INITIAL STATEMENT OF REASONS FOR PROPOSED BUILDING STANDARDS OF THE DIVISION OF THE STATE ARCHITECT - STRUCTURAL SAFETY (DSA-SS AND DSA-SS/CC) REGARDING THE 2019 CALIFORNIA BUILDING CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2

(DSA-SS/CC 02/18)

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons 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, PROBLEM, RATIONALE and BENEFITS:

(Government Code Section 11346.2(b)(1)) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem the agency intends to address for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.)

The purpose of this proposed action is to adopt the 2019 California Building Code (2019 CBC) based on new information since the adoption of the 2016 CBC.

TITLE 24, PART 2, VOLUME 1
CHAPTER 1 – SCOPE AND ADMINISTRATION

Section 1.9.2.1.1 - DSA amendment adopted as emergency regulations have been adopted in 2016 IBC. Amended emergency sections are being repealed and adopted language relocated from 107.2.7 to 107.2.5 and 110.3.8.1 to 110.3.6.

> **Sub-section 1.1**, reference Sections 4-401 through 4-435 were previously adopted in 2013 CAC, but not added into Section 1.9.2.1.1 at that time. This amendment updates the applicable administrative standards to include the adopted regulations.

Section 1.9.2.2.1 - DSA amendment adopted as emergency regulations have been adopted in 2016 IBC. Amended emergency sections are being repealed and adopted language relocated from 107.2.7 to 107.2.5 and 110.3.8.1 to 110.3.6.

> **Sub-section 1.1**, reference Sections 4-401 through 4-435 were previously adopted in 2013 CAC, but not added into Section 1.9.2.2.1 at that time. This amendment updates the applicable administrative standards to include the adopted regulations.

Section 106.1.1 – This proposal revises the existing DSA amendment to clarify posting requirements for design snow loads at floor levels and roofs.

Sections 107.2.5 and 107.2.7 - DSA amendment that was adopted as emergency regulations in collaboration with BSC and HCD in 2016 CBC have been adopted in the 2018 IBC. Therefore the amended emergency section 107.2.7 is being repealed and model code language is being adopted in section 107.2.5 without further amendment.

Per CAC comments, the following additional clarity has been provided.

DSA agreed with the SD/LF CAC recommendation of short-term further study for Section 107.2.5 in collaboration with other co-adopting agencies, BSC and HCD. After further study, DSA, along with the other co-adopting agencies, is proposing to withdraw all previous amendments to these sections. The model code section will be adopted as it appears in the 2018 IBC.

The SDLF CAC also recommended further study, aligning with the BFO CAC recommendation, to address whether the use of the term “water” is appropriate. BFO CAC suggestions included looking at the inclusion of “vapor” and “moisture”.

The three co-adopting agencies met regarding the term “water”. The agencies concluded that the use of “water” is fundamental to all other further-compartmenting terms. “Water,” whether in a solid or gaseous state, will be at some point a liquid, which is the culprit in penetration of assemblies, and the target of these provisions. Additionally, since this is model language, the thinking is that concept of using only the term “water” has been thoroughly vetted. The conclusion of the agencies is to leave the proposed language regarding “water” as it currently appears in the ET, reflecting model text.

Sections 110.3.6 and 110.3.8.1 - DSA amendment that was adopted as emergency regulations in collaboration with BSC and HCD in 2016 CBC have been adopted in the 2018 IBC. Therefore the amended emergency section 110.3.8.1 is being repealed and model code language is being adopted in section 110.3.6 without further amendment.

Per CAC comments, the following additional clarity has been provided.

DSA agreed with the SD/LF CAC recommendation of short-term further study for Section 110.3.6 in collaboration with other co-adopting agencies, BSC and HCD. After further study, DSA, along with the other co-adopting agencies, is proposing to withdraw all previous amendments to these sections. The model code section will be adopted as it appears in the 2018 IBC.

The SDLF CAC also recommended further study, aligning with the BFO CAC recommendation, to address whether the use of the term “water” is appropriate. BFO CAC suggestions included looking at the inclusion of “vapor” and “moisture”.

The three co-adopting agencies met regarding the term “water”. The agencies concluded that the use of “water” is fundamental to all other further-compartmenting terms. “Water,” whether in a solid or gaseous state, will be at some point a liquid, which is the culprit in penetration of assemblies, and the target of these provisions. Additionally, since this is model language, the thinking is that concept of using only the term “water” has been thoroughly vetted. The conclusion of the agencies is to leave the proposed language regarding “water” as it currently appears in the ET, reflecting model text.

TITLE 24, PART 2, VOLUME 1
CHAPTER 2 – DEFINITION

Definition: ACTIVE EARTHQUAKE FAULT. Relocating this amendment from 2016 CBC 1613A.2 to here because model code (2018 IBC) removed "terms" listings from front of chapters. All definitions are located here in Chapter 2.

Definition: BASE. Relocated from 2016 CBC 1613A.2

Definition: DISTANCE FROM AN ACTIVE EARTHQUAKE FAULT. Relocated from 2016 CBC 1613A.2

New Definition: EQUIPMENT. Added to align with OSHPD definition of equipment; includes definition of fixed, moveable and mobile equipment, and examples of common usage. Several provisions within Chapter 16A and 17A include reference to equipment; these definitions have been added to help provide clarity.

Definition: HIGH-RISE BUILDING. Relocated from 2016 CBC 1613A.2

Definition: IRREGULAR STRUCTURE. Relocated from 2016 CBC 1613A.2

Definition: NEXT GENERATION ATTENUATION WEST 2 (NGA WEST 2). Updated definition to reference new NGA WEST 2 relations; used to determine site-specific ground motion (as referenced by 1803A.6).

Definition: PROJECT INSPECTOR, Quality Assurance (QA), and Quality Control (QC). Relocated from 2016 CBC 1702A.1.

Definition: [BS] SPECIAL INSPECTION. - Periodic special inspection. Relocated definition (from 1702A) and amending to better align with model code language.

TITLE 24, PART 2, VOLUME 2
CHAPTER 14 – EXTERIOR WALLS

Section 1404 (Formerly 1405) - 2018 IBC eliminated Section 1402, thus requiring subsequent section numbers to be renumbered throughout Chapter 14.

Section 1410 (Formerly 1411) - 2018 IBC eliminated Section 1402, thus requiring subsequent section numbers to be renumbered throughout Chapter 14.

TITLE 24, PART 2, VOLUME 2
CHAPTER 15 – ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

Section 1502 - Section 1502 revised to Roof drainage in 2018 IBC. California amendment referencing Chapter 11 of the California Plumbing Code is being carried forward.

Section 1510.7.1 – Section removed in 2018 IBC; thus also eliminating existing DSA exception. The provisions of this section are being retained in the revisions to 1510.7.2.

Section 1510.7.2 - This proposal provides pointers to new sections that were added to ASCE 7-16 (13.6.12, 29.4.3 and 29.4.4) which provide direction regarding seismic and wind design requirements for Rooftop solar panels. This proposal also reinstates the wind force requirements and DSA amendment (exception) clarifying the effective wind area on solar panels and modules that were eliminated in Section 1510.7.1 of the 2018 IBC. This proposal allows DSA to enforce code and industry standards where appropriate for the type of anchorage specified on construction documents.

TITLE 24, PART 2, VOLUME 2
CHAPTER 16 – STRUCTURAL DESIGN

Section 1601.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1617.3.1 – Amendment is revised for consistency with newly-added ASCE 7 Section 12.13.5, "Strength Design for Foundation Geotechnical Capacity". This allowance to use phi (Ø) = 1.0 is intended explicitly and solely for the phi of foundation geotechnical capacity at soil-foundation interface as defined in ASCE 7 Section 12.13.5 (see section 12.13.5.2 and table 12.13-1) when applying load combinations with overstrength factor (Ω_o). Section 1617A.1.16 is the DSA and OSHPD amendment to ASCE 7 12.13.1.1 "Foundations and Superstructure-to-Foundation Connections". The amendment contains 3 options; the most-commonly selected option is to use the overstrength factor Ω_o, which amplifies the overturning loads applied to foundations by at least a factor of 2.

The minimum resistance factor Ø for lateral resistance is 0.5. The minimum resistance factor Ø for vertical resistance is 0.45. When amplified loads are applied to the structure, the maximum soil bearing stress is further amplified when soil is designed not to take tension loads. By using Ø = 1.0 when applying load combinations with Ω_o, the net effect in the sizing of the foundations will generally be equal to or greater than other load combinations as required by ASCE 7. The reason for permitting Ø = 1.0 for those combinations is to not penalize the soil bearing pressure; the model code does not apply Ω_o to any load combinations intended for checking soil bearing pressure. This allowance to use Ø = 1.0 shall not be extended to design of other elements, only the soil bearing pressure when using strength design per the new ASCE 7-16 Section 12.13.5.

Section 1617.6 – Proposal provides a pointer to Section 106.6.1 where posting requirements are located.

Section 1617.7 - Clarifies the exemption for story drift limit is applicable to single story open "structures" in Risk Category I and II, in order to align with original intent of this exception.

Section 1617.9 - Model code (2018 IBC) removed "defined terms" listings from front of chapters. Definitions formerly noted in Section 1616.9 have been relocated to Chapter 2.

Sections 1617.9.2, 1617.9.3, 1617.9.3.1, 1617.9.3.2: Amendment language updated to

reflect change in referenced section numbers; no change in regulatory effect.

Section 1617.9.4 - Add reference to comply with new ASCE 7 Section 13.6.12. Parallels new amendment language for Section 1613A.3.

Section 1613A.4.1 – Previous amendment language repealed because ASCE 7-16 now contains similar provisions in sections 17.2.5.5 and 17.2.5.4.

Section 1617.10 - This proposal adds definition that the project design professional proposes the Tsunami Risk Category (TRC) of a school, community college and essential services building or structure in accordance with ASCE 7 and Commentary; and that DSA accepts the TRC classification based on the ability of the community to evacuate its citizens, including school attendees and employees.

Sections 1617.11.1 - Amendment language updated to reflect change in referenced section numbers; no change in regulatory effect.

Section 1617.11.2 - Previous amendment language repealed because ASCE 7-16 now contains similar provisions.

Sections 1617.11.3 - Amendment language updated to reflect change in referenced section number; no change in regulatory effect.

Section 1617.11.5 - Clarifies that only the amplified loads that are applicable to the vertical elements of the lateral force resisting system must be considered in the design of the lower portion in a two stage analysis. Amplification of loads applied to beams or due to diaphragm offsets that do not affect the lower level need not be carried through as amplified forces when analyzing the lower portion of the structure.

Section 1617.11.9 – Proposed exception lifts prohibition on extreme torsional irregularity for Seismic Design Categories D through F where the maximum story drift in the direction of the irregularity is less than 10% of the allowable story drift. When applying the irregularity check on a structure that is very stiff on 3 sides (for example, full-length shear walls on 3 sides with an open front), calculated deflections will be very small, resulting in a very small denominator in the equation used to check torsional irregularity, thereby causing allowed limits to be exceeded despite very small calculated building drift. Damage or collapse of such rigid structures is unlikely to occur at such low levels of building drift. The ASCE 7-22 committee is looking into making modifications to this provision to permit structures with extreme torsional irregularities provided drifts are less than 75% of model code, but requiring consideration of load combinations that include orthogonal effects of 100% and 30% in each orthogonal direction applied simultaneously. The proposed provision is conservative and a step in that direction.

Rationale: The proposed exception lifts the prohibition on extreme torsional irregularity for Seismic Design Categories D through F when the maximum story drift in the direction of the irregularity is less than 10% of the allowable story drift. Structures with reinforced concrete or reinforced masonry shear wall systems and concrete or concrete-filled metal deck diaphragms having a span-to-depth ratio of 3 or less are eligible for this provision.

When applying the irregularity check on a structure that is very stiff on 3 sides (for example, full-length shear walls on 3 sides with an open front), calculated deflections will be very small, resulting in a very small denominator in the equation used to check torsional irregularity, thereby causing allowed limits to be exceeded despite very small calculated building drift. Damage or collapse of such rigid structures is unlikely to occur at such low levels of building drift. The ASCE 7-22 committee is looking into making modifications to this provision to permit structures with extreme torsional irregularities provided drifts are less than 75% of model code, but requiring consideration of load combinations that include orthogonal effects of 100% and 30% in each orthogonal direction applied simultaneously. The proposed provision is conservative and a step in that direction.

Section 1617.11.11 - Repealing previous amendment, which was added to provide alignment with ASCE 7-16, which is now the adopted reference standard. (ASCE 7-16 Section 12.8.1.3). No change in regulatory effect.

Section 1617.11.12 - Previous amendment language repealed because ASCE 7-16 Section 12.9.1.4 now contains provisions for scaling design values of combined response.

Section 1617.11.13 - Previous amendment language repealed because ASCE 7-16 Section 12.10.2.1 now contains equivalent provisions.

Section 1617.11.14 - Change in section number: Horizontal Seismic Load Effect with Overstrength was Section 12.4.3.2 in ASCE 7-10; now Section 12.4.3.1 in ASCE 7-16

Section 1617.11.15:

Item 2: Changes to distinguish between mobile and moveable equipment, allow exemption from anchorage for mobile equipment that is stored in a storage room.

Item 3: Editorial changes to help clarify requirements.

Section 1617.11.16 - Repealing previous amendment, which was added to the 2016 CBC to provide alignment with ASCE 7-16, which is now the adopted reference standard.

The other proposed modifications in this section are for clarification or editorial in nature.

Section 1617.11.17 – Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permits exemptions from bracing requirements consistent with ASCE 7 for distribution systems for Conduit, Cable Tray, and Raceways where Ip = 1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Section 1617.11.18 - Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permits exemptions from bracing requirements consistent with ASCE 7 for distribution systems for Duct Systems where Ip = 1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Section 1617.11.19 - Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permit exemptions from bracing requirements consistent with ASCE 7-16 for distribution systems for piping and tubing systems with Ip =1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Section 1617.11.20 - Updating reference pointer.

Section 1617.11.21 - Updating reference pointer.

Sections 1617.11.22 and 1617.11.23 - Repeal amendments from 2016 CBC 1616.10.22 and 1616.10.23. Chapter 16 (Seismic Response History Procedures) from ASCE 7-10 deleted; ASCE 7-16 contains a re-written Chapter 16, focused on Nonlinear Response History analysis and corresponding acceptance criteria. Linear Response History procedure has been moved to Section 12.9 and merged with Modal Response Spectrum Analysis to create the re-named Section 12.9 (Linear Dynamic Analysis) which contains Section 12.9.1 Modal Response Spectrum Analysis and Section 12.9.2 Response History Analysis.

> **Section 1617.11.22** - Repeal amendments for CBC 1616.10.22. ASCE 7-16 revised the Linear Response History procedure and moved it to Section 12.9 .2. Per 12.9.2.5, for force-based quantities, design base shear must not be less than that determined by ELF. However for displacement-based quantities, normalization to ELF is not required; need only multiply the computed response history quantities by the appropriate Cd/R in the direction of interest.
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> **Section 1617.11.23** - Repeal amendment language for CBC 1616.10.23 because ASCE 7-16 Section 16.2 now contains provisions for ground motion selection and refers to Section 11.4.1 for definition of near-fault sites.

TITLE 24, PART 2, VOLUME 2
CHAPTER 16A – STRUCTURAL DESIGN

Section 1601A.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1603A.1.5 - Updated reference to definition of base. No regulatory change.

Section 1603A.1.10 - Renumbered from 1603A.1.9 to 1603A.1.10 due to 2015 IBC added section 1603.1.9. No regulatory change to amendment, renumbering only.

Section 1604A.3 - Language in section 1604.3 was updated in 2018 IBC. No regulatory change to model code language, simply adding an “A” in order to reference table 1064A.3.

Table 1604.A.3 - 2018 IBC added “or Lr” to column heading. Continued DSA amendment to add Lr to column heading.

Footnote b - No regulatory change; add “A” to section reference.

Footnote f - No regulatory change; add “A” to table and section references.

Footnote g - Correcting IBC typo.

Section 1604A.3.8 - Renumbered from 1604A.3.7 to 1604A.3.8 due to 2018 IBC added section 1604.3.7. No regulatory change to amendment, renumbering only.

Section 1604A.3.9 - Renumbered from 1604A.3.8 to 1604A.3.9 due to 2018 IBC added section 1604.3.7. No regulatory change to amendment, renumbering only.

Section 1604*A*.5 - No regulatory change. Add “A” to table reference. No regulatory change.

Section 1604*A*.5.1 - No regulatory change. Add “A” to table reference.

Section 1605A.1.1 – Amendment is revised for consistency with newly-added ASCE 7 Section 12.13.5, “Strength Design for Foundation Geotechnical Capacity”. This allowance to use phi (Ø) = 1.0 is intended explicitly and solely for the phi of foundation geotechnical capacity at soil-foundation interface as defined in ASCE 7 Section 12.13.5 (see section 12.13.5.2 and table 12.13-1) when applying load combinations with overstrength factor (Ω_o). Section 1617A.1.16 is the DSA and OSHPD amendment to ASCE 7 12.13.1.1 “Foundations and Superstructure-to-Foundation Connections”. The amendment contains 3 options; the most-commonly selected option is to use the overstrength factor Ω_o, which amplifies the overturning loads applied to foundations by at least a factor of 2.

The minimum resistance factor Ø for lateral resistance is 0.5. The minimum resistance factor Ø for vertical resistance is 0.45. When amplified loads are applied to the structure, the maximum soil bearing stress is further amplified when soil is designed not to take tension loads. By using Ø = 1.0 when applying load combinations with Ω_o, the net effect in the sizing of the foundations will generally be equal to or greater than other load combinations as required by ASCE 7. The reason for permitting Ø = 1.0 for those combinations is to not penalize the soil bearing pressure; the model code does not apply Ω_o to any load combinations intended for checking soil bearing pressure. This allowance to use Ø = 1.0 shall not be extended to design of other elements, only the soil bearing pressure when using strength design per the new ASCE 7-16 Section 12.13.5.

Section 1605A.3 - Add “A” to section reference Section 1605*A*.3.1 or 1605*A*.3.2. No regulatory change.

Table 1607*A*.1 – 2018 IBC added new footnotes “n” and “o”; as a result, DSA-SS footnotes “n” through “r” must be renamed to “q” through “t”. Table references have been updated throughout in response to new IBC footnotes and resultant DSA-SS footnote renumbering. No regulatory change to DSA-SS footnotes.

Section 1607*A*13.6 - Section 1607.8.3 in 2015 IBC was renumbered to 1607.9 in 2018 IBC. Thus, Section 1607*A*12.6 needs to be renumbered to 1607*A*.13.6. No regulatory change to continued amendment language.

Section 1607*A*.15 - Section 1607.8.3 in 2015 IBC was renumbered to 1607.9 in 2018 IBC. Thus, Section 1607*A*.14 needs to be renumbered to 1607*A*.15. No regulatory change to continued amendment language.

Section 1608A.4– Proposal provides a pointer to Section 106.6.1 where posting requirements are located.

Section 1609A.1.3 - Clarify the exemption for story drift limit is applicable to single story open "structures" in Risk Category I and II, in order to align with original intent of this exception.

Section 1613A.2 - Model code (2018 IBC) removed "defined terms" listings from front of chapters. Definitions formerly noted in Section 1613A.2 have been relocated to Chapter 2.

Section 1613A.2.3 - Add "A" to section reference1613*A*.2.5. Also, Simplified Design Procedure not permitted by DSA-SS so strike last line. No regulatory change.

Section 1613A.3 - Model code language does not align with new provisions in ASCE 7-16, 13.6.12 Rooftop Solar Panels. Strike language and add reference to comply with ASCE 7 Section 13.6.12

Section 1613A.4.1 – Previous amendment language repealed because ASCE 7-16 now contains similar provisions in sections 17.2.5.5 and 17.2.5.4.

Section 1615A.1 - This proposal adds definition that the project design professional proposes the Tsunami Risk Category (TRC) of a school, community college and essential services building or structure in accordance with ASCE 7 and Commentary; and that DSA accepts the TRC classification based on the ability of the community to evacuate its citizens, including school attendees and employees.

Section 1615A.2 - Model code (2018 IBC) removed "defined terms" listings from front of chapters. Definitions formerly noted in Section 1615A.2 have been relocated to Chapter 2.

Section 1617A - Renumbered from 1616A to 1617A due to numbering changes in model code – typical throughout this section.

Section 1617A.1.2 - Added for clarification

Section 1617A.1.3 - Previous amendment language repealed because ASCE 7-16 now contains similar provisions.

Section 1617A.1.4 – Item G, Exception 3 - Amendment language updated to reflect change in referenced section; no change in regulatory effect.

Section 1617A.1.10 – Proposed exception lifts prohibition on extreme torsional irregularity for Seismic Design Categories D through F where the maximum story drift in the direction of the irregularity is less than 10% of the allowable story drift. When applying the irregularity check on a structure that is very stiff on 3 sides (for example, full-length shear

walls on 3 sides with an open front), calculated deflections will be very small, resulting in a very small denominator in the equation used to check torsional irregularity, thereby causing allowed limits to be exceeded despite very small calculated building drift. Damage or collapse of such rigid structures is unlikely to occur at such low levels of building drift. The ASCE 7-22 committee is looking into making modifications to this provision to permit structures with extreme torsional irregularities provided drifts are less than 75% of model code, but requiring consideration of load combinations that include orthogonal effects of 100% and 30% in each orthogonal direction applied simultaneously. The proposed provision is conservative and a step in that direction.

Section 1617A.1.12 - Repealing previous amendment, which was added to provide alignment with ASCE 7-16, which is now the adopted reference standard. (ASCE 7-16 Section 12.8.1.3). No change in regulatory effect.

Section 1617A.1.13 - Previous amendment language repealed because ASCE 7-16 Section 12.9.1.4 now contains provisions for scaling design values of combined response.

Section 1617A.1.14 - Previous amendment language repealed because ASCE 7-16 Section 12.10.2.1 now contains equivalent provisions.

Section 1617A.1.16 - Change in section number: Horizontal Seismic Load Effect with Overstrength was Section 12.4.3.2 in ASCE 7-10; now Section 12.4.3.1 in ASCE 7-16

Section 1617A.1.18:

Item 2: Changes to distinguish between mobile and moveable equipment, allow exemption from anchorage for mobile equipment that is stored in a storage room.

Item 3: Editorial changes to help clarify requirements.

Section 1617A.1.19 - Revised exception wording for clarity since “not prohibited” is a double negative. Revise to “permitted” for clarity. No regulatory change.

Section 1617A.1.21 - Repealing previous amendment, which was added to the 2016 CBC to provide alignment with ASCE 7-16, which is now the adopted reference standard.

The other proposed modifications in this section are for clarification or editorial in nature.

Section 1617A.1.23 – Repealing previous amendments which were added to align the 2016 CBC with the ASCE 7-16, which is now the current reference standard.

For the new proposed language, there are nonstructural components referenced in the referenced ASCE 7-16 Tables to be designed with an R_p = 1.5 and Ω_o of 2. When non-structural components are required to have an I_p of 1.5, force demands on those components having a low R_p values are considered essentially elastic. Therefore, there is no need to account for over strength beyond the elastic limit. In addition, only prequalified anchors in concrete are permitted. These anchors have resistance factors corresponding to a 5% fractile limit which provides the required conservatism needed.

Section 1617A.1.24 – Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permits exemptions from bracing requirements consistent with ASCE 7 for distribution systems for Conduit, Cable Tray, and Raceways where Ip = 1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Section 1617A.1.25 - Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permits exemptions from bracing requirements consistent with ASCE 7 for distribution systems for Duct Systems where Ip = 1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Section 1617A.1.26 - Repealing previous amendments thereby allowing the proposed language to parallel the new ASCE 7-16 language; the intent of previous amendments is generally maintained through new proposed language. While the new proposed language permit exemptions from bracing requirements consistent with ASCE 7-16 for distribution systems for piping and tubing systems with Ip =1.0, additional limitations have been added to limit the maximum rod length and load that can be hung per rod.

Item B – New amendment language to clarify intent of the exception when flexible connections are not required for braced piping systems.

Item C – New amendment language to clarify that flexible connections are required at seismic joints in order to accommodate differential movement between buildings, regardless of whether the pipe is braced

Section 1617A.1.27 - Updating reference pointer.

Section 1617A.1.28 - Updating reference pointer.

Section 1617A.1.29 through 1617A.1.32 - Repeal amendments from 2016 CBC Section1616A.1.29 through 1616A.1.32. Chapter 16 (Seismic Response History Procedures) from ASCE 7-10 deleted; ASCE 7-16 contains a re-written Chapter 16, focused on Nonlinear Response History analysis and corresponding acceptance criteria. Linear Response History procedure has been moved to Section 12.9 and merged with Modal Response Spectrum Analysis to create the re-named Section 12.9 (Linear Dynamic Analysis) which contains Section 12.9.1 Modal Response Spectrum Analysis and Section 12.9.2 Response History Analysis.

Section 1617A.1.29 - Repeal amendments for CBC 16167A.1.29. ASCE 7-16 revised the Linear Response History procedure and moved it to Section 12.9 .2. Per 12.9.2.5, for force-based quantities, design base shear must not be less than that determined by ELF. However for displacement-based quantities, normalization to ELF is not required; need only multiply the computed response history quantities by the appropriate Cd/R in the direction of interest.

Section 1617A.1.30 - Repeal amendments for CBC 16167A.1.30. Chapter 16 of ASCE 7-16 re-written to focus on Nonlinear Response History analysis and now includes corresponding acceptance criteria.

Section 1617A.1.31 - ASCE 7-10 Section 16.2.3 did not indicate how to combine the live load requirement, so previous amendment for CBC 16167A.1.31 was provided to clarify that it shall be per the standard load combinations. ASCE 7-16 now provides direction in Section 16.3.2; therefore, repeal previous amendment for CBC 16167A.1.31.

Section 1617A.1.32 - Repeal amendment language for CBC 16167A.1.32 because ASCE 7-16 Section 16.2 now contains provisions for ground motion selection and refers to Section 11.4.1 for definition of near-fault sites.

Section 1617A.1.37 - Repealing previous amendment, because similar provisions are now Section 1617A.1.38 - Continued amendment language, edited to adjust for re-numbering included in ASCE 7-16 Section 17.6.4 due to adjustments made to ASCE 7-16. Also, for clarity, remove language regarding DE and retain reference to MCER. No regulatory change.

TITLE 24, PART 2, VOLUME 2
CHAPTER 17A - SPECIAL INSPECTIONS AND TESTS

Section 1701A.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1701A.1.3 - Provides clarifying language since not all DSA-SS reference numbers directly correlate with DSA-SS/CC section numbers.

Section 1702A.1 - In the 2016 CBC, 1702A had definitions; the 2018 IBC replaced this section with “New Materials.” Therefore, previous amendment definitions are being either removed or relocated as shown below.

> Relocated definitions to Section 202: PROJECT INSPECTOR, Quality Assurance (QA), Quality Control (QC),
>
> Removing definition: Continuous special inspection - Deleting language for “continuous special inspection” since Section 202 definition is sufficient.
>
> Relocating to Section 202 and amending definition: Periodic special inspection. - (see Chapter 2 Express Terms and Statement of Reasons).

Section 1704A.2.5 - Striking new language since DSA does not have approved fabricators, just as in the 2016 CBC.

Section 1704A.2.5.1 - DSA is continuing deletion of this section and new language associated with it since DSA does not have approved fabricators, just as in the 2016 CBC.

Section 1704A.5, Item #1 – Minor editorial deletion in line with previous deletions and renumbering of items due to removal of OSHPD banner.

Section 1704A.6 - Removing new model code reference since that section is being removed by amendment (see Statement of Reasons for sections 1704.6.1, 1704.6.2, and 1704.6.3).

Sections 1704.6.1, 1704.6.2, and 1704.6.3 - The CAC requires structural observation for all DSA regulated projects rather than only certain types. Therefore, section 1704.6.1 is amended for removal which is consistent with past similar removal amendments. Sections 1704.6.2 and 1704.6.3 have minor editorial deletions in line with past removal amendments.

Section 1705A.2.1 - No net change in regulation. Changes shown are editorial in nature and merely align requirements with current AISC 360-16 sections and language.

TABLE 1705A.2.1 - Providing reference pointers and recognizing tests and special inspections already required in other sections; no new testing or special inspections being added nor proposed.

Adding items 1c, 3d, 4c, 5a7, 5a8, and 5b5 to explicitly recognize their special inspection requirements. Special inspection has been required previously and is currently for these items. No net regulatory change occurs with proposed additions.

Section 1705A.2.2 - Acknowledgment that testing is part of the referenced table and section. No new testing results from the proposed language.

Section 1705A.2.4.1 - Providing clarifying language for the intent of the existing amendment, that is, special inspection is required for all light-framed steel trusses.

Added reference pointer to Section 2211.1.3.3 which is applicable to certain cold-formed steel trusses; no special inspection requirements beyond model code results from providing the pointer reference.

Section 1705A.2.5 - Providing reference to existing code sections; no new testing or special inspection requirements. Adding language recognizing that, in accordance with CAC 4-335(f), only those special inspectors employed individually and directly with the school board require DSA approval.

Clarifying qualification requirements for those individuals performing nondestructive testing in alignment with current industry standards applicable to school projects.

Adding reference to recognized reference standard for welding of steel reinforcing, AWS D1.4.

Section 1705A.2.6 - No new special inspections or tests are being proposed. Proposed language provides a reference pointer to the requirements. Minimum qualifications for special inspectors are proposed, based on currently accepted industry standards.

Section 1705A.3.1 - No new special inspections or tests are being proposed. Proposed language provides a reference pointer to the requirements.

Section 1705A.3.2 - Providing reference pointers and acknowledging amendments applicable in those referenced sections. No net change in requirements occurs with the proposed language.

Section 1705A.3.4 - No new special inspections or tests are being proposed. Proposed language provides a reference pointer to the requirements.

Exception language provides clarification of reasonable actual field practice of special inspection requirements for prestress or posttensioned cables or tendons. Additional exception language provides alignment with CAC 4-335(f), which requires only those special inspectors employed individually and directly with the school board to obtain DSA approval prior to providing inspections.

Section 1705A.3.7 - No new special inspections or tests are being proposed. Proposed language provides a reference pointer to the requirements.

Section 1705A.3.8 - No new special inspections or tests are proposed. Proposed language provides a reference pointer to the requirements.

TABLE 1705A.3 - Providing reference pointers and recognizing tests and special inspections already required in other sections; no new testing or special inspections being proposed.

Section 1705A.4 - Updating reference standard nomenclature to the 2016 edition of the TMS. Due to revisions in the reference standard, the previous language is being repealed and modified accordingly. However, these proposed modifications result in no net changes to requirements from an amendment perspective. Reference pointers to other existing special inspection and testing requirements for masonry are proposed, but do not result in any new requirements from an amendment perspective.

Section 1705A.4.1 - Updating reference standard nomenclature to the 2016 edition of the TMS. Due to revisions in the reference standard, the previous language is being repealed and modified accordingly. However, these proposed modifications result in no net changes to requirements from an amendment perspective.

Section 1705A.5.4 – Proposed amendments result from updates to the reference standard. No net regulatory change.

Section 1705A.6.2 and 1705A.6.3 - Section added to provide a pointer reference to the requirements. No new special inspections or tests result from the proposed language.

Section 1705A.7 and 1705A.8 - Proposed amendment provides a pointer reference to requirements applicable to driven deep foundations and cast-in-place deep foundations, respectively. No new special inspections or tests result from the proposed amendment.

Sections 1705A.11.1 and 1705A.12 – Minor editorial deletions in-line with previous 2016 CBC amendments which removed “Exception” language.

Sections 1705A.12.1.1 and 1705A.12.1.2 - Removing current 2018 IBC exception language for both sections since the CAC requires special inspections for all DSA regulated structures. The proposed amendment will remove the exception for certain types of structures, which is consistent with past 2016 CBC removal amendments.

Section 1705A.12.6, Item #6 - Removed Seismic Design Category ‘C’ for consistency with other previous item removal amendments since Seismic Design Category ‘D’ is the minimum for all DSA regulated structures.

Sections 1705A.13.1.1 and 1705A.13.1.2 - Proposed deletions of “Exception” language are consistent with previous 2016 CBC deletion amendments.

Sections 1705A.13.2 and 1705A.13.3 – Based on industry input, proposed language allows approved alternative testing protocols to be used which are consistent with requirements in NFPA 13.

Section 1705A.13.4 - Minor editorial change of pointer.

Section 1705A.17 - DSA certified project inspectors already perform these inspections due to the CAC requirement for continuous inspection, including for Risk Category II structures.

Section 1705A.19 – ACI 506.2 was the adopted reference standard by DSA during the 2016 Intervening Code Cycle. No new testing requirements apply.

Notation for DSA-SS (at end of Chapter 17A): Minor editorial change to spell out applicable code.

TITLE 24, PART 2, VOLUME 2
CHAPTER 18A – SOILS AND FOUNDATIONS

Section 1801A.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1801A.1.3 - Provides clarifying language since not all DSA-SS reference numbers directly correlate with DSA-SS/CC section numbers.

Section 1803A.6 – Editorial change for consistency with ASCE 7-16. Updated requirements to use the current Next Generation Attenuation (NGA) relations or NGA-West 2 for determination of the site specific ground motion. Permit alternate attenuation relations not used in the 2014 USGS maps as a substitution subject to the approval by the building official similar to exiting provisions in the code.

Section 1805A.1 – Typo in IBC: Reference should be 1202.4 but IBC says 1203.4.

Section 1807A.2.2 - Last sentence of paragraph is new model code language in 2018 IBC. Add “A” to section reference 1803.2 in this new sentence; no change in regulatory effect.

Section 1810A.3.8.3.3 - In SDC D, E and F, the use of Ω_o E loads for prestressed concrete piles in the Exception should not result in the use of minimum fixed prescriptive non-seismic transverse reinforcing specified for precast non-prestressed concrete piles in Section 1810.3.8.1. The maximum spiral transverse steel ratio 0.021 will limit the effect of the Ω_o E axial load. The Exception is not consistent with ACI 318-14 Section 18.13.4.3 which requires the same pile transverse reinforcing ratio equations irrespective of the use of Ω_o E or E loads. The Exception added to 1810.3.8.3.3 item 5 for SDC D, E and F for the use of pile fixed non-seismic prescriptive transverse reinforcement was not added to item 6 for prestressed concrete pile rectangular hoop transverse reinforcement and is inconsistent. Therefore, the Exception is removed.

Section 1810A.3.8.3.4 - Add exception permitting an increase in the prestressed concrete pile axial load limit under Ω_o E forces. This is similar to/ consistent with ACI 318-14 Section 18.4.3.6.

Section 1810.3.11 - Foundation design methodologies for a combined pile raft system have not been adequately established which would determine the relative load sharing between the piles and the raft foundation bearing. A pile raft foundation is designated as an alternate system under Section 104.11 for that reason.

Section 1811A.3 - Updated amendment in response to/ in order to coordinate with latest issue of PTI DC35.1 Recommendations for Prestressed Rock and Soil Anchors Similar to provisions of 1812A.4.1 #6

Updated amendment to coordinate with latest issue of PTI DC35.1 Recommendations for Prestressed Rock and Soil Anchors Similar to provisions of 1812A.4.1 #6

Section 1812A.2 - Updated amendment to coordinate with latest issue of PTI DC35.1 Recommendations for Prestressed Rock and Soil Anchors Similar to provisions of 1812A.4.1 #6

Section 1812A.4 - Delete reference to year of publication; no regulatory change.

Section 1812A.4.1 - Update amendment language to include title of publication and delete reference to year of publication; no regulatory change.

New amendment language coordinates with change from 1 to 2 years in 1812A.2 Duration above. Also, is similar to provision s in 1811A.3 #7.

Section 1812A.4.3 - Update amendment language to include title of publication and delete reference to year of publication; no regulatory change.

Section 1812A.5 - Update amendment language to include title of publication and delete reference to year of publication; no regulatory change.

TITLE 24, PART 2, VOLUME 2
CHAPTER 19 – CONCRETE

Section 1901.1.1, 1901.1.2, and 1901.1.4 – Editorial updates recognizing OSHPD's adoption language applicable to this chapter, and to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1909.2.7.2 - Editorial update revising "test" to "evaluation" report which is more appropriate for laboratory evaluation reports.

Section 1909.2.7.3 - Editorial changes to clarify intent of requirements.

Section 1909.4.1 – This proposal recognizes ACI 506.2-13 was added to CCR Title 24, Part 2, Chapter 35 during the 2016 Intervening Code Cycle. Additionally, this proposal recognizes structural shotcrete is defined as having a minimum compressive strength of 4000 psi per ACI 506R-16 Section 1.1.1. In ACI 506.2-13 Section 2.4.2, the default compressive strength is noted as 4000 psi unless specified otherwise. The commentary to this section, ACI 506R-16 Section 2.4.2, indicates this minimum default applies to structural shotcrete since it is usually more than this. Based on surveying the shotcrete industry, including shotcrete contractors, structural shotcrete typically has a larger value than the noted 4000 psi minimum.

Sections 1909.4.2, 1909.4.5, and 1909.4.7 – Minor editorial update to revise section numbering based on proposed new sections added.

Section 1909.4.3 – This proposal helps avoid potential confusion for DSA-SS projects due to the proposed added referenced standard of ACI 506.2-13. The values in this table are from Table 1.1.1 of ACI 506R-16, which is the commentary to ACI 506.2-13. These values match the values in Table 1.1 in ACI 506R-05.

Section 1909.4.4 - Sand blasting is generally not used due to environmental concerns; alternative roughening techniques are now used by industry.

Section 1909.4.6 – This proposal recognizes minimum curing temperatures currently common in the shotcrete industry, which are consistent with those specified in ACI 506.2-13 Section 3.7.1.2.

Section 1909.4.8 - Updating references to current standards. Providing reference pointer for special inspection and testing requirements applicable to shotcrete.

TITLE 24, PART 2, VOLUME 2
CHAPTER 19A – CONCRETE

Section 1901A.1.2 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 1903*A*.8 – Providing clarifying language for allowance of and requirements associated with fusion welding of holding wires often used in reinforcing steel cages. Proposal provides quality control requirements associated with reinforcing having fusion welded holding wires.

Section 1904*A*.1 - This proposal carries forward existing amendment repealing exception in 2018 model code.

Section 1905*A*.1 - This proposal revises the 2016 CBC section reference since section 1905A.1.13 is being repealed in the 2019 CBC and subsequent section numbers are adjusted.

Sections 1905.1.1, 1905.1.2, 1905.1.3, 1905.1.4, 1905.1.5, 1905.1.6, 1905.1.7 and 1905.1.13 – Carry forward repeal of existing amendments of 2018 IBC modifications to ACI 318. Note these are not listed as "A" sections since they are a repeal of 2018 IBC sections.

Section 1905A.1.8 – Updated references for updated reference standards as noted:

Section 17.2.3.5.2 Exception 1.1 - Proposal revises the 2013 NDS Table reference to align with the 2018 NDS. Section 17.2.3.5.2 Exception 2 - Proposal revises the 2013 AISI S100 reference to align with the 2018 AISI S100.

Section 1905A.1.10 - Updating reference pointer from 1616A.1.16 to 1617A.1.16.

Section 1905A.1.13 - Section 1905A.1.13 is being repealed since language in ACI 318, Section 1813.1.2 states that the foundation provisions supplement the Building Code foundation provisions. Since Chapter 18A requirements are more specific than the ACI reference standard, this amendment is not needed. Section 1905A.1.14 in 2016 CBC renumbered to 1905A.13 in 2019 CBC.

Section 1905*A*.1.14 - Section reference revised due to repeal of 2016 CBC section 1905A.1.13.

Section 1905*A*.1.15 - Section reference revised due to repeal of 2016 CBC section 1905A.1.13.

Section 1906A.1 – Carrying forward existing amendment repealing structural plain concrete section.

Section 1908*A*.1 - No net change for DSA since proposals match requirements previously adopted during 2016 Intervening, except for adding the "R" to make explicit reference to ACI 506R (which was the default reference previously). Striking previous 2016 Intervening Code Cycle amendment language since proposed amendments address previous intent.

Section 1908*A*.3 - Providing clarifying general language since nearly all structural shotcrete walls are also shear walls. Updating reference pointer due to updated ACI 506R-16 from ACI 506R-05. Repealing DSA-SS exception and Table 1908A.3 from 2016

Intervening Code Cycle since this information is contained in the table referenced in the ACI 506R-16.

Section 1908*A*.5 – Carrying forward existing amendment clarifying preconstruction test requirements for shotcrete.

Section 1908*A*.9 - Editorial change from 2016 Intervening Code Cycle to bring in previous DSA-SS exception intent into this section directly. Striking previous 2016 Intervening Code Cycle amendment language since proposed amendments address previous intent.

Section 1908*A*.12 – Proposal provides clarification of applicable reference standards. ACI 506.2-13 was previously added during the 2016 Intervening Code Cycle; ACI 506R-16 is the current industry standard as a guide and commentary for shotcrete.

Section 1910*A*.5.2 – In the exception language, editorial update made revising “test” to “evaluation” report which is more appropriate for laboratory evaluation reports.

Section 1910*A*.5.3 - Editorial changes to clarify intent of requirements.

TITLE 24, PART 2, VOLUME 2
CHAPTER 20 - ALUMINUM

Section 2001.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2002.1 - Clarification that for applications submitted per CBC Section 1.9.2.1, CBC Chapter 16A applies rather than 16.

Section 2003 - Clarification that testing requirements also apply as they do for steel.

Section 2003.1 - Clarification that the welding reference applicable to aluminum is AWS D1.2 rather than AWS D1.1.

TITLE 24, PART 2, VOLUME 2
CHAPTER 21 - MASONRY

Section 2101.1.3, 2101.1.4, and 2101.1.5 - Editorial updates recognizing OSHPD’s adoption language applicable to this chapter and to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2101.1.4 – Updating reference pointer; no net regulatory change.

Section 2115 – Updating section reference from 2114; no net regulatory change. This applies to all other subsections and is not noted further.

Section 2115.1.1 - Prescriptive design of masonry partition walls in TMS 402 is based upon using allowable stress design for unreinforced masonry. Unreinforced masonry cannot be used due to past poor performance in seismic events.

Section 2115.2 - Proposed language provides allowance for consistency with current sampling and testing provisions for unidentified reinforcing bars in concrete.

Section 2115.4 - Architectural cast stone masonry consists of irregular shaped units that are unlike CMU and has no explicit seismic design provisions or seismic detailing requirements.

Section 2115.7 - Referenced section in proposed deletion is not applicable to compressive strength testing or verification. Coring requirements still apply per 2115.8.2 regardless of this pointer reference being removed.

Section 2115.8.1 - Providing editorial and clarifying language for regulatory intent.

Providing clarifying reference for the prism tests to be performed during construction.

Exceptions – Providing editorial and clarifying language for regulatory intent.

Section 2115.8.2 - Exceptions – Providing editorial and clarifying language for regulatory intent.

Section 2115.9.1 - Updating TMS reference for TMS 402-16.

Item 1, Exception - Horizontal reinforcing spacing requirements relaxed for non-bearing non-shear walls, whether interior or exterior. .

Section 2115.10.1 – Providing consistency with previous model code intent which was removed in the 2018 IBC; no net change from 2016 CBC requirements.

Section 2115.10.2 – Revising pointers for reference standard and Table.

(Previously 2114.8.2) – Repealing previous amendment for lap splice length since the 2018 IBC model code has the same intent language in Section 2702.1.

TITLE 24, PART 2, VOLUME 2
CHAPTER 21A – MASONRY

Section 2101A.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2101A.1.3 - Prescriptive design of masonry partition walls in TMS 402 is based upon using allowable stress design for unreinforced masonry. Unreinforced masonry cannot be used for school buildings.

Section 2102A.1 - Striking previous amendment since the model code now locates all definitions in Chapter 2; thus, terms are no longer listed in Section 2102A.

Repealing the CBC definition for “Hollow-unit Masonry Wall” since the term is no longer used and other definitions (i.e., ‘hollow-unit masonry’ and ‘wall’) in the reference standard are sufficient.

Section 2103A.3.1 - Updating TMS reference for TMS 602-16.

Section 2103A.4 - Proposed language provides allowance for consistency with current sampling and testing provisions for unidentified reinforcing bars in concrete.

Section 2104A.1 - Minor editorial change by adding ‘A’ to the section number reference.

Architectural cast stone masonry consists of irregular shaped units that are unlike CMU and has no explicit seismic design provisions or seismic detailing requirements.

Section 2104A.1.3.1.1 - This section has often been confused with hollow unit masonry. Therefore, the section title is proposed to be changed as shown.

Section 2104A.1.3.1.1.1.1, Item 2 - Providing clarifying language for code intent.

Section - 2104A.1.3.1.1.1.2:

Item 2 - Editorial change to provide alternate nomenclature for wire size.

Item 4 - Providing clarifying language for code intent.

Section 2104A.1.3.1.2.1 - Providing pointer references for struck language to remove unnecessary redundancies and simplify requirements. No net change in regulatory effect through providing pointer references in lieu of struck language.

Item 2 - Updating reference for TMS 602-16.

Section 2104A.1.3.1.2.2 – Proposed exception to allow an increase in wall height for the low-lift grout method when the base of the grout pour can be easily cleaned due to the increased access provided by larger celled units.

Section 2105A.1 - Providing pointer references to clarify applicable testing requirements. No new test requirements are proposed.

Section 2105A.2 - Removing pointer reference to core testing, which is not associated with compressive strength. Adding pointer reference to recognize the allowance for either unit strength or prism test methods for f'_m=2000 psi maximum.

Exception - Providing a pointer reference for the proposed prism test section being added; no net regulatory change from previous CBC requirements when f'_m exceeds 2000 psi. Proposed deletion of 2105A.4 is due to core testing not being applicable to compressive strength testing or verification; coring requirements still

apply per 2105A.4 regardless of this pointer reference being removed as indicated in proposed reference pointers in 2105A.1.

Section 2105A.3 – Exception – Providing editorial and clarifying language for regulatory intent.

Section 2105A.4 - Exception – Providing editorial and clarifying language for regulatory intent.

Section 2105A.5 - Proposed new section provides pointer reference and guidance on when the applicable prism test method applies. No net regulatory change from previous CBC requirements.

Section 2105A.6 - Proposed new section provides pointer reference for the unit strength method. No net regulatory change from previous CBC requirements.

Section 2106A.1.1 – Updating TMS reference for TMS 402-16.

Item 1, Exception - Horizontal reinforcing spacing requirements relaxed for non-bearing non-shear walls, whether interior or exterior.

Section 2107A.1 – Deleting model code pointer reference since the numbering was changed from the last model code version. No net change from previous CBC version.

Section 2107A.2.1 – Repealing previous amendment for lap splice length since the 2018 IBC model code has the same intent language in the next paragraph.

Section 2107A.4 – Providing consistency with previous model code intent which was removed in the 2018 IBC; no net change from 2016 CBC requirements.

Section 2107A.5 – Editorial modifications to update references to TMS 402-16.

TITLE 24, PART 2, VOLUME 2
CHAPTER 22 – STEEL

Section 2201.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2212.1.1 - Clarification of code intent for embedment of shear lugs.

Section 2212.2.1:

– Repeal 2016 CBC amendment language regarding designation of protection zones. AISC Code of Standard Practice for Steel Buildings and Bridges, ANSI/AISC 303 (AISC, 2016c) Section 1.11 requires that the protected zone be permanently marked by the fabricator and re-marked by the owner's designated representative for construction if those markings are obscured in the field (such as by application of fireproofing). This is also discussed in AISC 341-16 Commentary Section CA4.1.

– Amend language in AISC 341 new Section B5.2 regarding truss diaphragms, specifying that bracing load shall not exceed 30 percent of diaphragm shear at each line of resistance. This 30 percent limit was previously included in 2016 CBC 2212.2.2 amendment language (D1.6 item 2); no regulatory change.

Section 2212.2.2:

– Repeal 2016 CBC amendment 2212.2.2 to add Section D1.6 regarding diaphragm bracing systems to AISC 341 because provisions for truss diaphragms are now included in AISC 341, new section B5.2.

– 2016 CBC Section 2212.2.3 renumbered to 2019 CBC 2212.2.2. Also, renumbering from ii to 2 in order to align with renumbering in AISC 341. No change to regulatory language; amendment continues un-modified except for re-numbering.

Section 2212.2.4 - Repeal this amendment. AISC 341-16 added B5.2 regarding truss diaphragms, which includes requirements for the design of the bracing members and connections.

Section 2212.2.5 - Repeal this amendment. AISC 341-16 updated the exceptions to F2.3(b) to note that the required strength of columns need not exceed the least of : (1) The forces corresponding to the resistance of the foundation to overturning uplift, or (2) Forces as determined from nonlinear analysis as defined in Section C3. This sufficiently envelopes the requirement; thus the previous amendment is no longer necessary.

Section 2212.2.6 - Repeal this amendment. AISC 341-16 added two new sections containing provisions for multi-tiered braced frames. Section F1.4c contains provisions for multi-tiered Ordinary Concentric Braced Frames (MTBF-OCBF) and Section F2.4e contains provisions for multi-tiered Special Concentric Braced Frames (MTBF-SCBF).

Section 2212.2.7 - Repeal this amendment. AISC 341-16 Section F2.4a now contains provisions for collector design when opposing diagonal braces along a frame line do not occur in the same bay.

Section 2212.2.8 - Repeal this amendment. AISC 341-16 Section F2.4e now contains provisions for Multi-Tiered Special Concentric Braced Frames (MTBF-SCBF).

Section 2212.5.1.2 - Update of reference in response to changes in material standards. No change in regulatory effect.

Section 2212.5.3 - Update of references in response to changes in material standards. Cold-formed steel seismic force resisting systems are now contained in AISI S400. Sections E5 (Cold-formed steel light frame shear walls with wood-based structural panel sheathing on one side and gypsum board sheathing on the other side), E6 (Cold-formed steel light frame shear walls with gypsum board or fiber board sheathing) and E7 (Conventional construction cold-formed steel light frame strap braced wall systems) are not permitted by DSA-SS in accordance with Section 1617.10.3. No change in regulatory effect.

TITLE 24, PART 2, VOLUME 2
CHAPTER 22A – STEEL

Section 2201A.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2204A.4 - Clarification of code intent for embedment of shear lugs.

Section 2205A.3.1:

– Repeal 2016 CBC amendment language regarding designation of protection zones. AISC Code of Standard Practice for Steel Buildings and Bridges, ANSI/AISC 303 (AISC, 2016c) Section 1.11 requires that the protected zone be permanently marked by the fabricator and re-marked by the owner's designated representative for construction if those markings are obscured in the field (such as by application of fireproofing). This is also discussed in AISC 341-16 Commentary Section CA4.1.

– Amend language in AISC 341 new Section B5.2 regarding truss diaphragms, specifying that bracing load shall not exceed 30 percent of diaphragm shear at each line of resistance. This 30 percent limit was previously included in 2016 CBC 2205A.3.2 amendment language (D1.6 item 2); no regulatory change.

Section 2205A.3.2:

– Repeal 2016 CBC amendment 2205A.3.2 to add Section D1.6 regarding diaphragm bracing systems to AISC 341 because provisions for truss diaphragms are now included in AISC 341, new section B5.2.

– 2016 CBC Section 2205A.3.3 renumbered to 2019 CBC 2205A.3.2. Also, renumbering from ii to 2 in order to align with renumbering in AISC 341. No change to regulatory language; amendment continues un-modified except for re-numbering.

Section 2205A.3.4 - Repeal this amendment. AISC 341-16 added B5.2 regarding truss diaphragms, which includes requirements for the design of the bracing members and connections.

Section 2205A.3.5 - Repeal this amendment. AISC 341-16 added two new sections containing provisions for multi-tiered braced frames. Section F1.4c contains provisions for multi-tiered Ordinary Concentric Braced Frames (MTBF-OCBF) and Section F2.4e contains provisions for multi-tiered Special Concentric Braced Frames (MTBF-SCBF).

Section 2205A.3.6 - Repeal this amendment. AISC 341-16 updated the exceptions to F2.3(b) to note that the required strength of columns need not exceed the least of : (1) The forces corresponding to the resistance of the foundation to overturning uplift, or (2) Forces as determined from nonlinear analysis as defined in Section C3. This sufficiently envelopes the requirement; thus the previous amendment is no longer necessary.

Section 2205A.3.7 - Repeal this amendment. AISC 341-16 Section F2.4a now contains provisions for collector design when opposing diagonal braces along a frame line do not occur in the same bay.

Section 2205A.3.8 - Repeal this amendment. AISC 341-16 Section F2.4e now contains provisions for Multi-Tiered Special Concentric Braced Frames (MTBF-SCBF).

Section 2210A.1 – Added pointer for strength determination of power actuated fasteners for connections.

Section 2210A.2 - Strike reference to ASCE 8: Specification for the Design of Cold-formed Stainless Steel Structural Members. Cold-formed Stainless Steel has different stress-strain characteristics and ductility than AISI Cold-Formed Steel materials. ASCE 8 has no specific seismic design requirements. Cold-formed Stainless Steel materials are not included in AISI S400 Section A3.1. In addition, DSA-SS is unaware of any cyclic testing of shear wall assemblies using Cold-formed Stainless Steel performed to date.

Section 2211A.1.1.1 – Repeal this section. Minimum SDC permitted for all occupancies is SDC D. This section is not required.

Section 2211A.1.1.2 – Section renumbered: no regulatory change to amendment language.

Relocation of amendment language and update of references in response to changes in material standards. Cold-formed steel seismic force resisting systems are now contained in AISI S400. Sections E5 (Cold-formed steel light frame shear walls with wood-based structural panel sheathing on one side and gypsum board sheathing on the other side), E6 (Cold-formed steel light frame shear walls with gypsum board or fiber board sheathing) and E7 (Conventional construction cold-formed steel light frame strap braced wall systems) are not permitted by DSA-SS in accordance with Section 1617A.1.4. No change in regulatory effect.

Section 2211A.1.2 - Section renumbered: no regulatory change to amendment language

Section 2211A.1.3 - Section renumbered: no regulatory change to amendment language

Section 2211A.1.3.1 - Section renumbered: no regulatory change to amendment language, which adds A to reference 1705A.2

Section 2211A.1.3.3 - Section renumbered: no regulatory change to amendment language which adds A to reference 1704A.2.5 and 1705A.2

Section 2211A.2 - Composite assembly design uses gypsum board sheathing as structural composite with the steel studs and requires load testing to assess strength. Numerous penetrations in the sheathing do not lend itself to this system. Non-structural members in light frame construction in AISI S220 have loading limits which will limit their use as interior partition. AISI S240 and S100 are added to clarify where design of higher partition wall loading is required.

Section 2213A.1 – Replace term “independent testing laboratory” with “agency” in order to align with wording modifications made in 2016 CBC Chapter 17A which replaced many of the references to ”special inspector” with “approved agency”. Editorial change: no regulatory change to amendment language.

TITLE 24, PART 2, VOLUME 2
CHAPTER 23 - WOOD

Section 2301.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2301.1.2 - Editorial change - 2018 IBC relocated and renumbered previous section 2301.2 into section 2302.1.

Section 2304.12.1.4.1 – Language clarification in order to emphasize the curb must be at least 6” above the highest adjacent surface where water might pool (whether finished floor or exterior paved surface), which was the original intent.

Section 2304.12.2.5 - DSA amendment regarding positive drainage that was adopted as emergency regulations in collaboration with BSC and HCD in 2016 CBC has now been incorporated into Section 2304.12.2.5 in the 2018 IBC. Therefore the amended language that was added to 2304.12.2.5 via emergency regulations is being repealed and model code language is being adopted in section 2304.12.2.5 without further amendment.

Section 2304.12.2.6 - DSA amendment regarding ventilation that was adopted as emergency regulations in collaboration with BSC and HCD in 2016 CBC has now been incorporated into Section 2304.12.2.6 in the 2018 IBC. Therefore the amended language that was added as 2304.12.2.6 via emergency regulations is being repealed and model code language is being adopted in section 2304.12.2.6 without further amendment.

Per CAC comments, the following additional clarity has been provided.

DSA agreed with the SD/LF CAC recommendation of short-term further study for Section 2304.12.2.6 in collaboration with other co-adopting agencies, BSC and HCD. After further study, DSA, along with the other co-adopting agencies, is proposing to withdraw all previous amendments to these sections. The model code section will be adopted as it appears in the 2018 IBC.

The SDLF CAC also recommended further study, aligning with the BFO CAC recommendation, to address whether the use of the term “water” is appropriate. BFO CAC suggestions included looking at the inclusion of “vapor” and “moisture”.

The three co-adopting agencies met regarding the term “water”. The agencies concluded that the use of “water” is fundamental to all other further-compartmenting terms. “Water,” whether in a solid or gaseous state, will be at some point a liquid, which is the culprit in penetration of assemblies, and the target of these provisions. Additionally, since this is model language, the thinking is that concept of using only the term “water” has been thoroughly vetted. The conclusion of the agencies is to leave the proposed language regarding “water” as it currently appears in the ET, reflecting model text.

Sections 2308.2.7 and 2309.1.1 - Editorial changes updating renumbered section 2302.1.

TITLE 24, PART 2, VOLUME 2
CHAPTER 24 – GLASS AND GLAZING

Section 2401.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Sections 2410.1.1, 2410.1.2 and 2410.1.4 - This proposal replace the term “Structural Sealant Glazing” to “SSG” throughout to make all such references consistent throughout section 2410.

Section 2411 - DSA has elected not to adopt the language proposed by OSHPD this cycle due to effort required to review all test data for every mullion configuration on a project. Given the QA requirements, we feel this is low risk to reward. DSA also does not want to require special inspection of mullion fabrication.

TITLE 24, PART 2, VOLUME 2
CHAPTER 25 – GYPSUM BOARD, GYPSUM PANEL PRODUCTS AND PLASTER

Section 2501.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2508.6.6 - Section renumbered from 2508.5.6 to 2508.6.6 due to new Section 2508.4 Adhesives was added in 2018 IBC. No change in regulatory effect.

TITLE 24, PART 2, VOLUME 2
CHAPTER 26 – FOAM PLASTIC INSULATION

Section 2601.1 – Editorial revisions in order to utilize consistent terminology in Sections 1601.1, 1601A.1, 1701A.1, 1801A.1, 1901.1, 1901A.1, 2001.1, 2101.1, 2101A.1, 2201.1, 2201A.1, 2301.1, 2401.1, 2501.1, 2601.1. No regulatory change.

Section 2603.13.3 - This proposal adds new 2018 IBC section 2603.13 into 2019 CBC for attaching cladding over foam sheathing to wood framing. New DSA amendment in section 2603.13.3 was added to mirror the requirement to submit the attachment design to DSA for approval as per Section 2603.12.3 Cladding attachment over foam sheathing to cold-form steel framing.

TITLE 24, PART 2, VOLUME 2
CHAPTER 31 SPECIAL CONSTRUCTION

Section 3109 - This section has been completely rewritten in the 2018 IBC to reference the ISPSC-18. New DSA amendments pertain to the 2018 IBC model code language.

Section 3109.1 - This proposal requires swimming pools used for school purposes on or

off campuses to be designed in accordance with the 2018 Title 24 codes.

Section 3111.1 - This section has been completely rewritten in the 2018 IBC. New DSA amendments pertain to the 2018 IBC model code language.

Section 3111.1.1 - This provision adds reference to Chapter 15 for consistent specification of design wind loads for photovoltaic systems.

Section 3111.3 - This provision adds reference in Chapter 15 to structural requirements of photovoltaic panels and modules and their anchorage to the structure.

Section 3112.3 Exception - This proposal clarifies that design requirements for non-exempt greenhouses in accordance with Part 1, section 4-314 on public school sites shall comply with Chapter 16A.

Section 3113.1 - This provision clarifies that new buildings manufactured in accordance with the current code shall be enforced by the enforcement agency in accordance with their policies and procedures.

Section 3113.1.1 - This proposal clarifies that DSA will enforce design criteria for new relocatable buildings in accordance with their policies and procedures, and alterations to existing relocatable in accordance with adopted sections in the CEBC.

Section 3113.2 - Amendments to this section clarify that project submittal requirements for relocatable buildings for public schools shall also comply with adopted requirements in Chapter 16A.

Section 3113.3 - Amendment to this section allows DSA to enforce data plate information in accordance with their policies and procedures. Since these criteria change from time to time, DSA elects not to define in regulation.

Section 3113.4 - DSA elects not to adopt model code requirements for inspection agencies and amends section to require inspection in accordance with adopted administrative regulations in Part 1, Title 24, C.C.R.

TITLE 24, PART 2, VOLUME 2
CHAPTER 35 - REFERENCED STANDARDS

Section AAMA –

501.6—09 – Editorial correction.

TIR A8-16 – New amendment cites and incorporates this reference standard.

Section ACI -

355.2—07 – Editorial correction. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

355.4—11 – Editorial correction. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

506R–16 – Amendment is updating shotcrete guide reference standard. Correcting Sections referencing the standard.

530–13 – 2018 IBC eliminated this standard (ACI 530) and replaced it with TMS 402 and 602.

530.1–13 – 2018 IBC eliminated this standard (ACI 530.1) and replaced it with TMS 402 and 602.

Section AISC -

341–16 – Eliminating since 1707.2.2 does not exist and standard not included in 1708.3.

358–16 – Amendment is updating reference standard. Editorial correction.

Section AISI -

S100-16 – 2018 IBC now adopts the 2016 edition of this standard. Eliminating Sections not applicable. (1913.3.8 doesn't exist; IBC already references 1905.1 & 2010.2; 2211A.2 editorial correction; standard not referenced in 2212A.1.2).

S110–07/S1-09 (2012) – 2018 IBC eliminated this standard.

S214–12 – 2018 IBC eliminated this standard.

Section ANSI - A190.1–12 – 2018 IBC eliminated this standard from here and adopted most current version in its reference in APA.

Section APA –

ANSI 117–15 – 2018 IBC relocated this reference from WCLIB to APA, and 2303.1.3.1 added since it contains this standard.

ANSI/APA A190.1–17 – 1705A.5.4 added since it contains this standard.

Section ASCE/SEI –

5–13 – 2018 IBC eliminated this standard.

7–16 – Adding 1604A.4 since it contains the standard.

Adding 2212A.1.1 and 2212A.2.4 since they contain this standard. (Note-2212A.1.1 is DSA-SS only).

Eliminating since 3419.7.2 does not exist. Renumbering 1617.2, 1617.9, 1617.10 and 1617A due to 2018 IBC addition of Section 1616 (Tsunami Loads).

19–16 – 2018 IBC now adopts this edition of this standard. Eliminating 2208A.1 since 2018 IBC already references 2208.1.

24–14 – 2018 IBC now adopts this edition of this standard. Eliminating 1612A.4 and 1612A.5 since 2018 IBC already references 1612.4 and 1612.5.

41–17 – Eliminating 3406A since it does not reference this standard. Eliminating all 34XX references since Chapter 34 is blank/"Reserved". Renumbering 1617A.1.30

due to 2018 IBC addition of Section 1616 (Tsunami Loads). 1617A.1.34 added since it contains this standard.

49–12 – Eliminating 1609A.1.1 since 2018 IBC already references 1609.1.1.

Section ASTM –

A153/A153M–16a – Editorial correction.

A1064–17 – Editorial correction.

B695–04(2016) – Editorial correction.

C90–14 - Eliminating 2105A.2 since it does not reference the standard.

C94/C94M–17a – Editorial correction.

C114–10 – Eliminating since reference does not exist in CBC.

C144–04 – Eliminating this reference since this standard is now referenced in ACI-318.

C150/C150M–15 – Editorial changes.

C 270–14a – 2018 IBC now adopts this edition of this standard. Adding 2115.6.1 since it contains this standard. Adding 2115.6.1 since it contains this standard.

C595/C595M–17 – Editorial changes.

C618–17 – Editorial changes.

C635/C635M–17 – Renumbering 1617.10.16 and 1617A.1.21 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

C636/C636M–17 – Renumbering 1617.10.16 and 1617A.1.21 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

C989/C989M–17 – Editorial changes.

C1019–16 – Reference remains as a CA amendment. 2115.6.1 corrected since IBC added Section 2114 (Dry-Stack Masonry).

C1157/C1157M–17 – Editorial corrections.

C1249–06a(2010) – Editorial change.

C1392–00(2014) – Adding 2410.1.2 since it contains this standard.

D1586–11 – Editorial corrections.

D3966–07(2013) – Editorial correction.

D5778–12 – Editorial correction.

E580/E580M–174 – Eliminating Sections that no longer exist. Editorial corrections. Renumbering 1617.10.16 and 1617A.1.21 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

E648–15e1 – 2018 IBC now adopts this edition of this standard therefore it no longer needs to be shown as a CA amendment.

E662—17A – Editorial correction.

F606/F606M—16 – Editorial corrections.

Section AWC – ANSI/AWC NDS—2018 - Eliminating since 2018 IBC already references 1905.1.8.

Section AWPA – U1—16 – Editorial correction.

Section AWS –

D1.1/D1.1M—15 – Editorial correction.

D1.2/D1.2M—15 – DSA adding this reference as CA amendment.

D1.3/D1.3M—08 – Editorial correction.

D1.4/D1.4M—2017 – 2018 IBC adopts this more current version. Adding 1903A.8 since it contains this standard.

D1.8/D1.8M—2016 – Eliminating 1704.3.1.4, 2204A.1.1, 2204A.1.3, 2211.1 since they do not reference the standard. Adding Table 1705A.2.1 since it does reference the standard.

QC1—2016 – Editorial corrections. Eliminating 1704.3.1.4 since it does not reference the standard.

Section FM – FM 1950—2016 – Editorial correction.

Section ICC –

ICC-ES AC 01—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 58—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 70—18* – Editorial corrections. Renumbering 1617A.1.20 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 106—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 125—18* – Editorial correction.

ICC-ES AC 156—18* – Editorial correction.

ICC-ES AC 178—18* – Editorial correction.

ICC-ES AC 193—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 232—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 308—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

ICC-ES AC 358—18* – Editorial correction.

ICC-ES AC 446—18* – Editorial corrections. Renumbering 1617A.1.19 due to 2018 IBC addition of Section 1616 (Tsunami Loads).

Section ISO –

ISO/IEC 17020—12 – Editorial correction.

ISO/IEC 17025—17 – Editorial corrections.

Section PCI – MNL-120—17 – Editorial correction.

Section PTI - PTI DC35.1—14 – Editorial correction. Eliminated 1813A.2 since standard not included in this Section.

Section TMS –

402—2016 – Adding 2106A.1.1 since it contains this standard, and renumbering 2115.7 and 2115.8 due to 2018 IBC addition of Section 2114 (Dry-stack Masonry).

602—2016 – Adding 2103A.3.1, 2104A.1.3.1.2.1 and 2105.3 since they contain this standard.

Section UBC – Editorial correction.

Section WCLB – AITC 117—10 – Eliminated from WCLIB since 2018 IBC relocated standard to APA.

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

Government Code Section 11346.2(b)(3) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

2018 IBC: International Building Code.

2018 IEBC: International Existing Building Code.

ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other structures with Supplement No. 1

ASCE 24-14: Flood Resistant Design and Construction.

ASCE 41-17: Seismic Evaluation and Retrofit of Existing Buildings

ACI 318-14: Building Code Requirements for Structural Concrete and Commentary.

AISC 360-16: Specification for Structural Steel Buildings

AISC 341-16: Seismic Provisions for Structural Steel Buildings.

AISC 358-16: Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications including Supplement No. 1.

TMS 402-16: Building Code Requirements for Masonry Structures.

TMS 602-16: Specification for Masonry Structures.

AWC NDS-18: National Design Specification (NDS) for Wood Construction.

AWC SDPWS-2015: Special Design Provisions for Wind and Seismic.

STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS

Government Code Section 11346.2(b)(1) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.

Health and Safety Code (H&SC) Section 18941 requires consistency with state and nationally recognized standards for building construction in view of the use and occupancy of each structure to preserve and protect the public health and safety.

CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(4)(A)) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

DSA did not identify nor determine any reasonable alternatives to these regulations. The alternative to these proposed regulations would be to leave regulations as they are which will be inconsistent with H&SC 18941 requirements.

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

(Government Code Section 11346.2(b)(4)(B)) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

There will be no adverse impact on small business.

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

(Government Code Section 11346.2(b)(5)(A)) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business)

The regulations proposed will have no overall cost impact on business, since they are equivalent to current requirements in the Code. Technical updates to the national standards for structural design are incorporated, mostly by reference.

ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10))

The Division of the State Architect has assessed whether or not and to what extent this proposal will affect the following:

A. The creation or elimination of jobs within the State of California.

The Division of the State Architect did not identify any amended regulation that would lead to the creation or elimination of jobs.

B. The creation of new businesses or the elimination of existing businesses within the State of California.

The Division of the State Architect did not identify any amended regulation that would lead to elimination of existing businesses.

C. The expansion of businesses currently doing business within the State of California.

The Division of the State Architect did not identify any amended regulation that would lead to the expansion of businesses currently doing business with the State of California.

D. The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

The Division of the State Architect did not identify any amended regulation that would have a significant positive or adverse impact. These regulations will promote safer building design by the adoption of current national model codes, so that they will remain safe following major earthquake as required by statute.

ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS

(Government Code Section 11346.2(b)(5)(B)(i)) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

The proposed changes to the regulations are editorial to provide clarity, and do not result in an increase to the cost of compliance in the application and implementation of the California Building Code, since they are equivalent to current requirements. Technical updates to the national standards for structural design are incorporated, mostly by reference.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

(Government Code Section 11346.2(b)(6)) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B)

The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

These regulations do not duplicate or conflict with federal regulations.