Building Code

City of San Diego
2013 Building Regulations - Proposed Code Changes
(Revised 4-16-15)

Administrative

1. NOISE REGULATIONS

~~**§59.5.0701 Noise Insulation In Residential Buildings**~~

~~(a) Hotel, motel and apartment buildings, and dwellings other than detached single-family dwellings, shall conform with the provisions of Section T25-28 Noise Insulation Standards, of Article 4, Subchapter 1, Chapter 1, Division T25, Part 6, Title 24, California Administrative Code.~~

~~(b) Detached single-family dwellings proposed for construction on or after July 1, 1983, when located in an area with an aircraft generated community noise equivalent level (CNEL) of 65 decibel or greater, shall conform with the provisions of Subsection (e), entitled "Noise Insulation from Exterior Sources," of Section T25-28 referenced above.~~

~~(c) Sound level determinations for purposes of implementing this section shall be determined in accordance with the procedures set forth in Section 59.5.0206.~~

Reason: Repeal this section because it is redundant. The Section was adopted in 1982 because the 1979 UBC included Appendix Chapter 35 (page 668) that was not adopted by the city of San Diego. Additionally, these regulations are no longer consistent with 2013 CBC Section 1207 that does not regulate hotels. Additionally the general plan and Chapter 13 Article 2 Division 15 of the Land Development Code address outdoor noise. Discretionary permits may address exterior noise issues but generally the impact of the development on a neighboring community.

2. SIGN REGULATIONS

Modify the sign regulations for consistency with new CBC and CFC regulations for signage on high-rise buildings.

Text as it appears in 2013 CBC.

2013 CBC Section *705.12* *Exterior graphics on exterior walls of high-rise buildings. Where installed on the exterior walls of high-rise buildings, exterior graphics, both permanent and temporary, greater than 100 square feet in area or greater than 10 feet in either dimension shall comply with the following conditions subject to the review and approval of the fire code official and building official:*

1. *The materials used for graphics installed at a height greater than 40 feet above the grade plane shall be noncombustible materials or shall have a flame spread index not greater than* 25 *when tested in accordance with ASTM E* 84 *or UL 723.*
2. *The method of attachment and mounting of the graphics to the exterior wall shall be such that the graphics are securely attached.*
3. *The graphics shall not interfere with the active or passive ventilation required for the building and the required smoke control systems in the building.*
4. *The graphics shall not impair the functions of any fire or life safety systems in the building.*

Text as it appears in LDC.

§142.1210 General Sign Regulations

This section is divided into subsections for copy regulations, locational regulations, structural regulations, and *sign* maintenance regulations.

(Subsection (a) through (b) no change)

(c) Structural Regulations

(1) *Signs* and *sign*-supporting *structures* shall be listed by a recognized testing laboratory and constructed in compliance with the requirements of the ~~Uniform~~

~~Building Code~~ Building Regulations and ~~National Electrical Code~~ the Electrical Regulations as adopted by the City of San Diego. Exposed-tube neon *signs* shall be constructed and installed in compliance with the ~~National Electrical Code~~ the Electrical Regulations as adopted by the City of San Diego.

(2) Guy wires or angle iron *structures* that are used as *sign* supports shall not be visible from *public rights-of-way*. *Sign* supports shall appear to be an integral part of the *sign*.

(3) The supports for all *signs* or *sign structures* shall be placed entirely within the boundaries of the *premises* on which the *sign* is located.

(4) When installed on the exterior walls of high-rise buildings as defined in Chapter 4 of the California Building Code, exterior wall signs greater than 100 square feet in area or greater than 10 feet in either dimension shall comply with Section 705.12 of the 2013 California Building Code and Section 705.1 of the California Fire Code.

Reason: Update Section 142.1210 (c) and add item # 4. The 2013 CBC and CFC regulate the combustibility of signs as well as obstructions caused by signs placed on high rise building facades.

3. ADOPT APPENDIX L FOR EARTHQUAKE INSTRUMENTATION

Adopt appendix L which addresses earthquake instrumentation for certain buildings.

Text as it appears in LDC.

§145.0107 Adoption of Appendices to the ~~2010~~ 2013 California Building Code

The following Appendix Chapters of the 2010 California Building Code are adopted by the City of San Diego:

(a) Appendix chapters specifically amended by a State agency listed in Section 145.0103 and identified in the adoption matrices of the ~~2010~~ 2013 California Building Code.

(b) Appendix Chapter C, Group "U" Agricultural Buildings.

(c) Appendix Chapter I, Patio Covers.

(d) Appendix Chapter J, Grading.

(e) Appendix L Earthquake Recording Instrumentation excluding amendments by OSHPD.

Reason: Will increase the number of seismically instrumented buildings which will aid in improving ground motion data to assist in the design of multi-story buildings performing dynamic analysis. Currently two buildings are instrumented in the City of San Diego.

4. REPEAL LIVE WORK REGULATIONS

~~**§145.0419 Local Modifications and Additions to Section 419 "Live/Work Units" of the 2010 California Building Code**~~

~~Section 419 of the 2010 California Building Code is adopted with the addition of Section 419.9. 419.9 Plumbing. The applicable requirements of the California Plumbing Code shall apply to each portion of the live/work unit based on the use in each portion.~~

Reason: The regulations above are proposed to be repealed since Section 419.7 and Section 419.9 clarify the accessibility and plumbing code regulations apply based on the function in the residential area.

5. RESIDENTIAL CLOTHES DRYER EXHAUST IN COMMON SHAFT

Text as it appears in CBC

2013 CBC Section 717.5.3 Shaft enclosures, exception 5.

5. Fire dampers and combination fire/smoke dampers are not required in kitchen and clothes dryer exhaust systems when installed in accordance with the *California Mechanical Code.*

Text as it appears in LDC

145.0701 Local Modifications and Additions to Chapter 7 "Fire-Resistance Rated Construction" of the ~~2010~~ California Building Code

(a) Chapter 7 of the ~~2010~~ California Building Code is adopted by reference ~~without change pursuant to Section 145.0103~~ with modifications pursuant to Section 145.0105 and additions pursuant to Section 145.0106 of the Land Development.

(b) Chapter 7A of the ~~2010~~ California Building Code is adopted by reference with modifications pursuant to Section 145.0105 and additions pursuant to Section 145.0106 of the Land Development Code.

145.0717 Local Additions and Modifications to Section 717 "Ducts and Air Transfer Openings" of the California Building Code

(a) Section 717.5.3 Shaft enclosures, exception 5 is adopted with modifications pursuant to Section 145.0105 and additions pursuant to Section 145.0106 of the Land Development Code of the Land Development Code as follows.

(1) Exception 5. Fire dampers and combination fire/smoke dampers are not required in kitchen and clothes dryer exhaust systems when installed in accordance with the California Mechanical Regulations of the Land Development Code.

Reason: The proposed modification to Section 717.5.3 exception 5 is to reference the requirements in amendments to Section 504.3 of the California Mechanical Code that is based on Section 504.8 of the International Mechanical Code. The 2013 International Building Code is adopted by transcription into the 2013 California Building Code and is not correlated with the IMC. The California Mechanical code adopts the Uniform Mechanical Code by transcription and not the IMC. As a consequence the CMC does not completely address the configuration of shafts with combined ducts that can be exempted from fire dampers. Section 504.8 of the IMC is proposed to be adopted as a CMC amendment in Section 148.0504 of the LDC.

6. UPDATE REFERENCE TO THE VERY HIGH FIRE HAZARD SEVERITY ZONE MAP

This code change s necessary to revise the reference to the VHFHSZ map

Text as it appears in LDC

§145.0703 Local Additions and Modifications to Section 702A "Definitions" and Section 703A "Standards of Quality" of the ~~2010~~ California Building Code

(a) Section 702A is adopted by reference with modifications pursuant to Section 145.0105 of the Land Development Code as follows:

(1) *Accessory building* and structure shall mean *accessory structure* as defined in Section 113.0103 of the San Diego Municipal Code.

(2) Local Agency Very High Fire Hazard Severity Zone shall mean the Very High Fire Hazard Severity Zones as designated on the "Very High Fire Hazard Severity Zone Map – Local Responsibility Areas" adopted pursuant to Section ~~55.5001~~ 55.9401 of the San Diego Municipal Code.

(b) **Reason:** The California Fire Code amendments relocated Article 5 Division 50 "Very High Fire Hazard Severity Zone" to a new Division 94 due to renumbering in the CFC. Reference to the map is necessary for application of Ch 7A building standards in the CBC.

7. OMISSION OF ATTIC VENTILATION.

Update the attic ventilation in the CBC for consistency with the CRC which addresses the construction of unventilated attics.

Text as it appears in 2013 California Residential Code

R806.5 Unvented attic and un-vented enclosed rafter assemblies. Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) and unvented enclosed rafter assemblies (spaces between ceilings that are applied directly to the underside of roof framing members/rafters and the structural roof sheathing at the top of the roof framing members/rafters) shall be permitted if all the following conditions are met:

1. The unvented attic space is completely contained within the building thermal envelope.
2. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the un-vented attic assembly or on the ceiling side of the unvented enclosed rafter assembly.
3. Where wood shingles or shakes are used, a minimum 1/4-inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In *California Climate Zones* 14 *and* 16, any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class III vapor retarder coating or covering in direct contact with the underside of the insulation. *See Title* 24, *Part* 6, *Figure 100.1-A-California Climate Zones.*
5. Either Items 5.1, 5.2 or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. *No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous layer shall be considered to exist if sheathing, roofing paper or any continuous layer which has a perm rate of no more than one perm under the dry cup method.*
   - 5.1. Air-impermeable insulation only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.
   - 5.2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation with an R-value of R-4 shall be installed directly above the structural roof sheathing for condensation control.

5.3. Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

5.4. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

Text as it appears in LDC

§145.1203 Local Modifications and Additions to Section 1203 "Ventilation" of the California Building Code

Section 1203.2 of the ~~2010~~ California Building Code is adopted with additions and modifications pursuant to Sections 145.0105 and 145.0106 of the Land Development Code. Section 1203.2 is modified by ~~adding an exception as follows: Attic ventilation shall not be required when determined not necessary by the Building Official due to atmospheric or climatic conditions.~~ adding Section 1203.2.2.

(a) 1203.2.2 Unvented attics and unvented enclosed rafter assemblies. Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) and unvented enclosed rafter assemblies (spaces between ceilings that are applied directly to the underside of roof framing members/rafters and the structural roof sheathing at the top of the roof framing members/rafters) shall be permitted if all the following conditions are met:

(1) The unvented attic space is completely contained within the building thermal envelope.

(2) No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the un vented attic

assembly or on the ceiling side of the unvented enclosed rafter assembly

(3) Either Items 1, 2 or 3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous layer shall be considered to exist if sheathing, roofing paper or any continuous layer which has a perm rate of no more than one perm under the dry cup method.

1. Air-impermeable insulation only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.
2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation with an R-value of R-4 shall be installed directly above the structural roof sheathing for condensation control.
3. Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.
4. Where preformed insulation board is used as the air-impermeable insulation layer, it shall

be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

Reason: The proposed repeal of the attic ventilation exception is due to the addition of exception # 3 in CBC Section 1203.2. However the CBC is not consistent with the CRC in that requirements for the construction of unventilated attics are not included. As a consequence new subsection (a) is proposed based on CRC Section R806.5 "Unvented attic and un-vented enclosed rafter assemblies" including applicable HCD amendments relevant to the City of San Diego, for example climate zones 14 and 16 do not exist in the City of San Diego so condition # 4 not included . Additionally no new wood covered roofs are permitted in the City of San Diego and it is assumed that existing wood covered roofs have ventilated attics so those requirements are not included either. The proposed code change adopts by transcription into the LDC as an amendment to the CBC based on CRC Section R806.5.

8. OTHER NOISE REGULATIONS IN THE LDC

Text as it appears in the 2015 supplement of the 2013 CBC

1207.1 Scope. This section shall apply to common interior walls, partitions and floor-ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public areas such as halls, corridors, stairs or service areas.

1207.2 Air-borne sound. Walls, partitions and floor/ceiling assemblies separating dwelling units from each other or from public or service areas shall have a sound transmission class (STC) of not less than 50 (45 if field tested) for air-borne noise when tested in accordance with ASTM E 90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to dwelling unit entrance doors; however, such doors shall be tight fitting to the frame and sill.

1207.2.1 Masonry. The sound transmission class of concrete masonry and clay masonry assemblies shall be calculated in accordance with TMS 0302 or determined through testing in accordance with ASTM E 90.

1207.3 Structure-borne sound. Floor/ceiling assemblies between dwelling *units and sleeping* units or between a dwelling *unit or sleeping* unit and a public or service area within the structure shall have an impact insulation class (IIC) rating of not less than 50 (45 if field tested) when tested in accordance with ASTM E 492.

Exception: *Impact sound insulation is not required for floor-ceiling assemblies over nonhabitable rooms or spaces not designed to be occupied, such as garages, mechanical rooms or storage areas.*

1207.4 Allowable interior noise levels. *Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be either the day-night average sound level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.*

Text as it appears in the LDC

§145.1207 Local Additions and Modifications to Section 1207 "Sound Transmission" of the California Building Code

(a) Section 1207 of the California Building Code is adopted with additions and modifications pursuant to Sections 145.0105 and 145.0106 of the Land Development Code.

(b) Add Section 1207.5 as follows. For additional noise regulations limiting the intrusion of exterior noise into buildings based on land use standards see Chapter 13 Article 2 Division 15 of the Land Development Code. For additional noise regulations limiting the intrusion of exterior noise into non-residential buildings based on the California Green Building Standards Code see Section 5.507.

Reason: The proposed addition of Section 1207.5 references the Airport Land Use Compatibility Plan (ALUC) regulations for outside noise. The California Department of Housing and community Development has decided to not transcribe text in the 2013 CBC from the Health and Safety Code. The City of San Diego Land Use regulations address appropriateness of developments and uses relative to noise sources through the General Plan and through the project Discretionary Review process.

9. FIRE CLASSIFICATION FOR INTEGRATED AND FRAME MOUNTED SOLAR PV

Text as it appears in the CBC

1505.8 Building integrated photovoltaic systems. *Effective January 1, 2015,* Rooftop installed *building integrated* photovoltaic systems that *serve as* the roof covering shall be *listed and* labeled for fire classification in accordance with Section 1505.1.

1505.9 Photo voltaic panels and modules. *Effective January 1, 2015,* Rooftop mounted photovoltaic systems shall be tested, listed and identified with a fire classification in accordance with UL 1703. The fire classification shall comply with Table 1505.1 based on the type of construction of the building.

Text as it appears in the LDC.

145.0104 Portions of the ~~2010~~ 2013 California Building Code Not Adopted by the City of San Diego

The following portions of the ~~2010~~ 2013 California Building Code are not adopted by the City of San Diego:

(a) Chapter 1, Division II "Scope and Administration."

(b) Chapter 15, Roof Assemblies and Roof Structures, ~~Table 1505.1 and~~ Section 1510.4.

(c) Chapter 29, Plumbing Systems.

§145.1501 Local Modifications and Additions to Chapter 15 "Roof Assemblies and Roof Top Structures" of the ~~2010~~ California Building Code

(a) Chapter 15 of the ~~2010~~ California Building Code is adopted by reference with additions and modifications pursuant to Sections 145.0105 and 145.0106 of the Land Development Code.

(b) Sections 1501 through 1504 and Sections 1505 ~~(except for Table 1505.1)~~, 1506, 1508 and 1509 are adopted by reference without change pursuant to Section 145.0103 of the Land Development Code.

(c) Sections 1505.1, 1507.8 and 1507.9 are adopted by reference with modifications pursuant to Section 145.0105 of the Land Development Code.

(d) ~~Table 1505.1 is not adopted by reference by the City of San Diego pursuant to Section 145.0105 of the Land Development Code.~~

Reason: The proposed deletion of Section 145.1501 (d) is necessary for the determination of the required fire classification requirements for roof top mounted solar photovoltaic panels and modules and for consistency with the California State Fire Marshal amendments in Section 1505.9 of the CBC.

This deletion does not change the City of San Diego requirement that all new roofs be constructed with Class A roofs since Section 145.0505 (a) (1) modifies Section 1505.1 of the CBC and does not adopt the reference to the Table.

Solar photovoltaic's located on roofs of buildings in the Very high Fire Hazard Severity Zone require Class A and all others require a fire classification as required in the CBC table.

10. WOOD SHAKE AND SHINGLE ROOFS EDITORIAL CORRECTION

Correct a section reference error that was not identified during the 2010 Code adoption cycle.

Text as it appears in the LDC.

145.1510 Local Additions and Modifications to Section 1510 "Reroofing" of the ~~2010~~ California Building Code

(subsection a and b no change)

(c) Sections 1510.1.3 through 1510.1.5 are added pursuant to Section 145.0106 of the Land Development Code:

(1) 1510.1.3. Wood shakes and shingles are prohibited throughout the roof where more than twenty-five percent of the total roof area is replaced, altered or repaired within any twelve month period.

(2) 1510.1.4. Wood shakes and shingles are not permitted, except as provided in California Historical Building Code

Section 8-408 and Land Development Code Section ~~145.1510~~ 145.1510 (c) (1).

(3) 1510.1.5. No roof covering shall be applied over any existing wood shakes or wood shingles.

Reason: The modification to 145.1510 (c) (1) is editorial and corrects an inadvertent error. If the proposed change is not made then subsection 2 would make subsection 1 moot.

11. FIRE TRUCK AND EMERGENCY VEHICLE LOADS

Text as it would appear in CBC

1607.7.2 Fire truck and emergency vehicles. Where a structure or portions of a structure are accessed and loaded by fire department access vehicles and other similar emergency vehicles, the structure shall be designed for the greater of the following loads:

1. The actual operational loads, including outrigger reactions and contact areas of the vehicles as stipulated ~~and approved by the building official~~ for ~~bridges and elevated~~ driving surfaces in Section ~~503.2.6~~ D102.1 in Appendix Chapter D of the California Fire Code ; or
2. The live loading specified in Section 1607.7.1.

Text as it would appear in LDC

§145.1607 Local Modifications and Additions to Section 1607 "Live Loads" of the of the California Building Code

(a) Section 1607.7.2 is modified with additions as follows pursuant to Section 145.0105 and Section 145.0106 of the Land Development Code.

(b) 1607.7.2 Fire truck and emergency vehicles. Where a structure or portions of a structure are accessed and loaded by fire department access vehicles and other similar emergency vehicles, the structure shall be designed for the greater of the following loads:

(1) The actual operational loads, including outrigger reactions and contact areas of the vehicles as stipulated and approved by the building official for ~~bridges and elevated~~ driving surfaces in Section ~~503.2.6~~ D102.1 in Appendix Chapter D of the California Fire Code of the California Fire Code ; or

(2) The live loading specified in Section 1607.7.1.

Reason: The modification to Section 1607.7.2 # 1 is necessary to correlate the Section with Section 503.2.6 of the California Fire Code http://www.ecodes.biz/ecodes_support/free_resources/2013California/13Fire/PDFs/Chapter%205%20-%20Fire%20Service%20Features.pdf that requires the design to be per AASHTO HB-17. The City of San Diego does not require special loading for fire apparatus access roads other than that specified in the CBC and CFC. The Fire Rescue Department will be updating policy FPB A-08-1 "FIRE ACCESS ROADWAYS" http://www.sandiego.gov/fire/pdf/access.pdf to reference the loading in AASHTO HB-17 and will repeal the current requirement in the policy that requires the elevated roadway to support the imposed load of a minimum 95,000 pound vehicle load.

Note: Text shown in double underline or ~~double strike through~~ reflects additions and deletions since the publication of the November 8, 2015 version. This is necessary for consistency with the Fire Rescue Department adoption of appendix Chapter D and their proposal to repeal policy FPB A-08-1.

12. Flood hazard map reference

Text as it appears in CBC

1612.3 Establishment of Flood Hazard areas. ~~To establish flood hazard areas, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for [INSERT NAME OF JURISDICTION]," dated [INSERT DATE OF ISSUANCE], as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.~~

Text as it appears in LDC

§145.1612 Local Modifications and Additions to Section 1612 "Flood Loads" of the of the California Building Code

(a) Section 1612.3 is modified as follows pursuant to Section 145.0105 of the Land Development Code.

(1) 1612.3 Establishment of flood hazard areas. Flood Hazard Areas within the City of San Diego are established in Section §143.0145 of the Land Development Code.

(2) For additional regulations for construction in special flood hazard areas see Section §143.0145 and §143.0146 of the Land Development Code.

Reason: The modification to Section 1612.3 is to reference the City flood hazard map and to identify other local flood regulations.

13. IMPORTANCE FACTOR FOR DISPLACEMENTS WITHIN STRUCTURES

~~**§145.1613 Local Additions and Modifications to Section 1613 "Earthquake Loads" of the 2010 California Building Code**~~

~~Subsections 1613.8.1 and 1613.8.2 are added as follows pursuant to Section 145.0106 of the Land Development Code:~~

~~(a) **1613.8.1 P-delta Effects.** Modify equation 12.8-16 in Section 12.8.7 of ASCE 7-05 by adding the importance factor I as follows:~~

~~$$\theta = \frac{P_x \Delta I_e}{V_x h_{sx} C_d}$$ (Equation 12.8-16)~~

~~(b) **1613.8.2 Displacements Within Structures.** Modify equations 13.3-5, 13.3-6, 13.3-7 and 13.3-8 in Section 13.3.2.1 of ASCE 7-05 10 by adding the importance factor I as follows:~~

~~(1) $\Delta_p = (\delta_{xA} - \delta_{yA})\ I_e A$ (Equation 13.3-5)~~

~~(2) $\Delta_P = \frac{(h_x - h_y)\Delta_{aA}}{h_{sx}} I_{eA}$ (Equation 13.3-6)~~

~~(3) $\Delta_P = |\delta_{xA} I_{eA}| + |\delta_{yB} I_{eB}|$ (Equation 13.3-7)~~

~~(4) $\Delta_P = \frac{h_x \Delta_{aA}}{h_{sx}} I_{eA} + \frac{h_y \Delta_{aB}}{h_{sx}} I_{eB}$ (Equation 13.3-8)~~

~~***where***~~

~~I_{eA} = the importance factor for structure A pursuant to Section 11.5.1 of ASCE 7-05.~~

~~I_{eB} = the importance factor for Structure B pursuant to Section 11.5.1 of ASCE 7-05.~~

Reason: The proposed update is necessitated due to changes in ASCE 7-10 that now address the concerns that were covered in the amendments published in subsection a and b. Section 12.8.7 now accounts for I_e when P delta effects are determined. Additionally ASCE 7-10 Section 13.3.2 now addresses I_e when determining relative displacement. Section 145.1613 is proposed to be repealed in its entirety.

14. GEOTECHNICAL REPORTS TO ADDRESS EARTHQUAKE PRESSURE ON RETAINING WALLS.

Text as it appears in LDC

§145.1803 Local Additions and Modifications to Section 1803 "Geotechnical Investigations" of the ~~2010~~ California Building Code

(subsection (a) through (d) no change)

~~(e) Section 1803.5.12 is modified pursuant to Section 145.0105 of the San Diego Municipal Code. 1803.5.12.~~

~~(Seismic Design Categories D through F) For structures assigned to Seismic Design Category D, E or F in accordance with Section 1613, the geotechnical investigation report required by Section 1803.5.11, shall also include the determination of lateral earth pressures on foundation walls, and retaining walls supporting more than 6 ft of backfill height, due to earthquake motions.~~

(Renumber (f) through (h))

Reason: The proposed text is being repealed since it has now been adopted into the CBC in Section 1803.5.12.

15. UPDATE CH 18 OCCUPANCY CATEGORY TO RISK CATEGORY

Update the section to reflect the correct CBC table number and the new term Risk Category.

Text as it appears in LDC

§145.1803 Local Additions and Modifications to Section 1803 "Geotechnical Investigations" of the ~~2010~~ California Building Code

(*Subsection (a) through (f) no change)*

(g) The Geologic Hazard Category and the Building, Structure and Facility Class must be determined as follows when using Table 145.1803 to determine whether a geotechnical investigation report is required due to local geological hazards within the City of San Diego.

(subsection (1) no change)

(2) City staff shall assign one of four Building, Structure and Facility classes to each building, *structure*, or facility based on their use, type of occupancy, number of occupants, and whether hazardous materials are being used or stored in the

building, *structure*, or facility to determine whether a Geotechnical Investigation Report is required.

(A) Class A includes the following:

(i) Buildings or *structures* classified as Essential Facilities in ~~Occupancy~~ Risk Category IV as defined in Table 1604.5 of the ~~2010~~ California Building Code.

(Remainder no change)

(B) Class B includes the following *developments*, occupancy groups, and *structures* provided they are not included in Class A:

(subsection (i)to (iv) no change)

(i) All *structures* with an occupant load of more than 300 occupants as determined by Table ~~10-A~~ 1004.1.2 of the ~~2010~~ California Building Code and *structures* used for public assembly assigned to ~~Occupancy Category~~ Risk Category III in Table 1604.5 of the ~~2010~~ California Building Code.

Reason: The proposed text is being updated for consistency with the CBC since occupancy category has been relabeled risk category in CBC Ch 16 Section 1604.5.

~~16. CROSS REFERENCE TO CPC FOR SUBSURFACE DRAINAGE~~

~~Provide a cross reference between the CBC to the Plumbing Regulations and the City of San Diego regulations for Storm Water Management and Discharge Control.~~

~~Text as it appears in CBC~~

~~1610.1 General.~~ ~~Foundation walls and retaining walls shall be designed to resist lateral soil loads. Soil loads specified in Table 1610.1 shall be used as the~~

~~minimum design lateral soil loads unless determined otherwise by a geotechnical investigation in accordance with Section 1803. Foundation walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure. Retaining walls free to move and rotate at the top shall be permitted to be designed for active pressure. Design lateral pressure from surcharge loads shall be added to the lateral earth pressure load. Design lateral pressure shall be increased if soils at the site are expansive. Foundation walls shall be designed to support the weight of the full hydrostatic pressure of undrained backfill unless a drainage system is installed in accordance with Sections 1805.4.2 and 1805.4.3.~~

~~**1805.1.3 Ground-water control.** Where the ground-water table is lowered and maintained at an elevation not less than 6 inches (152 mm) below the bottom of the lowest floor, the floor and walls shall be damp-proofed in accordance with Section 1805.2. The design of the system to lower the ground-water table shall be based on accepted principles of engineering that shall consider, but not necessarily be limited to, permeability of the soil, rate at which water enters the drainage system, rated capacity of pumps, head against which pumps are to operate and the rated capacity of the disposal area of the system.~~

~~**1805.4 Subsoil drainage system.** Where a hydrostatic pressure condition does not exist, damp-proofing shall be provided and a base shall be installed under the floor and a drain installed around the foundation perimeter. A subsoil drainage system designed and constructed in accordance with Section 1805.1.3 shall be deemed adequate for lowering the groundwater table.~~

~~**1805.4.1 Permanent Dewatering Systems.** Permanent dewatering systems necessary to pump ground water adjacent to building foundation walls shall be prohibited unless authorization has been obtained from the Regional Water Quality Control board.~~

~~**1805.4.2 Foundation drain.** A drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10-percent material that passes through a No.4 (4.75 mm) sieve. The drain shall extend a minimum of 12 inches (305 mm) beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches (152 mm) above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or the top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2 inches (51 mm) of gravel or crushed stone complying with Section 1805.4.1, and shall be covered with not less than 6 inches (152 mm) of the same material.~~

1805.4.3 Drainage discharge. The floor base and foundation perimeter drain shall discharge by gravity or mechanical means into an approved drainage system that complies with the *California Plumbing Code* the Plumbing Regulations and Section 43.0301 of the San Diego Municipal Code.

Exception: Where a site is located in well-drained gravel or sand/gravel mixture soils, a dedicated drainage system is not required.

1807.1.1 Design lateral soil loads. Foundation walls shall be designed for the lateral soil loads set forth in Section 1610.

§145.1805 Local Additions to Section 1805 "Damproofing and Waterproofing" of the California Building Code

Sub-section 1805.4.1 is added and Section 1805.4.3 is modified as follows pursuant to Section 145.0106 of the Land Development Code.

(a) 1805.4.1 Permanent Dewatering Systems. Permanent dewatering systems necessary to pump ground water adjacent to building foundation walls shall be prohibited unless authorization has been obtained from the Regional Water Quality Control Board.

(b) 1805.4.3 Drainage discharge. The floor base and foundation perimeter drain shall discharge by gravity or mechanical means into an approved drainage system that complies with the Plumbing Regulations and Section 43.0301 of the San Diego Municipal Code.

Reason: The proposed text is being proposed to co-ordinate between the plumbing regulations and the City storm water discharge requirements. Generally permanent dewatering systems are not permitted by the Regional Water Quality Control Board. Termination of drainage discharge is referenced to the Plumbing Regulations due to proposed amendments to Ch 11 of the CPC.

Reason for Deletion: This proposed revision to the Municipal Code has been determined not necessary since the reviewers in the Engineering Drainage and Grades review discipline enforce this requirement. Additionally and Regional

Water Quality Control Board approves of such systems when required for structural safety reasons.

17. ANCHORAGE OF WOOD SILL PLATES AND METAL TRACK TO CONCRETE.

Text as it appears in LDC

~~**§145.1908 Local Additions to Section 1908 "Modifications to ACI 318" of the 2010 California Building Code**~~

~~Section 1908.1.9 is modified and exceptions 2 and 3 are added pursuant to Section 145.0106 of the Land Development Code. 1908.1.9 ACI 318, Section D.3.3. Modify ACI 318, Section D3.3.4 by adding exceptions 2 and 3.~~

~~(a) Exception 2. Light-Frame Wood Construction. D.3.3.4 does not apply and the design shear strength in accordance with D.6.2.1(c) shall not be computed for anchor bolts attaching wood sill plates of bearing or non-bearing walls of light-frame wood structures to foundations or foundation stem walls provided all of the following are satisfied:~~

~~(1) The allowable in-plane shear strength of the anchor is determined in accordance with AF&PA NDS Table 11E for lateral design values parallel to grain;~~

~~(2) The maximum anchor nominal diameter is 5/8 inches (16 mm);~~

~~(3) Anchor bolts are embedded into concrete a minimum of 7 inches (178 mm);~~

~~(4) Anchor bolts are located a minimum of 1-3/4 inches (45 mm) from the edge of the concrete parallel to the length of the wood sill plate;~~

~~(5) Anchor bolts are located a minimum of fifteen anchor diameters from the edge of the concrete~~

~~perpendicular to the length of the wood sill plate; and~~

~~(6) The sill plate is 2-inch or 3-inch nominal thickness.~~

~~(b) Exception 3. Light-Frame Cold Formed Steel Construction. Section D.3.3.4 does not apply and the design shear strength in accordance with Section D.6.2.1(c) shall not be computed for anchor bolts attaching cold-formed steel track of bearing or non-bearing walls of light-frame construction to foundations or foundation stem walls provided all of the following are satisfied:~~

~~(1) The maximum anchor nominal diameter is 5/8 inches (16 mm);~~

~~(2) Anchors are embedded into concrete a minimum of 7 inches (178 mm).~~

~~(3) Anchors are located a minimum of 1-3/4 inches (45 mm) from the edge of the concrete parallel to the length of the track.~~

~~(4) Anchors are located a minimum of fifteen anchor diameters from the edge of the concrete perpendicular to the length of the track; and~~

~~(5) The track is 33 to 68 mil designation thickness.~~

~~(c) Allowable in-plane shear strength of exempt anchors parallel to the edge of concrete shall be permitted in accordance with AISI S100 Section E3.3.1.~~

Reason: The proposed text is being repealed since CBC Section 1905.1.9 now codifies the same requirements in the 2013 CBC.