

**45-Day STATEMENT OF REASONS  
FOR PROPOSED BUILDING STANDARDS  
OF THE OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT  
REGARDING THE 2022 CALIFORNIA BUILDING CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 2**

**(OSHPD 06/21)**

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 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.

In Part 2, Volume 1, OSHPD 2A and 2B were added and defined. This description is provided for review of Volume 2. Skilled nursing facility and intermediate care facility buildings of single-story, wood-frame, or light steel frame construction or buildings of single-story, wood-frame, or light steel frame construction where only skilled nursing or intermediate care services are provided if the building is separated from a building housing other patients of the health facility receiving higher levels of care, must not have additional requirements from the building code. Other facilities of all other types are allowed to have more stringent requirements due to safety and seismic concerns based on the building type and location. In order to distinguish between what must meet model code and what does not, OSHPD 2 has been split into two (2) categories. OSHPD 2A is for skilled nursing facility and intermediate care facility buildings of single-story, wood-frame, or light steel frame construction or buildings of single-story, wood-frame, or light steel frame construction where only skilled nursing or intermediate care services are provided if the building is separated from a building housing other patients of the health facility receiving higher levels of care and must meet model code requirements. OSHPD 2B skilled nursing facility and intermediate care facility buildings of all other types must meet the requirements designated by the OSHPD 2B banner. If the only designation is OSHPD 2, it applies to both 2A and 2B.

**Item 1**

**CHAPTER 16 STRUCTURAL DESIGN**

Adopt 2021 International Building Code (IBC) Chapter 16 for OSHPD 3. Adopt 2021 International Building Code (IBC) Chapter 16 for OSHPD 1R, 2 and 5 and carry forward existing amendments of the 2019 California Building Code (CBC).

**SECTION 1605 LOAD COMBINATIONS**

**1605.2 Alternative allowable stress design load combinations.**

Variable load requirement for the alternative allowable stress design load combinations is added as previously covered in 2018 IBC Section 1605.1.

Section 1605.1 in the 2018 (and earlier editions of the) IBC included the following sentence: "Each load combination shall also be investigated with one or more of the variable loads set to zero. The applicability of this requirement extended to Section 1605.3.2 Alternative basic load combinations.

ASCE 7-16 Section 2.3.1 (basic strength design load combinations) as well as Section 2.4.1 (basic ASD load combinations) contains the following statement: "Effects of one or more loads not acting shall be considered."

The 2021 IBC retained only the alternative basic ASD load combinations in Section 1605 and that all other load combinations would be deleted in favor of referencing ASCE 7-16, Section 1605.1. This requirement was overlooked and is added back in our amendment to be consistent with the requirements in ASCE 7 when variable loads apply.

### **SECTION 1613 EARTHQUAKE LOADS**

**Table 1613.2.3(1)** New amendment language for Site Class E and footnote c. to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

**Table 1613.2.3(2)** New amendment language in footnote c. to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

#### **CAC Recommendation (if applicable):**

Approve.

#### **Agency Response:**

Accept.

### **Item 2**

#### **CHAPTER 16A STRUCTURAL DESIGN**

Adopt 2021 International Building Code (IBC) Chapter 16A for OSHPD 1 and 4 as amended below in each Item. All existing California amendments that are not revised below shall continue without change.

### **SECTION 1605A LOAD COMBINATIONS**

#### **1605A.2 Alternative allowable stress design load combinations.**

Variable load requirement for the alternative allowable stress design load combinations is added as previously covered in 2018 IBC Section 1605.1.

Section 1605.1 in the 2018 (and earlier editions of the) IBC included the following sentence: "Each load combination shall also be investigated with one or more of the variable loads set to zero. The applicability of this requirement extended to Section 1605.3.2 Alternative basic load combinations.

ASCE 7-16 Section 2.3.1 (basic strength design load combinations) as well as Section 2.4.1 (basic ASD load combinations) contains the following statement: "Effects of one or more loads not acting shall be considered."

The 2021 IBC retained only the alternative basic ASD load combinations in Section 1605 and that all other load combinations would be deleted in favor of referencing ASCE 7-16, Section 1605.1. This requirement was overlooked and is added back in our amendment to be consistent with the requirements in ASCE 7 when variable loads apply.

**1605A.3 Modifications to load combinations in ICC 300.** Editorial changes to section numbering.

## **SECTION 1606A DEAD LOADS**

**1606A.6 Roof dead loads.** Updated pointer to model code reference since the numbering was changed from the last model code version.

## **SECTION 1607A LIVE LOADS**

**1607A.14.4.5 Ballasted photovoltaic panel systems.** Updated section number to model code reference since the numbering was changed from the last model code version.

**1607A.14.5 Uncovered open-frame roof structures.** Updated section number to model code reference since the numbering was changed from the last model code version.

**1607A.16 Interior walls and partitions.** Clarification that 5 psf loading requirement is an allowable stress design load.

**1607A.19 Seating for assembly uses.** Pointer to load combination requirements in Section 1605A.3 is relocated here from footnote c of Table 1607A.1.

## **SECTION 1613A EARTHQUAKE LOADS**

**Table 1613A.2.3(1)** New amendment language for Site Class E and footnote c. to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

**Table 1613A.2.3(2)** New amendment language in footnote c. to be consistent with ASCE 7-16 Supplement 3 as proposed in CBC Chapter 35.

### **CAC Recommendation (if applicable):**

Approve.

### **Agency Response:**

Accept.

## **Item 3**

### **CHAPTER 16A STRUCTURAL DESIGN**

#### **SECTION 1617A MODIFICATIONS TO ASCE 7**

**1617A.1.3 ASCE 7, Section 11.4. Modify ASCE 7, Section 11.4.** Includes the following: New amendment added to adopt ASCE 7-16 supplement 3 which updates various subsections in ASCE 7-16 Section 11.4 to the seismic ground motions values for clarity.

Permit use of the multi-period spectrum provided the requirements for generating the ground motion spectra as specified in the 2020 NEHRP provisions based on how the values from the spectra are applied is also met.

**1617A.1.5 ASCE 7, Section 12.2.3, 12.2.3.1, and 12.2.3.2.** This section is amended to incorporate the ballot change proposals related to combining of different lateral force resisting systems and the Two Stage Analysis Procedures that passed main committee ballot of ASCE 7-22, except for Section 12.2.3.2 item f. Section 12.2.3.2 item f is not permitted to allow the building height to be the limits of the combined upper and lower portions, since the upper portion will see amplified accelerations due to the response of the lower portion of the structure that is not consistent with the intent of the ground level based height limitations. Section 1617A.1.5 is relocated to Section 1617A.1.5.2. Section 1617A.1.6 is relocated to Section 1617A.1.5.3, Item h. Some of these amendments will need to be deleted when ASCE 7-22 is adopted to avoid duplication.

**1617A.1.10 ASCE 7, Section 12.3.3.1.** This section is amended to incorporate the ballot change proposals that passed main committee ballot of ASCE 7-22. Existing amendment in this section is retained as an alternate.

**1617A.1.14 ASCE 7, Section 12.12.3. [OSHPD 1 & 4]** This section was reserved and is now relocated amendment from 1617A.1.15.

**1617A.1.15 ASCE 7, Section 12.13.1.** Relocated amendment from 1617A.1.16.

**1617A.1.16 ASCE 7, Section 12.13.9.2.** New clarification language added to item b, that lateral building response including seismic load combinations do not need to be considered concurrently with differential settlements for shallow foundations on liquefiable sites. Absent this statement it may imply that force demands due differential settlements are additive to the seismic earthquake demands.

**1617A.1.18 ASCE 7, Section 13.1.4.** The “a” in section identifier as 13.1.4a is being deleted as this section is now being co-adopted by DSA.

Clarified that wall/roof or floor hung equipment exceeding 20lbs for discrete equipment or 5lb/ft for distributed systems are not exempt from the requirements if Chapter 13, and seismic design and details must be provided.

**1617A.1.26 ASCE 7, Section 13.6.7.3.** Amendment is revised and deleted the text, “Seismic Design Categories D, E & F”, as it was redundant. All amendments in the A chapters only pertain to SDC D, E and F. Strike out language about piping with  $I_p$  greater than 1.0, was previously taken out by OSHPD but not by DSA. This is shown here for consistency with DSA.

**1617A.1.27 ASCE 7, Section 13.6.11.1.** Clarification that minimum horizontal acceleration requirement is an allowable stress design load.

**1617A.1.28 ASCE 7, Section 13.6.11.4.** Clarification that minimum horizontal acceleration requirement is an allowable stress design load.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 4**

**CHAPTER 17 SPECIAL INSPECTIONS AND TESTS**

Adopt 2021 International Building Code (IBC) Chapter 17 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1R, 2 and 5 with the following modifications:

**SECTION 1705 REQUIRED SPECIAL INSPECTIONS AND TESTS**

**1705.3.9 Shotcrete. [OSHPD 1R, 2B & 5]** Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Previous amendment 1705.19 is carried forward as any similar language in ACI 506R is not written in as mandatory language and some aspects of this amendment are not included.

**1705.3.9.1 Visual examination for structural soundness of in-place shotcrete.**

Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Previous amendment 1705.19.1 is carried forward and relocated to this section.

**1705.3.9.2 Preconstruction tests.** Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Similar language in ACI 506R is not written in as mandatory language and some aspects of this amendment are not included.

**1705.5.5 Structural glued laminated and cross-laminated timber. [OSHPD 1R, 2B & 5]**

Renumbering due to model code insertion of 1705A.5.3 and corrected reference standard title. Further modifications ensure members exempted from special inspection are explicitly identified on construction documents and the nature of such members is clarified.

**CAC Recommendation (if applicable):**

Approve, except Further Study for Section 1705.3.9.2.

**Agency Response:**

Accept. Resolved Further Study by relocating sentence in Section 1705.3.9.2.

**Item 5**

**CHAPTER 17A SPECIAL INSPECTIONS AND TESTS**

Adopt 2021 International Building Code (IBC) Chapter 17A for OSHPD 1 and 4 as amended below in each Item. All existing California amendments that are not revised below shall continue without change.

**SECTION 1704A SPECIAL INSPECTIONS AND TESTS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION**

**1704A.5 Submittals to the building official.** Added reference pointer to Section 1705A.3.9.2 for requirements for shotcrete preconstruction tests has been added.

## **SECTION 1705A REQUIRED SPECIAL INSPECTIONS AND TESTS**

### **TABLE 1705A.2.1 REQUIRED SPECIAL INSPECTIONS AND TESTS OF STEEL**

**CONSTRUCTION** Revising references, generally based on relocations of testing and inspection items from material chapters to Chapter 17A.

Further reasons for specific items:

**1c, 5a.7, and footnote 'a'** Revising references based on relocations of testing and inspection items from material chapters to Chapter 17A. For footnote 'a' renumbered reference pointer based on model code renumbering.

**5b and sub-items** – Relocating to Table 1705A.3 and providing a reference pointer accordingly.

### **TABLE 1705A.2.3 REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB STEEL**

**JOISTS AND JOIST GIRDERS** footnote 'a' Renumbered reference pointer based on model code renumbering.

**1705A.2.5 Inspection and tests of structural welding.** Added reference to AWS D1.1 provisions on end welded shear studs.

**1705A.2.6 Special inspection and tests of high-strength fastener assemblies.** Added reference to applicable ASTM standards for testing.

### **TABLE 1705A.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE**

**CONSTRUCTION** Revising references, generally based on: a) relocations of testing and inspection items from material chapters to Chapter 17A; and b) updated reference standard from ACI 318-14 to ACI 318-19.

**1705A.3.2 Material tests.** Added pointer reference to testing of cementitious materials.

**1705A.3.9 Shotcrete.** Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Previous amendment 1705.19 is carried forward as any similar language in ACI 506R is not written in as mandatory language and some aspects of this amendment are not included.

#### **1705.3.9.1 Visual examination for structural soundness of in-place shotcrete.**

Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Previous amendment 1705.19.1 is carried forward and relocated to this section.

**1705A.3.9.2 Preconstruction tests.** Requirements for shotcrete were deleted from model code as they are now incorporated in ACI 318-19 which is adopted by the IBC. Similar language in ACI 506R is not written in as mandatory language and some aspects of this amendment are not included.

### **TABLE 1705A.5.3 REQUIRED SPECIAL INSPECTIONS OF MASS TIMBER**

**CONSTRUCTION** Added subsection numbers to major subsection for easier identification of the requirements.

**1705A.5.5 Structural glued laminated and cross-laminated timber.** Renumbering due to model code insertion of 1705A.5.3 and corrected reference standard title. Further modifications ensure members exempted from special inspection are explicitly identified on construction documents and the nature of such members is clarified. Associated change sections: 1705A.5.3.

**1705A.5.7 Mass Timber Construction.** Repealing 2019 intervening code language for 1705A.5.7 and Table 1705A.5.7 which was an early adoption of model code information now present in 1705A.5.3 and Table 1705A.5.3.

**1705A.6.3 Vibro stone columns.** Providing more specific reference pointer.

**1705A.8.1 Micropile tests.** Providing reference pointer for micropile tests.

**1705A.9.1 Helical pile tests.** Providing reference pointer for helical pile tests.

**1705A.10 Structural Integrity of deep foundation elements.** New section included in model code requires renumbering of subsequent sections and subsections and pointers within those sections.

**1705A.14.2.1 Structural sealant glazing testing.** Providing specific reference pointer for testing in Chapter 24.

**1705A.20 Sealing of mass timber.** Deleted section in coordination with DSA regarding Tall Wood and Mass Timber regulation.

**CAC Recommendation (if applicable):**

Approve, Recommended editorial correction to Table 1705A.3.

Further Study for Table 1705A.2.1, Section 1705A.2.6, Table 1705A.3 and Section 1705A.3.9.2.

**Agency Response:**

Accept. Editorial correction for Table 1705A.3 by changing CBC reference in item 14 1908A.3.

Further Study resolved for Table 1705A.2.1 by rearranging item 1.c CBC references, for Section 1705A.2.6 by adding OSHPD banner, and for Section 1705A.3.9.2 by relocating sentence in Section 1705A.3.9.2.

**Item 6**

**CHAPTER 18 SOILS AND FOUNDATIONS**

Adopt 2021 International Building Code (IBC) Chapter 18 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1R, 2 and 5 with the following modifications:

**SECTION 1810 DEEP FOUNDATIONS**

**1810.3.1.5.1 Helical piles seismic requirements. [OSHPD 1R, 2B & 5].** The model code

no longer contains the strength design load combinations or Section 1605.2.1 referenced. New reference is made to the applicable ASCE 7 load combinations.

**1810.3.3.1.9 Helical piles.** Ultimate capacities of helical piles are always required to be determined by load tests. Section 1810.3.3.1.2 specifies only those conditions under which load testing needs to be performed.

**1810.3.8 Precast concrete piles.** Exception 1 and 2 are effectively a continuation of the exception previously found in Sections 1810.3.8.3.2 and 1810.3.8.3.3 respectively, of the prior version of the model code (i.e., 2018 IBC). Because model code revisions have deleted the sections in which these exceptions previously occurred, they have been moved to the parent section. Current amendments to the prior model code did not permit the use of these exceptions. The proposed deletion of these exceptions is therefore a continuation of current amendments.

Continuing amendment is updated its citation to coordinate with the new adopted material standard (ACI 318-19).

**1810.3.9.4.1 Seismic reinforcement in Seismic Design Category C.** California amendment section 1613.2.5 classifies all other structures not in seismic F to Seismic Design Category D. Therefore, requirements applicable to Seismic Design Categories less than D do not apply and amendment is added for clarity.

**1810.3.10.4.1 Seismic requirements.** – Editorial, Reference revised to ASCE 7 citation due to the removal of load combinations from Section 1605 of the model code. Editorial, Incorrect ACI reference is being updated.

**1810.3.11.2 Seismic Design Categories D through F.** Exception where deep foundation elements are required to be connected to the pile cap for resisting uplift but not required when the connection is not required for stability of the structure under seismic loads is being deleted. This is new change in IBC 2021 not in previous versions of the code. This requirement does not satisfy the performance level for the risk category of these building.

**1810.3.12 Grade beams.** Adding a pointer to the section in ACI 318 where this exception where grade beams need not satisfy the seismic detailing requirements applies.

## **SECTION 1811 PRESTRESSED ROCK AND SOIL FOUNDATION ANCHORS**

**1811.3 Geotechnical requirements.** Current version of the adopted standard (PTI DC35.1-14), defines a third category of anchors based on service life termed “extended temporary” and defined by 2 to 5 years of service. Amendment clarifies the minimum requirement for corrosion protection of prestressed rock and soil foundation anchors that may still be considered as temporary but exceeds a period of two years.

**1811.4 Structural Requirements.** Reference revised to ASCE 7 citation due to the removal of load combinations from Section 1605 of the model code.

## **SECTION 1812 EARTH RETAINING SHORING [OSHPD 1R, 2B & 5]**

**1812.4.1 Geotechnical requirements.** Current version of the adopted standard (PTI DC35.1-14), defines a third category of anchors based on service life termed “extended



temporary” and defined by 2 to 5 years of service. Amendment clarifies the minimum requirement for corrosion protection of prestressed rock and soil foundation anchors that may still be considered as temporary but exceeds a period of two years.

**1812.4.2 Structural Requirements.** For earth retaining shoring, the reference section number for the structural requirements has been revised to ASCE 7 citation due to the removal of load combinations from Section 1605 of the model code.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 7**

**CHAPTER 18A SOILS AND FOUNDATIONS**

Adopt 2021 International Building Code (IBC) Chapter 18A and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1 and 4 with the following modifications:

**SECTION 1807A FOUNDATION WALLS, RETAINING WALLS AND EMBEDDED POSTS AND POLES**

**1807A.2.5** (formerly 1807A.2.4) Provisions added in Section 15.6.8 to the adopted version of ASCE 7 now govern the design of freestanding cantilever walls. A stability check however is still added to ensure the wall does not topple over. Reference to dividing by  $R_p$  does not apply and is deleted.

**SECTION 1808A FOUNDATIONS**

**1808A.8.2 Concrete cover.** Editorial revisions to correct ACI references in the 2021 IBC that were incorrect and possibly being corrected by errata.

**TABLE 1808A.8.2 MINIMUM CONCRETE COVER.** Editorial revisions to correct ACI references in the 2021 IBC that were incorrect and possibly being corrected by errata.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 8**

**CHAPTER 18A SOILS AND FOUNDATIONS**

**SECTION 1810A DEEP FOUNDATIONS**

**1810A.3.1.5.1 Helical piles seismic requirements.** Updating reference pointer from 1617A.1.16 to 1617A.1.15.

**1810A.3.3.1.9 Helical piles.** Ultimate capacities of helical piles are always required to be determined by load tests. Section 1810.3.3.1.2 specifies only those conditions under which load testing needs to be performed.

**1810A.3.6 Splices.** Deleted exemption when splices need not comply with the 50 percent tension and bending strength requirements permitted in Seismic Design Categories A and B not applicable for hospitals located in California where the minimum seismic design category is D.

**1810A.3.8 Precast concrete piles.** Exception 1 and 2 are effectively a continuation of the exception previously found in Sections 1810.3.8.3.2 and 1810.3.8.3.3 respectively, of the prior version of the model code (i.e., 2018 IBC). Because model code revisions have deleted the sections in which these exceptions previously occurred, they have been moved to the parent section. Current amendments to the prior model code did not permit the use of these exceptions. The proposed deletion of these exceptions is therefore a continuation of current amendments.

Continuing amendment is updated its citation to coordinate with the new adopted material standard (ACI 318-19).

**1810A.3.9.4.1 Seismic reinforcement in Seismic Design Category C.** California amendment section 1613A.2.5 classifies all other structures not in seismic F to Seismic Design Category D. Therefore, requirements applicable to seismic design categories less than D do not apply and amendment is added for clarity.

**1810A.3.10.4 Seismic requirements.** – Editorial, incorrect ACI reference is being updated.

**1810A.3.11.2 Seismic Design Categories D through F.** Exception where deep foundation elements are required to be connected to the pile cap for resisting uplift but not required when the connection is not required for stability of the structure under seismic loads is being deleted. This is new change in IBC 2021 not in previous versions of the code. This requirement does not satisfy the performance level for risk category IV buildings.

**1810A.3.12 Grade beams.** Adding a pointer to the section in ACI 318 where this exception where grade beams need not satisfy the seismic detailing requirements applies.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 9**

**CHAPTER 18A SOILS AND FOUNDATIONS**

**SECTION 1811A PRESTRESSED ROCK AND SOIL FOUNDATION ANCHORS**

**1811A.3 Geotechnical requirements.** Current version of the adopted standard (PTI DC35.1-14), defines a third category of anchors based on service life termed “extended temporary” and defined by 2 to 5 years of service. Amendment clarifies the minimum requirement for corrosion protection of prestressed rock and soil foundation anchors that

may still be considered as temporary but exceeds a period of two years.

**1811A.4 Structural Requirements.** Reference revised to ASCE 7 citation due to the removal of load combinations from Section 1605 of the model code.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 10**

**CHAPTER 18A SOILS AND FOUNDATIONS**

**SECTION 1812A EARTH RETAINING SHORING**

**1812A.4.1 Geotechnical requirements.** Current version of the adopted standard (PTI DC35.1-14), defines a third category of anchors based on service life termed “extended temporary” and defined by 2 to 5 years of service. Amendment clarifies the minimum requirement for corrosion protection of prestressed rock and soil foundation anchors that may still be considered as temporary but exceeds a period of two years.

**1812A.4.2 Structural Requirements.** For earth retaining shoring, the reference section number for the structural requirements has been revised to ASCE 7 citation due to the removal of load combinations from Section 1605 of the model code.

**1812A.4.3 Testing of tie-back anchors.** Sections 2 and 3 are relocated to Section 1812A.5 as these two requirements are more related to the construction aspects related to the testing.

**1812A.5 Construction.** Added a reference pointer to protection requirements of anchors depending on how long they will be in use.

Sections 2 and 3 from 1812A.4.3 are relocated to Section 1812A.5 as these two requirements are more related to the construction process.

**1812A.6 Inspection, survey monitoring and observation.** Design engineer “inspections” have been changed to “visits” to align with the Registered Design Professional’s observation responsibilities during construction.

**1812A.7 Monitoring of existing structures.** The OSHPD/DSA banner has been deleted as this section only applies to OSHPD/DSA and the banner is redundant.

**CAC Recommendation (if applicable):**

Approve

**Agency Response:**

Accept CAC recommendation for Item Number 10, except sub-item 06/21/10-5

Post CAC: Disagree with approval of CAM sub-item OSHPD 06/21-10-5 (Section 1812A.6). OSHPD proposes to Withdraw the following phrase in item #1 of this

section: “in accordance with section 1704A.6.” The addition of this phrase was initially proposed in the Express Terms as it appeared and was submitted to and approved by the SDLF CAC. The phrase also appeared in DSA’s Express Terms however in a different location with a different interpretation from OSHPD’s intent. In further review and coordination, OSHPD requested (and DSA agreed) to remove this phrase from the Express Terms since Criteria #1 of nine-point criteria was not satisfied and conflicted with DSAs amendment and is sufficiently related to other CAC recommendations for Further Study. See Section 1910A.5.5 within the Express Terms.

The addition of this phrase was not necessary in this amendment to correlate with DSA’s proposal, and OSHPD’s intent of the amendment as developed for coordination of Chapter 18A requirements for periodic visits for the purpose of observing shoring systems as required by Section 1704A.6 conflicted with the DSA requirements to perform periodic visits in accordance with Section 1704A.6. As the phrase is just a pointer and does not change the regulatory effect, it has been Withdrawn. However, the other proposed change to item #1 is still necessary to meet the intent of the amendment and remains unchanged from what was approved by the CAC.

## Item 11

### CHAPTER 18A SOILS AND FOUNDATIONS

#### **SECTION 1813A VIBRO STONE COLUMNS FOR GROUND IMPROVEMENT**

**Section 1813A.3 Shallow foundations.** The reference to VSC as “*deep foundation elements*” contradicts the fourth sentence of Section 1813A.1, which states: “*VSCs shall not be considered a deep foundation element.*” The amendment is modified to eliminate this contradiction for clarity.

**1813A.5 Construction documents.** Added item 6 to ensure VSCs achieve project site verified soil improvements specified in the geotechnical report prior to foundation construction commencement.

#### **CAC Recommendation (if applicable):**

Approve.

#### **Agency Response:**

Accept.

## Item 12

### CHAPTER 19 CONCRETE

Adopt 2021 International Building Code (IBC) Chapter 19 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1R, 2 and 5 with the following modifications:

#### **SECTION 1901 GENERAL**

**1901.3.4.3 Tests for Post-Installed Anchors in Concrete [OSHPD 1R, 2B & 5].** Tension testing post-installed anchors for nonstructural components, such as grab bars and shower seats creates an undue physical challenge and financial burden without increasing structural safety of the building.

**1901.3.4.5 Test Acceptance criteria.** An exception is added for tension test apparatus support locations for adhesive anchors with low tension loads and where concrete breakout in tension does not control the anchor design consistent with the DSA amendment.

## **SECTION 1905 MODIFICATIONS TO ACI 318**

**1905.1.7 ACI Section 14.1.4 [OSHPD 1R, 2B & 5].** This amendment to ACI 318 has been revised to not permit plain concrete in place of required longitudinal reinforcing of footings in Seismic Design Categories D, E and F. Item (b) of ACI 318 Section 14.1.4 does not apply since it is for detached one and two-family dwellings.

## **SECTION 1908 SHOTCRETE**

**1908.1 GENERAL. [OSHPD 1R, 2B & 5].** The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). The amendment requiring the minimum specified strength of concrete has been relocated to Section 1905.1.12 for consistency with the requirements of ACI 318.

In selected conditions where certain prescriptive requirements can be exceeded based on qualification or for qualification of the minimum reinforcement spacing requirements by use of a successful shotcrete mockup panel, ACI 506.4R is referenced for the evaluation of test panel results with a stipulated acceptance category given in ACI 506.6T.

**1908.2 Tests and Inspections. [OSHPD 1R, 2B & 5].** The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment provides a reference pointer to test and inspection requirements, including preconstruction tests, in Chapter 17. The amendment is, in part, a continuation of the amendment previously in Section 1908.5, which cannot remain in that location due to its removal from the model code. The amendment is also a coordination with the relocation of these requirements to Section 1705.3.9.2 for consistency with other special inspection and test requirements.

**1908.3 Forms and ground wires for shotcrete. [OSHPD 1R, 2B & 5].** Preceding repealed model code sections cause the amendment previously numbered Section 1908A.11 to be renumbered Section 1908.3.

**1908.12 Placing. [OSHPD 1R, 2B & 5].** Amendment repealed based on equivalent requirements being consolidated into Sections 1908.1 (placement in accordance with ACI 506R and ACI 506.2) and 1908.2 (special inspection and testing in accordance with Chapter 17) above.

## **SECTION 1910 ADDITIONAL REQUIREMENTS FOR SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, ACUTE PSYCHIATRIC AND NON-GAC BUILDINGS [OSHPD 1R, 2B & 5]**

**1910.3.4 ACI 318, Table 21.2.2** The new version of the material standard (ACI 318-19) adopted by the model code has revised the strain limit of “0.005” to “ $\epsilon_{ty}+0.003$ ” in Table

21.2.2. This change was made to accommodate higher strength steel reinforcement becoming more common in construction. To remain consistent with this change in the adopted material standard, the same term used in amendment footnote 2 is revised accordingly.

**CAC Recommendation (if applicable):**

Approve, except Further Study for Section 1901.3.4.3, Exception 6.

**Agency Response:**

Accept. Further Study resolved by re-writing Section 1901.3.4.3, Exception 6.

**Item 13**

**CHAPTER 19A CONCRETE**

Adopt 2021 International Building Code (IBC) Chapter 19A and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1 and 4 with the following modifications:

**SECTION 1901A GENERAL**

**1901A.2 Plain and Reinforced concrete.** Adding prohibition of plain concrete design and construction here that is carried over from the amendment to 2019 CBC Section 1906A.

**SECTION 1903A SPECIFICATION FOR TESTS AND MATERIAL**

**1903A.2 Special inspections.** Adding reference pointers for tests and inspection requirements.

**1903A.8 Welding of reinforcing bars.** Section reference updated to coordinate citation with its location in the new version of the adopted material standard (ACI 318).

**1905A MODIFICATIONS TO ACI 318**

**1905A.1 General.** Section reference updated to coordinate with subsequent amendments described and explained below.

**1905A.1.1, 1905A.1.2, 1905A.1.4, 1905A.1.5, 1905A.1.6, 1905A.1.7** Continued deletion of model code provision replaced with a continued amendment from the previous Code Adoption Cycle.

**1905A.1.3 ACI 318, Section 9.6.1.3.** Continued deletion of model code provision replaced with a continued amendment from the previous Code Adoption Cycle.

The amendment is revised to define a second condition whereby the provision contained in the adopted material standard (ACI 318) can be applied in members resisting seismic loads. Section 1617A.1.18 of this code results in the design of many foundation members for load combinations that include the overstrength factor. The overstrength factor is intended to yield a design that will remain essentially elastic in the design basis earthquake and the provision of the adopted material standard requires a strength approximately 33% larger than that. In this context additional steel resulting from the remaining provisions of the adopted standard is not deemed beneficial to the design that is not expected to see force levels that would otherwise require it. The sizes of foundation members are

frequently driven by soil properties, which can result in designs with large quantities of reinforcement if only the geometry based minimum steel requirements are permitted. The strength-based minimum steel limit is thus appropriate and beneficial to the design of foundation members based on load combinations with the overstrength factor, where the same structural performance can be expected. However, to prevent significant under-reinforcing of concrete, sufficient area of steel rebar is required to exceed the cracking moment of the concrete in the member.

**1905A.1.7** (Post CAC: Item Withdrawn)

**1905A.1.8** Editorial change to correct the 2021 IBC errata for this section. Post CAC this item was added to the Express Terms. The 2021 IBC errata did not update the ACI reference section in the heading to match the appropriate references in ACI 318-19.

**1905A.1.9** Continued amendment previously numbered Section 1905A.1.10 is renumbered to Section 1905A.1.9 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

**1905A.1.10** Continued amendment previously numbered Section 1905A.1.11 is renumbered to Section 1905A.1.10 to maintain the numerical order of the sections in the adopted material standard (ACI 318) being modified.

**1905A.1.11** Continued amendment previously numbered Section 1905A.1.12 is renumbered to Section 1905A.1.11 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

**1905A.1.12** Continued amendment previously numbered Section 1905A.1.9 is renumbered to Section 1905A.1.12 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified.

Amendment is continued from the previous Code Adoption Cycle with same regulatory effect. Changes to the presentation of the amendment are required due to changes made to the table and section of ACI 318 being modified. The minimum concrete strength remains 3,000 psi, as does the requirement that specified strengths over 8,000 psi require prior approval of the design method and acceptance criteria.

The minimum compressive strength for shotcrete applications has been relocated to this amendment from its previous location as an amendment to Section 1908A.1. This consolidates compressive strength requirements into a common amendment for clarity.

**1905A.1.13 ACI 318, Table 21.2.2** The new version of the material standard (ACI 318-19) adopted by the model code has revised the strain limit of “0.005” to “ $\epsilon_{ty}+0.003$ ” in Table 21.2.2. This change was made to accommodate higher strength steel reinforcement becoming more common in construction. To remain consistent with this change in the adopted material standard, the same term used in amendment footnote 2 is revised accordingly.

**1905A.1.15 ACI 318, Section 25.2.10.** Added back an existing model code language from Section 1908A.4.4 for shotcrete that was deleted from the IBC.

**1905A.1.16 ACI 318, Section 26.5.2.** The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment continues the previous model code requirement of former section 1908A.4.4 prohibiting shotcrete applied to spirally tired columns that is not found in ACI 318.

**1905A.1.17** Continued amendment previously numbered Section 1905A.1.15 is renumbered to Section 1905A.1.17 to maintain the numerical order of the sections in the new version of the adopted material standard (ACI 318-19) being modified. Post CAC, the ISOR is revised to reference 1905A.1.17 instead of 1905A.1.16 which was in the previous ISOR.

## **SECTION 1908A SHOTCRETE**

**1908A.1 GENERAL.** The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). The amendment requiring the minimum specified strength of concrete has been relocated to Section 1905A.1.12 for consistency with the requirements of ACI 318.

In selected conditions where certain prescriptive requirements can be exceeded based on qualification or for qualification of the minimum reinforcement spacing requirements by use of a successful shotcrete mockup panel, ACI 506.4R is referenced for the evaluation of test panel results with a stipulated acceptance category given in ACI 506.6T.

**1908A.2 Tests and Inspections.** The model code has repealed all shotcrete requirements in favor of those contained in the new version of the adopted material standard (ACI 318-19). This amendment provides a reference pointer to test and inspection requirements, including preconstruction tests, in Chapter 17A. The amendment is, in part, a continuation of the amendment previously in Section 1908A.5, which cannot remain in that location due to its removal from the model code. The amendment is also a coordination with the relocation of these requirements to Section 1705A.3.9.2 for consistency with other special inspection and test requirements.

**1908A.3 Forms and ground wires for shotcrete.** Preceding repealed model code sections cause the amendment previously numbered Section 1908A.11 to be renumbered Section 1908A.3.

**1908A.12 Placing.** Amendment repealed based on equivalent requirements being consolidated into Sections 1908A.1 (placement in accordance with ACI 506R and ACI 506.2) and 1908A.2 (special inspection and testing in accordance with Chapter 17A) above.

## **SECTION 1910A CONCRETE, REINFORCEMENT AND ANCHOR TESTING**

**1910A.5.3 Test Frequency.** Tension testing post-installed anchors for nonstructural components, such as grab bars and shower seats creates an undue physical challenge and financial burden without increasing structural safety of the building.



**1910A.5.5 Test acceptance criteria.** Clarified testing apparatus support distance may be reduced when adhesive bond strength in shear governed the anchor tension failure load and when the tension load demand is low compared to its tension capacity.

**CAC Recommendation (if applicable):**

Approve, Further Study for Section 1905A.1.7, Section 1910A.5.3, Exception 6. and Section 1910A.5.5, Exception.

**Agency Response:**

Accept. Further Study for Section 1905A.1.7 resolved by Withdrawing this section amendment as proposed and replacing with a similar amendment to Section 1901A.2. Modifying model code Section 1905A.1.7 would effectively delete existing OSHPD/DSA amendment which was not the intent. Revising the number would require renumbering subsequent sections and would be in conflict with amendments by DSA. Relocation of the amendment was the best solution to resolve nine point criteria #1. Post CAC: This item was added to the Express Terms, and not reviewed by CAC.

Further Study for Section 1910A.5.3, Exception 6, was resolved by re-writing Section 1910A.5.3, Exception 6 based on language being confusing. Revised language is based on nine point criteria #6 which is direct and clear. Further Study for Section 1910A.5.5, Exception was resolved by matching the amendment text of DSA. The words “denoted accordingly” was preferred to “explicitly stated”. While the original OSHPD language was adequate, conflict was resolved based on further study criteria #1. Additionally the amendment to Section 1812A.6 was modified to coordinate with DSA regarding periodic visits to job sites as required by Section 1704A.6.

Post CAC: Section 1905A.1.8. This item was edited to correct reference numbering.

**Item 14**

**CHAPTER 20 ALUMINUM**

Adopt 2021 International Building Code (IBC) Chapter 20 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1, 1R, 2, 4 and 5.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 15**

**CHAPTER 21 MASONRY**

Adopt 2021 International Building Code (IBC) Chapter 21 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1R, 2 and 5 with the following modifications:

**SECTION 2101 GENERAL**

**2101.2.2 Prohibition. [OSHPD 1R, 2B & 5]** Added reference to the reference standard

pertaining to design methods, systems, and materials not permitted by OSHPD.

## **SECTION 2103 MASONRY CONSTRUCTION MATERIALS**

**2103.1 Masonry units.** *[OSHPD 1R, 2B & 5]* Relocated text specified under “Construction” to “Masonry Construction Materials” in coordination with public comment from the Masonry Institute of America. No change in regulatory effect.

**2103.4 Metal reinforcement and accessories.** *[OSHPD 1R, 2B & 5]* Clarified that unidentified reinforcement also includes reinforcement without mill certification.

**2103.5 Air entrainment.** *[OSHPD 1R, 2B & 5]* Prohibiting use of Air-entraining materials or air-entraining admixtures in grout in coordination with public comment from the Masonry Institute.

## **SECTION 2104 CONSTRUCTION**

**2104.1 Masonry construction.** Struck out text is relocated to Section 2103.1. No change in regulatory effect.

**2104.2 Reinforced Grouted masonry.** *[OSHPD 1R, 2B & 5]* Clarified this section applies to reinforced grouted masonry, not for grouted masonry without reinforcement.

**2104.2.1** Struck out text is now included as modifications to TMS 402/602. No change in regulatory effect.

**2104.2.1, 2104.2.2, 22104.2.3, 2104.2.4 and 2104.2.5** Is relocated and revised text from sections 2104.2.1, 2106.1.1, modifying associated sections in TMS 602 in coordination with public comments received from the Masonry Institute of America. No net change in regulatory effect.

## **SECTION 2105 QUALITY ASSURANCE**

**2105.2 Compressive strength,  $f'_m$ .** *[OSHPD 1R, 2B & 5]* Reduced the minimum specified masonry compressive strength to be consistent with TMS 402 Section 9.1.9.1.1 based upon public comment from the Masonry Institute of America. References to masonry prism and unit strength methods in the previous amendments are deleted and the appropriate sections in TMS 602 are now being referenced. Clarified the exception for when higher compressive strengths are used.

**2105.3 Mortar and grout tests.** *[OSHPD 1R, 2B & 5]* References to masonry prism and unit strength methods in the previous amendments are deleted and the appropriate section in TMS 602 are now being referenced based on proportion specifications as given in the referenced ASTM standards.

**2105.4 Masonry core testing.** *[OSHPD 1R, 2B & 5]* Lowered the minimum threshold for masonry compressive strength from 2000 psi to 1500 psi where core tests are not required for non-bearing non-shear masonry walls.

**2105.5 Masonry prism method testing.** Repealing language that is redundant with the reference standard.

**2105.6 Unit strength method testing.** Repealing language that is redundant with the reference standard.

## **SECTION 2106 SEISMIC DESIGN**

**2106.1.1, 2106.1.2, 2106.1.3** Existing prescriptive text from 2106 and 2104 is relocated to these sections as modifications to associated sections in TMS 402. Revisions were made in coordination with public comment received from the Masonry Institute of America. No net change in regulatory effect.

## **SECTION 2107 ALLOWABLE STRESS DESIGN**

**2107.1 General.** Modified associated sections in TMS 402 with existing amendment language and added a new sub section. No net change in regulatory effect.

**2107.5 [OSHPD 1R, 2B & 5]** Modified associated sections in TMS 402 with existing amendment language. No net change in regulatory effect.

**2107.7 Masonry Compressive Strength. [OSHPD 1R, 2B & 5]** New subsection added which reduces the minimum specified masonry compressive strength to be consistent with TMS 402 Section 9.1.9.1.1 and modifies maximum strength for clay masonry in response to public comments received from the Masonry Institute of America. Maximum strength of concrete masonry remains the same as originally specified in the Section 2105 provisions.

## **SECTION 2108 STRENGTH DESIGN OF MASONRY**

**2108.1 General.** Deleted redundant exception for AAC Masonry as it is not permitted.

**2108.4 [OSHPD 1R, 2B & 5]** New subsection added which modifies TMS 402 for the maximum strength for clay masonry in response to public comment received from the Masonry Institute of America. Maximum strength of concrete masonry remains the same as originally specified in the Section 2105 provisions.

### **CAC Recommendation (if applicable):**

Approve, except Further Study for Section 2105.3.

### **Agency Response:**

Accept. Further Study resolved by re-lettering Section 2105.3 to match the DSA amendment.

## **Item 16**

### **CHAPTER 21A MASONRY**

Adopt 2021 International Building Code (IBC) Chapter 21A and carry forward existing amendments for OSHPD 1 and 4 with the following modifications:

#### **SECTION 2101A GENERAL**

**2101A.1.3 Prohibition:** Added reference to the reference standard pertaining to design methods, systems, and materials not permitted by OSHPD.

#### **SECTION 2103A MASONRY CONSTRUCTION MATERIALS**

**2103A.1 Masonry units.** Relocated text specified under "Construction" to "Masonry"

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Construction Materials” in response to public comment from the Masonry Institute. No change in regulatory effect.

**2103A.4 Metal reinforcement and accessories.** Clarified that unidentified reinforcement also includes reinforcement without mill certification.

**2103A.5 Air entrainment.** Prohibiting use of Air-entraining materials or air-entraining admixtures in grout in coordination with public comment from the Masonry Institute of America.

## **SECTION 2104A CONSTRUCTION**

**2104A.1 Masonry construction.** Struck out text is relocated to Section 2103A.1. No change in regulatory effect.

**2104A.1.3.1** Struck out text is now included as modifications to TMS 402/602. No change in regulatory effect.

**2104A.1.3.1.1 and 2104A.1.3.1.2** Existing sections 2104A.1.3.1 and it’s subsections are now relocated text and revised text in these sections modifying associated sections in TMS 402 and 602 in coordination with public comment received from the Masonry Institute. No net change in regulatory effect.

**2104A.1.3 Reinforced Grouted Masonry.** Clarified this section applies to reinforced grouted masonry, not for grouted masonry without reinforcement.

**2104A.1.3.1, 2104A.1.3.2, 2104A.1.3.3, 2104A.1.3.4, 2104A.1.3.5, 2104A.1.3.6, 2104A.1.3.7, 2104A.1.3.8, 2104A.1.3.9, 2104A.1.3.10, 2104A.1.3.10.1, 2104A.1.3.10.2, 2104A.1.3.10.3, 2104A.1.3.10.4, 2104A.1.3.10.5, 2104A.1.3.10.6, 2104A.1.3.11.1, 2104A.1.3.11.2** Contain relocated and revised text from existing sections 2104A.1.3.1, 2104A.1.3.1.1.1.1, 2104A.1.3.1.1.1.2, 2104A.1.3.1.2.1, 2104A.1.3.1.2.2, 2104A.1.3.1.2.3, and 2106A.1.1. modifying associated sections in TMS 402/602 in coordination with public comment received from the Masonry Institute. No net change in regulatory effect.

## **SECTION 2105A QUALITY ASSURANCE**

**2105A.2 Compressive strength,  $f'_m$ .** Revised minimum compressive strength to minimums permitted in TMS 402. Revised pointers to repealed amendments for unit strength and prism testing to reference the appropriate sections in TMS 602.

**2105A.3 Mortar and grout tests.** Repealed existing amendment and modified associated sections in TMS 402/602 with existing amendment language in coordination with public comment received from the Masonry Institute. No net change in regulatory effect.

**2105A.4 Masonry core testing.** Lowered the minimum threshold for masonry compressive strength from 2000 psi to 1500 psi where core tests are not required for non-bearing non-shear masonry walls.

**2105A.5 Masonry prism method testing.** Repealing language that is redundant with the reference standard.

**2105A.6 Unit strength method testing.** Repealing language that is redundant with the reference standard.

### **SECTION 2106A, SEISMIC DESIGN**

**2106A.1.1, 2106.1.2, 2106A.1.3** Existing amendment section 2106A.1.1 is repealed and relocated to these sections modifying associated sections in TMS 402/602 in coordination with public comment received from the Masonry Institute. No net change in regulatory effect.

### **SECTION 2107A, ALLOWABLE STRESS DESIGN**

**2107A.4 TMS 402, Section 8.3.4.4 Walls.** Repealed and revised existing amendment duplicative with the reference standard to instead modify the appropriate sections of TMS 402. No net change is regulatory effect.

**2107A.6 Masonry Compressive Strength.** New subsection added which reduces the minimum specified masonry compressive strength to be consistent with TMS 402 Section 9.1.9.1.1 and modifies maximum strength for clay masonry in response to public comments received from the Masonry Institute of America. Maximum strength of concrete masonry remains the same as originally specified in the Section 2105A provisions.

### **SECTION 2108A, STRENGTH DESIGN OF MASONRY**

**2108A.1 General.** Continued deleted redundant exception for AAC Masonry as it is not permitted. Revised numbering to include new added subsection.

**2108A.4 TMS 402, Section 9.1.9.1.1.** New subsection added which modifies TMS 402 requirements for the maximum compressive strength permitted for clay masonry to aligned with existing amendment intent in response to public comment received from the Masonry Institute of America. Maximum strength of concrete masonry remains the same as originally specified in the Section 2105A provisions.

#### **CAC Recommendation (if applicable):**

Approve, except Further Study for Section 2105A.3.

#### **Agency Response:**

Accept. Further Study resolved by re-lettering Section 2105A.3 to match the DSA amendment.

## **Item 17**

### **CHAPTER 22 STEEL**

Adopt 2021 International Building Code (IBC) Chapter 22 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1R, 2 and 5.

#### **CAC Recommendation (if applicable):**

Approve.

#### **Agency Response:**

Accept.

**Item 18**  
**CHAPTER 22A STEEL**

Adopt 2021 International Building Code (IBC) Chapter 22A for OSHPD 1 and 4 with the following modifications:

**SECTION 2211A COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION**

**2211A.1.3 Truss design.** This item is an existing amendment that was missed in the printed version of the 2019 CBC and is now being added back into the 2022 CBC.

**SECTION 2213A TESTING AND FIELD VERIFICATION**

**2213A.1 Tests of High-strength Bolts, Nuts and Washers.** Relocating some requirements from Section 2213A.1 to 1705A.2.6.

**2213A.2 Tests of end-welded studs.** Post CAC: Proposed amendment Withdrawn. No other amendments to this section are proposed.

**CAC Recommendation (if applicable):**

Approve, except Further Study for Sections 2213A.1 and 2213A.2.

**Agency Response:**

Accept. Further Study for Section 2213A.1 resolved with DSA by adding an OSHPD banner to the first paragraph to distinguish OSHPD adoption of Section 1705A.2.6 and Section 2213A.1.

Further Study for Section 2213A.2 resolved with DSA by Withdrawing its initial proposal to add its banner regarding its adoption of requirements of the AWS D1.1, Sections 7.7 and 7.8.

The Express Terms have been revised to coordinate these co-adopted sections with DSA.

**Item 19**  
**CHAPTER 23 WOOD**

Adopt 2021 International Building Code (IBC) Chapter 23 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1, 1R, 2, 4 and 5 with the following modifications:

**2303.1.3.1 Additional requirements. [DSA-SS, DSA-SS/CC AND OSHPD 1, 1R, 2B, 4 & 5]**

Post CAC: Item Withdrawn.

**2304.10.1.2 Connection fire resistance rating.** Repeal 2304.10.1.2 from 2019 intervening code cycle and adopt new 2021 IBC Section 2304.10.1 which has the same language.

**2304.10.2.1 Additional requirements [OSHPD 1, 1R, 2B, 4 & 5]** Renumbering what was 2304.10.1.1 to 2304.10.2.1 due to addition of 2304.10.1 by 2021 IBC.

**CAC Recommendation (if applicable):**

Approve, except Disapprove for Section 2303.1.3.1 amendment change.

**Agency Response:**

Accept, except Withdrawn for Section 2303.1.3.1 amendment change.

Disapprove resolved by Withdrawing the Section 2303.1.3.1 amendment change.

**Item 20**

**CHAPTER 24 GLASS AND GLAZING**

Adopt 2021 International Building Code (IBC) Chapter 24 for OSHPD 2. Adopt 2021 International Building Code (IBC) Chapter 16 for OSHPD 1, 1R, 4 and 5 and carry forward existing amendments of the 2019 California Building Code (CBC) with the following modifications:

**SECTION 2410 [OSHPD 1, 1R, 2B, 4 & 5] STRUCTURAL SEALANT GLAZING (SSG)  
2410.1.2 Testing and inspection.**

**Subsection 1** The reference to ASCE 7 Section 13.5.9.2 is removed for clarity, as the language contained therein contradicts the requirements of Item 1 by allowing engineering analysis in lieu of testing. ASCE 7 Section 13.5.9.2 does not include any testing requirements as implied. Its removal eliminates the misunderstanding that sometimes results from the contradiction without effectively changing the regulations. The second sentence from Item 6 (formerly Item f) is relocated to this section because it is a universal requirement of the testing and not specific only to the structural sealant product.

**Subsection 6** Second sentence relocated to Item 1 for the reason noted above.

**2410.1.3 Monitoring.** Revised reference to the appropriate ASTM standard for inspection frequencies for Short- and long-term periodic performance monitoring.

**2410.1.4 Construction Documents.** Added clarifying language regarding the nature of information provided on the construction documents, and a reference pointer as a new item to ensure owners are aware of expectations for monitoring.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 21**

**CHAPTER 25 GYPSUM BOARD, GYPSUM PANEL PRODUCTS AND PLASTER**

Adopt 2021 International Building Code (IBC) Chapter 25 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1, 1R, 2, 4 and 5.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 22**

**CHAPTER 26 PLASTIC**

Adopt 2021 International Building Code (IBC) Chapter 26 and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1, 1R, 2, 3, 4 and 5.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 23**

**CHAPTERS 27, 28, AND 29**

Entire Chapters 27, 28, and 29 not adopted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 24**

**CHAPTER 30 ELEVATORS AND CONVEYING SYSTEMS**

Adopt 2021 International Building Code (IBC) Chapter 30 for OSHPD 1R, 2, 3, 4 and 5.  
Adopt 2021 International Building Code (IBC) Chapter 30 for OSHPD 1 and carry forward existing amendments of the 2019 California Building Code (CBC).

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 25**

**CHAPTER 31 SPECIAL CONSTRUCTION**

Adopt 2021 International Building Code (IBC) Chapter 31 for OSHPD 1, 1R, 2, 3, 4 and 5.

**SECTION 3115 INTERMODAL SHIPPING CONTAINERS**

Clarified this section is not permitted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.



**Item 26**  
**CHAPTERS 31A, 31B, and 31C**

Entire Chapter 31A, 31B and 31C not adopted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 27**  
**CHAPTER 31D FOOD ESTABLISHMENTS**

Carry forward existing amendments of the 2019 California Building Code, Chapter 31D for OSHPD 1 and 4.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 28**  
**CHAPTER 31F MARINE OIL TERMINALS**

Entire Chapter 31F not adopted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 29**  
**CHAPTER 32 ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY**

Adopt 2021 International Building Code (IBC) Chapter 32 for OSHPD 1 and 4.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 30**  
**CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION**

Adopt 2021 International Building Code (IBC) Chapter 33 for OSHPD 1, 1R, 2, 3, 4 and 5.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 31**

**CHAPTER 35 REFERENCED STANDARDS**

Adopt 2021 International Building Code (IBC) Chapter 35 for OSHPD 3. Adopt 2021 International Building Code (IBC) Chapter 35 for OSHPD 1, 1R, 2, 4 and 5 and carry forward existing amendments of the 2019 California Building Code (CBC) with the following modifications:

**AAMA 501.4-19 and AAMA 501.6-19.** Amendment is adopting the latest standard.

**ACI 355.2—19 and ACI 355.4-19.** Amendment is updating reference standard and adding additional referenced sections.

**ACI 506.4R-94.** Amendment adopts this ACI document for evaluation of shotcrete bond and voids.

**ACI 506.6T-17.** Amendment adopts this ACI document for evaluating the results of pre-construction core testing for determining quality of contact between shotcrete and the reinforcing bars.

**ASCE/SEI 7-16** Amendment is adopting Supplements 2 and 3, in addition to Supplement 1.

**ASCE/SEI 49-12** – Repeal added reference standard from 2019 CBC and adopt 2021 IBC reference standards which are the same or updated.

**AISC 358-16/s1-18** – Editorial correction.

**ASTM C1394-20**, *Editorial correction.*

**ASTM C1019—16** – Editorial correction. Editorial correction.

**ASTM C1157/C1157M—17** – 2021 IBC now adopts this edition of this standard.

**ASTM C1249—18** – Amendment is updating reference standard.

**ASTM C1249—18** – Amendment is updating reference standard.

**ASTM C1392—20** – 2021 IBC now adopts this edition of this standard.

**ASTM C1394—20** – 2021 IBC now adopts this edition of this standard.

**ASTM D1586—20** – Amendment is updating reference standard.

**ASTM D5778—20** – Amendment is updating reference standard.

**ASTM E580/E580M—17** – Editorial correction.

**AWPA U1—20** – Amendment is updating reference standard. Editorial correction.

**AWS D1.1/D1.1M—15** – Editorial correction.

**AWS D1.2/D1.2M—14** – Amendment is updating reference standard.

**AWS D1.4/D1.4M—2018** – Editorial correction.

**AWS D1.8/D1.8M—2016** – Editorial correction.

**AWS QC1—2016** – Editorial correction.

**FM 1950—2016** – Editorial correction.

**ICC-ES AC01—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC58—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC70—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC106—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC125—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC156—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC178—21** – Amendment is updating reference standard. Editorial correction.

**ICC-ES AC358—21** – Amendment is updating reference standard. Editorial correction.

**ISO 9001-15** Editorial correction.

**NEHRP** – Amendment is adopting *NEHRP Recommended Seismic Provisions for New Building and Other Structures, Volume 1*, FEMA P-2082-1, September 2020 (1617A.1.3).

**TMS 402—2016** – Editorial corrections.

**TMS 602—2016** – Editorial corrections.

**UL 857—13** – Editorial correction.

**UL 61730-1—2017** – Editorial correction.

**UL 61730-2—2017** – Editorial correction.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 32**

**APPENDIX A, B, C, D, E, F, G, H, I and J**

Entire Appendices A, B, C, D, E, F, G, H, I, and J not adopted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 33**

**APPENDIX K**

2021 IBC Appendix K - Administrative Provisions, not adopted by OSHPD. OSHPD 2, carry forward existing 2019 CBC amendments, *Appendix K – GROUP R-3 AND GROUP R-3.1 OCCUPANCIES PROTECTED BY THE FACILITIES OF THE CENTRAL VALLEY*

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*FLOOD PROTECTION PLAN* into the 2022 CBC.

**CAC Recommendation (if applicable):**

Further Study based on 9 Point Criteria #6. CAC recommended coordination with BSC to resolve the vague charging language for this item in the Express Terms and ISOR.

**Agency Response:**

Accept. Resolved Further Study. After editorial coordination with BSC, OSHPD determined to revise the charging statement in the Express Terms to clarify that OSHPD adopts and carries forward existing amendments to the 2019 CBC Appendix K for OSHPD 2. OSHPD Does NOT adopt the 2021 IBC Appendix K.

**Item 34**

**APPENDIX L**

Adopt 2021 International Building Code (IBC) Appendix L and carry forward existing amendments of the 2019 California Building Code (CBC) for OSHPD 1 and 4.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**Item 35**

**APPENDIX M, N, O, and P and RESOURCE A**

Entire Appendices M, N, O and P and Resource A not adopted by OSHPD.

**CAC Recommendation (if applicable):**

Approve.

**Agency Response:**

Accept.

**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).

OSHPD has developed these provisions in consultation with the Hospital Building Safety Board (HBSB) in multiple Structural Nonstructural Subcommittee meetings over the past year. Meeting minutes are available on request.

The following documents were referenced in the determination of these proposed amendments:

- 2021 IBC: International Building Code.
- 2019 CBC: California Building Code

- ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other structures with Supplement Numbers 1, 2 and 3
- NEHRP 2020: NEHRP Recommended Provisions for New Buildings and Other Structures
- ACI 318-19: Building Code Requirements for Structural Concrete and Commentary
- ACI 506R-16: Guide to Shotcrete
- TMS 402-16 Building Code for Masonry Structures
- TMS 602-16 Specification for Masonry Structures
- 2021 IBC: International Building Code
- ASCE 24-14: Flood Resistant Design and Construction
- 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-2021: 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.

The proposed changes do not mandate any specific technologies or equipment and do not require any prescriptive standards.

### **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.

There were no alternatives for consideration by the Office. Proposed amendments will provide clarification and consistency within the code and are in alignment with national standards.

### **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.

Small businesses will not be adversely impacted by the proposed adoption, amendments, or repeal of code requirements.

## **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 Office identified that there will be no adverse economic impact on businesses on the basis that the provisions proposed are optional and are being proposed to allow facilities to provide services that better match their needs.

## **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) OSHPD 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 proposed regulations will not create or eliminate jobs within the State of California.
- B.** The creation of new businesses or the elimination of existing businesses within the State of California.  
The proposed regulations will not create new businesses or eliminate existing businesses within the State of California.
- C.** The expansion of businesses currently doing business within the State of California.  
The proposed regulations will not cause 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.  
OSHPD promulgates building standards regarding the design and construction of licensed health facilities to ensure the protection of the public's health and safety in the facilities. The proposed regulations are necessary for the continued preservation of the health, safety, and welfare of California residents through updated amendments. The regulations will not affect worker safety, or the state's environment.

## **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.

OSHPD finds that the proposed building standards will result in no cost, cost savings, and/or cost that is reasonable if the facility chooses to incorporate a specific building standard into the project design.

## **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.

The proposed regulations do not duplicate or conflict with Federal regulations.