ORDINANCE NO 19-0015

AN ORDINANCE OF THE CITY OF MANHATTAN BEACH ADOPTING BY REFERENCE THE 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE, CALIFORNIA RESIDENTIAL CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA EXISTING BUILDING CODE, CALIFORNIA GREEN BUILDING STANDARDS CODE, CALIFORNIA ENERGY CODE, CALIFORNIA ADMINISTRATIVE CODE, CALIFORNIA HISTORICAL BUILDING CODE, THE CALIFORNIA REFERENCED STANDARDS CODE, AND 1997 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS; ADOPTING LOCAL AMENDMENTS TO THE REFERENCED CODE; AND AMENDING TITLES 5 AND 9 OF THE MANHATTAN BEACH MUNICIPAL CODE RELATED TO CONSTRUCTION ACTIVITY AND POST DISASTER ACTIVITIES

THE CITY COUNCIL OF THE CITY OF MANHATTAN BEACH DOES ORDAIN AS FOLLOWS:

SECTION 1. The City Council hereby finds that it can be seen with certainty that there is no possibility that the adoption of this Ordinance may have a significant effect on the environment. It is therefore exempt from review under the California Environmental Quality Act pursuant to Title 14, Section 15061(b)(3) of the California Code of Regulations (CEQA Guidelines).

SECTION 2. Chapter 9.01 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

"**Chapter 9.01 BUILDING CODE**

9.01.010 Adoption of the 2019 California Building Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled the "2019 California Building Code," including the Appendices F, J, and O and Standards (including Chapter/Section 1, Division 2; Chapter 31B and excluding all other Appendices) therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at

length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed in the construction, alteration, improvements, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, demolition, conversion, area and height, of buildings or structures or any appurtenances connected or attached to such buildings or structures in the city; and subject to the additions, deletions and amendments set forth in this chapter, said Code with its Appendices F, J, and O and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Building Code" of and for the City.

9.01.020 Referenced codes.

Section [A] 101.4 is amended to add a second paragraph as follows:

> The most recently adopted California State and Manhattan Beach Municipal Code will take precedence.

9.01.030 Work exempt from permit.

Section [A] 105.2, Building Item 2, is amended to read as follows:

> 2. Fences not over 6 feet (1829 mm) high.

Section [A] 105.2, **Building** Item 9, is amended to read as follows:

> 9. Prefabricated swimming pools accessory to Group R-3 occupancy that are less than 18 inches (457 mm) deep, do not exceed 5,000 gallons (18925 L) and are installed entirely above ground.

9.01.040 Expiration of plan review.

Section [A] 105.3.2 is amended to read as follows:

> **[A] 105.3.2 Time limitation of application**. Applications for which no permit is issued within 12 months following the date of application shall expire by limitation and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by applicant for periods not exceeding 180 days upon written request by the applicant and justifiable cause demonstrated. No application shall be extended more than two years from original submittal date. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee

and plans shall be reviewed under the current codes and ordinances at the time of the new applications.

9.01.050 Permit expiration.

Section [A] 105.5 is amended to read as follows:

[A] 105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the work is commenced, or if the building or work authorized by such permit is not completed within 2 calendar years from the issuance date of the permit without the issuance of a permit renewal or extension.

Before such work can be recommenced, a new permit, or a renewed permit as specified below, shall be first obtained. No permit shall be valid for more than 4 years.

For permits where work has not commenced within 12 months from the date of such permit, a renewed permit may be obtained provided that: (1) no changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the original issuance date.

For permits where work had commenced and was subsequently suspended or abandoned for a period exceeding 180 days, a renewed permit may be obtained provided that: (1) No changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded four years from the issuance date, and/or (3) where construction has progressed and has been approved, to the point whereby only a final inspection(s) is required, a fee shall be determined based on the number of estimated inspections, estimated staff time, and required meetings as determined by the Building Official.

For permits that have exceeded two years beyond the issuance date and have not received an extension prior to expiring, a new permit is required. The applicant shall pay the fee based on the valuation of the uncompleted work required for a plan check and a new permit and plans will be reviewed under the current codes and ordinances at the time of the new applications.

Any permittee holding an unexpired permit may apply for an extension of the time within which work under that permit may be continued when, for good and satisfactory reasons, the permittee is unable to continue work within the time required by this section. The Building Official may grant one or more extensions for periods not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented completion of the project. No permit shall be valid for more than 4 years.

If the owner or applicant fails to complete the construction work within the time required, the Building Official is authorized to obtain the abatement of any unsafe condition or nuisance created by such incomplete work. The City Attorney is authorized to file an action for the abatement of any such unsafe condition or nuisance if required to do so by the Building Official.

9.01.060 Fees.

Sections [A] 109.2 is amended to read as follows:

[A] 109.2 Schedule of permit fees. The fees shall be determined by the most current City Resolution of Fees.

Plan Review Fees. When submittal documents are required by the Building Official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate and in addition to any permit fees required.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section [A] 107.3.4.1, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

Section [A] 109.4 is amended to read as follows:

[A] 109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current

Manhattan Beach Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

9.01.070 Violation penalties.

Section [A] 114.4 is amended to read as follows:

[A] 114.4. Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

9.01.080 Definitions.

Section 202 is amended by adding two definitions to read as follows:

> **ABANDONED OR SUSPENDED WORK.** Work that has been stopped or no progress in construction and no inspection is required or performed for a period of 180 days.
>
> **INTERMODAL SHIPPING CONTAINER.** A six-sided steel unit originally constructed as a general cargo container used for the transport of goods and materials.

9.01.100 Roofing and re-roofing.

Table 1505.1 is amended by replacing all roof classifications of "C" with class "B" roof classifications.

Sections 1505.1 is amended by adding a sentence to the end of each section that reads as follows:

> Fire-retardant roofs are roofing assemblies complying with California Building Code Standards and listed as Class A or B roofs. The use of fire-retardant wood shakes or fire retardant wood shingles is prohibited.

Section 1505.5 is amended to read as follows:

> **[BF] 1505.5 Nonclassified Roofing**. Non-classified roofing is approved material that is not listed as a Class A or B roofing assembly. The use of wood shakes or wood shingles is prohibited.

Sections 1505.4, 1505.6, 1507.8, 1507.9 are deleted.

Sections 1507.1 is amended by adding a sentence to the end of the section to read as follows:

> Fire-retardant roofs are roofing assemblies complying with California Building Code Standards and listed as Class A or B roofs. The use of fire-retardant wood shakes or fire retardant wood shingles is prohibited.

Section 1507.3.1 is amended to read as follows:

> **1507.3.1 Deck requirements.** Concrete and clay tile shall be installed only over solid sheathing.

Exception: Spaced lumber shall be permitted in Seismic Design Categories A, B, and C.

Section 1511.1 is amended by adding Exception 3 to read as follows:

Exception 3. Wood shakes and wood shingles re-roofs of entire structure are prohibited unless approved by the building official because of special circumstances.

9.01.110 General structural design provisions.

Section 1613.5 is amended to read as follows:

1613.5 Amendments to ASCE 7. The provisions of Section 1613.5 shall be permitted as an amendment to the relevant provisions of ASCE 7.

Section 1613.5.1 is added to read as follows:

1613.5.1 Values for vertical combinations. Modify ASCE 7 Section 12.2.3.1 Exception 3 as follows:

3. Detached one- and two-family dwellings up to two stories in height of light frame construction.

Section 1613.5.2 is added to read as follows:

1613.5.2 Wood diaphragms. Modify ASCE 7 Section 12.11.2.2.3 as follows:

12.11.2.2.3 Wood diaphragms. The anchorage of concrete or masonry structural walls to wood diaphragms shall be in accordance with AWC SDPWS 4.1.5.1 and this section. Continuous ties required by this section shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toenails or nails subject to withdrawal, nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective for providing the ties or struts required by this section

For structures assigned to Seismic Design Category D, E or F, wood diaphragms supporting concrete or masonry walls shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75% of the maximum diaphragm shear.

Section 1613.5.3 is added to read as follows:

1613.5.3 Structural separation. Modify ASCE 7 Section 12.12.3 Equation 12.12-1 as follows:

$$\delta_M = \frac{C_d \delta_{max}}{I_e} \qquad \textbf{(12.12-1)}$$

Section 1613.6 is added to read as follows:

Section 1613.7 is added to read as follows:

1613.7 Suspended ceilings. Minimum design and installation standards for suspended ceilings shall be determined in accordance with the requirements of Section 2506.2.1 of this Code and this section.

1613.7.1 Scope. This part contains special requirements for suspended ceilings and lighting systems. Provisions of Section 13.5.6 of ASCE 7 shall apply except as modified herein.

1613.7.2 General. The suspended ceilings and lighting systems shall be limited to 6 feet (1828 mm) below the structural deck unless the lateral bracing is designed by a licensed engineer or architect.

1613.7.3 Sprinkler heads. All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ceiling assemblies, shall be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile. Sprinkler heads and other penetrations shall have a 2 inch (50mm) oversize ring, sleeve, or adapter through the ceiling tile to allow for free movement of at least 1 inch (25mm) in all horizontal directions. Alternatively, a swing joint that can accommodate 1 inch (25 mm) of

ceiling movement in all horizontal directions is permitted to be provided at the top of the sprinkler head extension.

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies shall comply with Section 714 of this Code.

1613.7.4 Special requirements for means of egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more shall comply with the following provisions.

1613.7.4.1 General. Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural deck along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers shall not exceed 2 feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

1613.7.4.2 Assembly device. All lay-in panels shall be secured to the suspension ceiling assembly with two hold-down clips minimum for each tile within a 4-foot (1219 mm) radius of the exit lights and exit signs.

1613.7.4.3 Emergency systems. Independent supports and braces shall be provided for light fixtures required for exit illumination. Power supply for exit illumination shall comply with the requirements of Section 1008.3 of this Code.

1613.7.4.4 Supports for appendage. Separate support from the structural deck shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

Section 1704.6 is amended to read as follows:

1704.6 Structural observations. Where required by the provisions of Section 1704.6.1, 1704.6.2 or 1704.6.3, the owner or the owner's authorized agent shall employ a structural observer to perform structural observations.

Structural observation does not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other sections of this code. The structural observer shall be one of the following individuals:

1. The registered design professional responsible for the structural design, or

2. A registered design professional designated by the registered design professional responsible for the structural design.

Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of structural observations.

The owner or owner's authorized agent shall coordinate and call a preconstruction meeting between the structural observer, contractors, affected subcontractors and special inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the report submitted to the building official.

Observed deficiencies shall be reported in writing to the owner or owner's authorized agent, special inspector, contractor and the building official. Upon the form prescribed by the building official, the structural observer shall submit to the building official a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer which states that all observed deficiencies have been resolved is required before acceptance of the work by the building official.

Section 1704.6.2 is amended to read as follows:

1704.6.2 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design Category D, E or F where one or more of the following conditions exist:

1. The structure is classified as Risk Category III or IV.

2. The structure is classified as Risk Category I or II, and a lateral design is required for the structure or portion thereof.

Exception: One-story wood framed Group R-3 and Group U Occupancies less than 2,000 square feet in area, provided the adjacent grade is not steeper than 1 unit vertical in 10 units horizontal (10% sloped), assigned to Seismic Design Category D.

Section 1705.3 is amended to read as follows:

1705.3 Concrete construction. The special inspections and tests for concrete construction shall be performed in accordance with this section and Table 1705.3.

Exceptions: Special inspections and tests shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock where the structural design of the footing is based on a specified compressive strength, f'c, not more than 2,500 pounds per square inch (psi) (17.2 Mpa) regardless of the compressive strength specified in the construction documents or used in the footing construction.

2. Continuous concrete footings supporting walls of buildings three stories or less above grade plane that are fully supported on earth or rock where:

    2.1. The footings support walls of light-frame construction;

    2.2. The footings are designed in accordance with Table 1809.7; or

    2.3. The structural design of the footing is based on a specified compressive strength, f'c, not more than 2,500 pounds per square inch (psi) (17.2 Mpa), regardless of the compressive strength specified in the construction documents or used in the footing construction.

3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi (1.03 Mpa).

4. Concrete patios, driveways and sidewalks, on grade.

Section 1705.12 is amended to read as follows:

1705.12 Special inspections for seismic resistance. Special inspections for seismic resistance shall be required as specified in Sections 1705.12.1 through 1705.12.9, unless exempted by the exceptions of Section 1704.2.

Exception: The special inspections specified in Sections 1705.12.1 through 1705.12.9 are not required for structures designed and constructed in accordance with one of the following:

1. The structure consists of light-frame construction; the design spectral response acceleration at short periods, S_{DS}, as determined in Section 1613.2.4, does not exceed 0.5; and the building height of the structure does not exceed 35 feet (10 668 mm).

2. The seismic force-resisting system of the structure consists of reinforced masonry or reinforced concrete; the design spectral response acceleration at short periods, S_{DS}, as determined in Section 1613.2.4, does not exceed 0.5; and the building height of the structure does not exceed 25 feet (7620 mm)

3. The structure is a detached one- or two-family dwelling not exceeding two stories above grade plane, is not assigned to Seismic Design Category D, E or F, and does not have any of the following horizontal or vertical irregularities in accordance with Section 12.3 of ASCE 7:

   3.1 Torsional or extreme torsional irregularity.

   3.2 Nonparallel systems irregularity.

3.3 Stiffness-soft story or stiffness-extreme soft story irregularity.

3.4 Discontinuity in lateral strength-weak story irregularity.

Section 1807.1.4 is amended to read as follows:

1807.1.4 Permanent wood foundation systems. Permanent wood foundation systems shall be designed and installed in accordance with AWC PWF. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Special Requirement 4.2) and shall be identified in accordance with Section 2303.1.9.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E or F.

Section 1807.1.6 is amended to read as follows:

1807.1.6 Prescriptive design of concrete and masonry foundation walls. Concrete and masonry foundation walls that are laterally supported at the top and bottom shall be permitted to be designed and constructed in accordance with this section. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E or F.

Section 1807.2 is amended to read as follows:

1807.2 Retaining walls. Retaining walls shall be designed in accordance with Section 1807.2.1 through 1807.2.3. Retaining walls assigned to Seismic Design Category D, E or F shall not be partially or wholly constructed of wood.

Section 1807.3.1 is amended to read as follows:

1807.3.1 Limitations. The design procedures outlined in this section are subject to the following limitations:

1. The frictional resistance for structural walls and slabs on silts and clays shall be limited to one-half of the normal force imposed on the soils by the weight of the fooling or slab.

2. Posts embedded in earth shall not be used to provide lateral support for structural or nonstructural materials such as plaster, masonry or concrete unless bracing is provided that develops the limited deflection required.

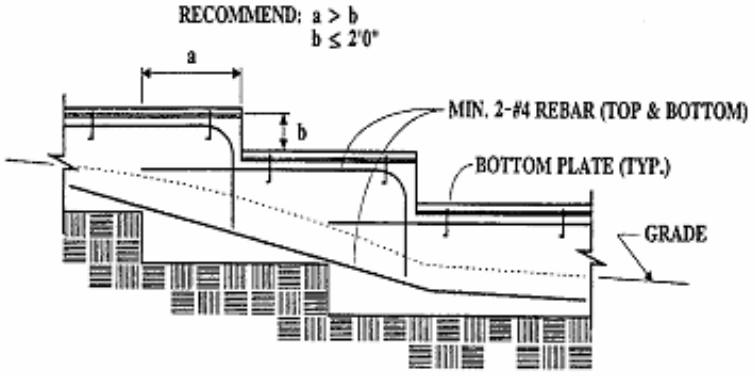
Wood poles shall be treated in accordance with AWPA U1 for sawn timber posts (Commodity Specification A, Use Category 4B) and for round timber posts (Commodity Specification B, Use Category 4B). Wood poles and posts embedded in direct contact with soil shall not be used for structures assigned to Seismic Design Category D, E or F.

Exception: Wood poles and posts embedded in direct contact with soil may be used to support nonhabitable, nonoccupiable structures such as fences when approved by the building official.

Section 1809.3 is amended to read as follows:

1809.3 Stepped footings. The top surface of footings shall be level. The bottom surface of footings shall be permitted to have a slope not exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in 10 units horizontal (10-percent slope).

For structures assigned to Seismic Design Category D, E or F, the stepping requirement shall also apply to the top surface of continuous footings supporting walls. Footings shall be reinforced with four No. 4 deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1809.3.



STEPPED FOUNDATIONS

FIGURE 1809.3

STEPPED FOOTING

Section 1809.7 is amended to read as follows:

> **1809.7 Prescriptive footings for light-frame construction.** Where a specific design is not provided, concrete or masonry-unit footings supporting walls of light-frame construction shall be permitted to be designed in accordance with Table 1809.7. Light-frame construction using prescriptive footings in Table 1809.7 shall not exceed one story above grade plane for structures assigned to Seismic Design Category D, E or F.

Table 1809.7 is amended to read as follows:

TABLE 1809.7
PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION [a, b, c, d, e]

NUMBER OF FLOORS SUPPORTED BY THE FOOTING [f]	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	12	6
2	15	6
3	18	8 [g]

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm

a. Depth of footings shall be in accordance with Section 1809.4.

b. The ground under the floor shall be permitted to be excavated to the elevation of the top of the footing.

c. Not Adopted.

d. See Section 1905 for additional requirements for concrete footings of structures assigned to Seismic Design Category C, D, E or F.

e. For thickness of foundation walls, see Section 1807.1.6.

f. Footings shall be permitted to support a roof addition to the stipulated number of floors. Footings supporting roof only shall be as required for supporting one floor.

Section 1809.12 is amended to read as follows:

> **1809.12 Timber footings.** Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the Building Official. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level,

or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footings supported on treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the ANSI/AWC NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E or F.

Section 1810.3.2.4 is amended to read as follows:

1810.3.2.4 Timber. Timber deep foundation elements shall be designed as piles or poles in accordance with ANSI/AWC NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20. Timber deep foundation elements shall not be used in structures assigned to Seismic Design Category D, E or F.

Section 1905.1 is amended to read as follows:

1905.1 General. The text of ACI 318 shall be modified as indicated in Sections 1905.1.1 through 1905.1.11.

Sections 1905.1.9 thru 1905.1.11 are added to read as follows:

1905.1.9 ACI 318, Section 18.7.5. Modify ACI 318, Section 18.7.5, by adding Section 18.7.5.7 and 18.7.5.8 as follows:

18.7.5.7 Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318 Sections 18.7.5.1, Items (a) through (c), over the full height of the member.

18.7.5.8 – At any section where the design strength, φP_n, of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 18.7.6.1 and 18.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 18.7.5.1 through 18.7.5.3 shall be provided. For beams framing into opposite sides of the column, the moment components are permitted to be assumed to be of opposite sign. For the determination of the design strength, φP_n, of the

column, these moments are permitted to be assumed to result from the deformation of the frame in any one principal axis.

1905.1.10 ACI 318, Section 18.10.4. Modify ACI 318, Section 18.10.4, by adding Section 18.10.4.6 as follows:

18.10.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated shear strength of the structure for resisting earthquake-induced forces. Such walls shall conform to the requirements of ACI 318 Section 18.14.

1905.1.11 ACI 318, Section 18.12.6. Modify ACI 318, by adding Section 18.12.6.2 as follows:

18.12.6.2 Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 d_b in thickness, where d_b is the diameter of the largest reinforcement in the topping slab.

Section 1905.1.7 is amended to read as follows:

1905.1.7 ACI 318, Section 14.1.4. Delete ACI 318, Section 14.1.4, and replace with the following:

14.1.4 – Plain concrete in structures assigned to Seismic Design Category C, D, E or F.

14.1.4.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

(a) Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement or cementitious material per cubic yard.

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

(c) Plain concrete footings supporting walls are permitted provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exception:

1. Detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, are permitted to have plain concrete with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.

Section 2304.10.1 is amended to read as follows:

2304.10.1 Fastener requirements. Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2302.1. The number and size of fasteners connecting wood members shall not be less than that set forth in Table 2304.10.1. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Section 2304.10.2.1 is added to Chapter 23 to read as follows:

2304.10.2.1 Quality of nails. In Seismic Design Category D, E or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required

for hand-driven nails, including diameter, minimum length and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

Section 2304.12.5 is amended to read as follows:

2304.12.5 Wood used in retaining walls and cribs. Wood installed in retaining or crib walls shall be preservative treated in accordance with AWPA U1 for soil and fresh water use. Wood shall not be used in retaining or crib walls for structures assigned to Seismic Design Category D, E or F.

Section 2305.4 is added to read as follows:

2305.4 Hold-down connectors. In Seismic Design Category D, E or F, hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable seismic load values that do not consider cyclic loading of the product. Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Hold-down connectors shall be tightened to finger tight plus one half (1/2) wrench turn just prior to covering the wall framing.

Section 2306.2 is amended to read as follows:

2306.2 Wood-frame diaphragms. Wood-frame diaphragms shall be designed and constructed in accordance with AWC SDPWS. Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.2(1) or 2306.2(2) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the building official.

The allowable shear values in Tables 2306.2(1) and 2306.2(2) are permitted to be increased 40 percent for wind design.

Wood structural panel diaphragms used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Exception: Wood structural panel diaphragms are permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.

Section 2306.3 is amended to read as follows:

2306.3 Wood-frame shear walls. Wood-frame shear walls shall be designed and constructed in accordance with AWC SDPWS. For structures assigned to Seismic Design Category D, E, or F, application of Tables 4.3A and 4.3B of AWC SDPWS shall include the following:

1. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

2. The maximum nominal unit shear capacities for 3/8 inch wood structural panels resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 400 pounds per linear foot (plf).

   Exception: Other nominal unit shear capacities may be permitted if such values are substantiated by cyclic testing and approved by the building official.

3. Nails shall be placed not less than 1/2 inch in from the panel edges and not less than 3/8 inch from the edge of the connecting members for shear greater than 350 plf using ASD or 500 plf using LRFD. Nails shall be placed not less than 3/8 inch from panel edges and not less than 1/4 inch from the edge of the connecting members for shears of 350 plf or less using ASD or 500 plf or less using LRFD.

4. Table 4.3B application is not allowed for structures assigned to Seismic Design Category D, E, or F.

For structures assigned to Seismic Design Category D, application of Table 4.3C of AWC SDPWS shall not be used below the top level in a multi-level building.

Where panels are fastened to framing members with staples, requirements and limitations of AWC SDPWS shall be met and the allowable shear values set forth in Table 2306.3(1), 2306.3(2) or 2306.3(3) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

Exception: Allowable shear values where panels are fastened to framing members with staples may be used if such values are substantiated by cyclic testing and approved by the building official.

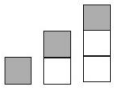
The allowable shear values in Tables 2306.3(1) and 2306.3(2) are permitted to be increased 40 percent for wind design. Panels complying with ANSI/APA PRP-210 shall be permitted to use design values for Plywood Siding in the AWC SDPWS.

Section 2307.2 is added to read as follows:

2307.2 Wood-frame shear walls. Wood-frame shear walls shall be designed and constructed in accordance with Section 2306.3 as applicable.

Table 2308.6.1 is amended to read as follows:

TABLE 2308.6.1[a]
WALL BRACING REQUIREMENTS

SEISMIC DESIGN CATEGORY	STORY CONDITION (SEE SECTION 2308.2)	MAXIMUM SPACING OF BRACED WALL LINES	BRACED PANEL LOCATION, SPACING (O.C.) AND MINIMUM PERCENTAGE (X)			MAXIMUM DISTANCE OF BRACED WALL PANELS FROM EACH END OF BRACED WALL LINE
			Bracing method[b]			
			LIB	DWB, WSP	SFB, PBS, PCP, HPS, GB[c,d]	
A and B		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
C		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	12′- 6″
D and E [f, g, h]		25′- 0″	NP	$S_{DS} < 0.50$: Each end and ≤ 25′- 0″ o.c. (minimum 21% of wall length)[e]	$S_{DS} < 0.50$: Each end and ≤ 25′- 0″ o.c. (minimum 43% of wall length)[e]	8′- 0″
				$0.5 \le S_{DS} < 0.75$: Each end and ≤ 25′- 0″ o.c. (minimum 32% of wall length)[e]	$0.5 \le S_{DS} < 0.75$: Each end and ≤ 25′- 0″ o.c. (minimum 59% of wall length)[e]	
				$0.75 \le S_{DS} \le 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 37% of wall length)[e]	$0.75 \le S_{DS} \le 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 75% of wall length)	
				$S_{DS} > 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 48% of wall length)[e]	$S_{DS} > 1.00$: Each end and ≤ 25′- 0″ o.c. (minimum 100% of wall length)[e]	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

NP = Not Permitted.

a. This table specifies minimum requirements for braced wall panels along interior or exterior braced wall lines.

b. See Section 2308.6.3 for full description of bracing methods.

c. For Method GB, gypsum wallboard applied to framing supports that are spaced at 16 inches on center.

d. The required lengths shall be doubled for gypsum board applied to only one face of a braced wall panel.

e. Percentage shown represents the minimum amount of bracing required along the building length (or wall length if the structure has an irregular shape).

f. DWB, SFB, PBS, and HPS wall braces are not permitted in Seismic Design Catergories D or E.

g. Minimum length of panel bracing of one face of the wall for WSP sheathing shall be at least 4'-0" long or both faces of the wall for GB or PCP sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide [actual 1 1/2 inch (38 mm)] or larger members and spaced a maximum of 16 inches on center. Braced wall panel construction types shall not be mixed within a braced wall line.

h. WSP sheathing shall be a minimum of 15/32" thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

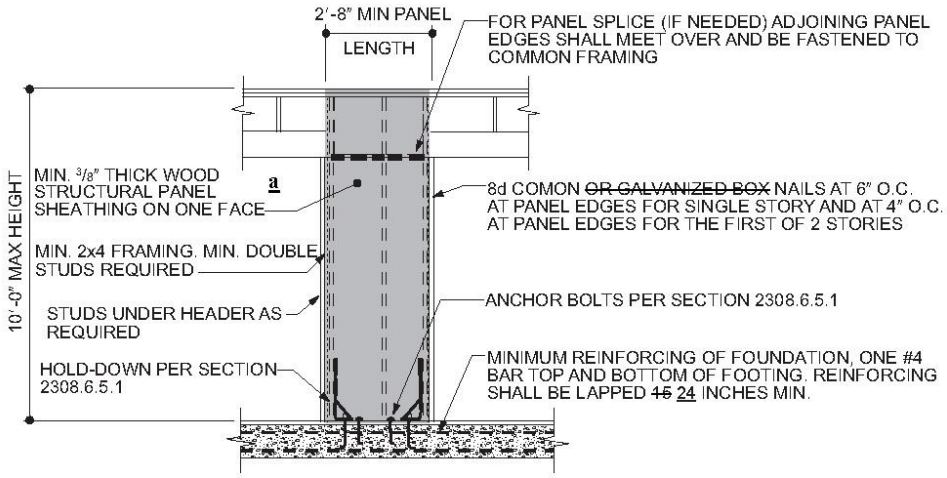
Sections 2308.6.5 is amended to read as follows, inclusive of Figures 2308.6.5.1 and 2308.6.5.2 as set forth below:

2308.6.5 Alternative bracing. An alternate braced wall (ABW) or a portal frame with hold-downs (PFH) described in this section is permitted to substitute for a 48-inch (1219 mm) braced wall panel of Method DWB, WSP, SFB, PBS, PCP or HPS. For Method GB, each 96-inch (2438 mm) section (applied to one face) or 48-inch (1219 mm) section (applied to both faces) or portion thereof required by Table 2308.6.1 is permitted to be replaced by one panel constructed in accordance with Method ABW or PFH**.**

2308.6.5.1 Alternate braced wall (ABW). An ABW shall be constructed in accordance with this section and Figure 2308.6.5.1. In one-story buildings, each panel shall have a length of not less than 2 feet 8 inches (813 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8-inch (3.2 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table 2304.10.1 and blocked at wood structural panel edges. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports. Two anchor bolts installed in accordance with Section 2308.3.1 shall be provided in each panel. Anchor bolts shall be placed at each panel outside quarter points. Each panel end stud shall have a hold-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (8006 N). The hold-down device shall be installed in accordance with the manufacturer's recommendations. The ABW shall be supported directly on a foundation or on floor framing supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing is permitted at door openings in the braced wall line. This continuous footing shall be reinforced with not less than one No. 4

bar top and bottom. This reinforcement shall be lapped 24 inches (610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

Where the ABW is installed at the first story of two-story buildings, the wood structural panel sheathing shall be provided on both faces, three anchor bolts shall be placed at one-quarter points and tie-down device uplift capacity shall be not less than 3,000 pounds (13 344 N).



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

FIGURE 2308.6.5.1
ALTERNATE BRACED WALL PANEL (ABW)

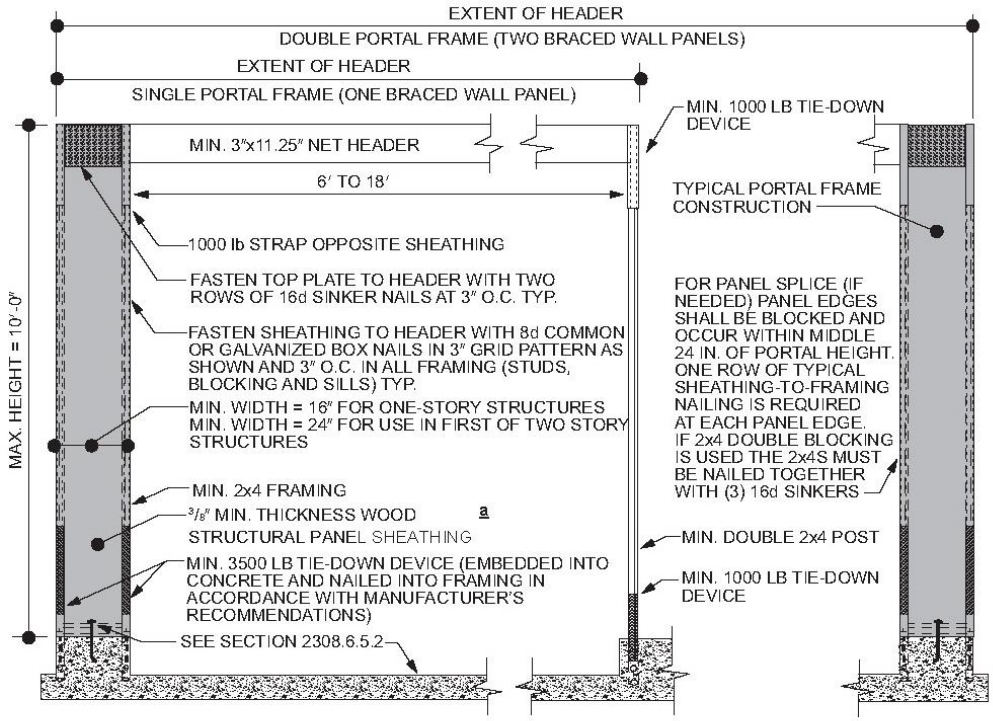
2308.6.5.2 Portal frame with hold-downs (PFH). A PFH shall be constructed in accordance with this section and Figure 2308.6.5.2. The adjacent door or window opening shall have a full-length header.

In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8-inch (9.5 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.6.5.2. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports and in accordance with Figure 2308.6.5.2. The wood structural panel

sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.6.5.2. A built-up header consisting of at least two 2-inch by 12-inch (51 mm by 305 mm) boards, fastened in accordance with Item 24 of Table 2304.10.1 shall be permitted to be used. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1,000 pounds (4,400 N) shall fasten the header to the inner studs opposite the sheathing. One anchor bolt not less than 5/8 inch (15.9 mm) diameter and installed in accordance with Section 2308.3.1 shall be provided in the center of each sill plate. The studs at each end of the panel shall have a hold-down device fastened to the foundation with an uplift capacity of not less than 3,500 pounds (15 570 N).

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud of the panel and the bearing studs at the other end of the opening. A strap with an uplift capacity of not less than 1,000 pounds (4400 N) shall fasten the header to the bearing studs. The bearing studs shall also have a hold-down device fastened to the foundation with an uplift capacity of not less than 1,000 pounds (4400 N). The hold-down devices shall be an embedded strap type, installed in accordance with the manufacturer's recommendations. The PFH panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing is permitted at door openings in the braced wall line. This continuous footing shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than 24 inches (610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

Where a PFH is installed at the first story of two-story buildings, each panel shall have a length of not less than 24 inches (610 mm).



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N.

a. For structures assigned to Seismic Design Category D or E, sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing.

FIGURE 2308.6.5.2
PORTAL FRAME WITH HOLD-DOWNS (PFH)

Section 2308.6.8.1 is amended to read as follows:

2308.6.8.1 Foundation requirements. Braced wall lines shall be supported by continuous foundations.

Exception: For structures with a maximum plan dimension not more than 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures assigned to Seismic Design Category A, B, or C.

For structures in Seismic Design Categories D and E, exterior braced wall panels shall be in the same plane vertically with the foundation or the portion of the structure containing the offset shall be designed in accordance with accepted engineering practice and Section 2308.1.1.

Section 2308.6.9 is amended to read as follows:

2308.6.9 Attachment of sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.6.1 or 2304.10.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners

in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inches (6096 mm) intervals along the top plate of discontinuous vertical framing.

Section 3101 is amended to read as follows:

3101.1 Scope. The provisions of this chapter shall govern special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels, automatic vehicular gates, awnings and canopies, marquees, signs, towers, antennas, relocatable buildings, swimming pool enclosures and safety devices, solar energy systems, and intermodal shipping containers.

Section 3114 is added to read as follows:

SECTION 3114 INTERMODAL SHIPPING CONTAINERS

3114.1 General. The provisions of Section 3114 and other applicable sections of this code shall apply to intermodal shipping containers that are repurposed for use as buildings or structures or as a part of buildings or structures.

Exceptions:

1. Stationary storage battery arrays located in intermodal shipping containers complying with Chapter 12 of the California Fire Code.

2. Intermodal shipping containers that are listed as equipment complying with the standard for equipment, such as air chillers, engine generators, modular datacenters, and other similar equipment.

3. Intermodal shipping containers housing or supporting experimental equipment are exempt from the requirements of Section 3114 provided they comply with all of the following:

   (A) Single-unit stand-alone intermodal shipping containers shall be supported at grade level and used only for occupancies as specified under Risk Category I in Table 1604.5;

   (B) Single-unit stand-alone intermodal shipping containers shall be located a minimum of 8 feet from adjacent structures and are not connected to a fuel gas system or fuel gas utility; and

   (C) In hurricane-prone regions and flood hazard areas, single-unit stand-alone intermodal shipping containers are designed in accordance with the applicable provisions of Chapter 16.

4. Intermodal shipping containers approved as temporary structures complying with Section 3103.

5. Single-unit stand-alone intermodal shipping containers used as temporary storage or construction trailer on active construction sites. Construction support facilities for uses and activities not directly associated with the actual processes of construction, including but not limited to, offices, meeting rooms, plan rooms, other administrative or support functions shall not be exempt from Section 3114.

3114.2 Construction documents. The construction documents shall contain information to verify the dimensions and establish the physical properties of the steel components, and wood floor components, of the intermodal shipping container in addition to the information required by Sections 107 and 1603.

3114.3 Intermodal shipping container information. Intermodal shipping containers shall bear the manufacturer's existing data plate containing the following information as

required by ISO 6346 and verified by an approved agency. A report of the verification process and findings shall be provided to the building owner.

1. Manufacturer's name or identification number

2. Date manufactured

3. Safety approval number

4. Identification number

5. Maximum operating gross mass or weight (kg) (lbs)

6. Allowable stacking load for 1.8G (kg) (lbs)

7. Transverse racking test force (Newtons)

8. Valid maintenance examination date

Where approved by the building official, the markings and manufacturer's existing data plate are permitted to be removed from the intermodal shipping containers before they are repurposed for use as buildings or structures or as part of buildings or structures.

3114.4 Protection against decay and termites. Wood structural floors of intermodal shipping containers shall be protected from decay and termites in accordance with the applicable provisions of Section 2304.12.1.1.

3114.5 Under-floor ventilation. The space between the bottom of the floor joists and the earth under any intermodal shipping container, except spaces occupied by basements and cellars, shall be provided with ventilation in accordance with Section 1202.4.

3114.6 Roof assemblies. Intermodal shipping container roof assemblies shall comply with the applicable requirements of Chapter 15.

> **Exception:** Single-unit stand-alone intermodal shipping containers not attached to, or stacked vertically over, other intermodal shipping containers, buildings or structures.

3114.7 Joints and voids. Joints and voids that create concealed spaces between intermodal shipping containers,

that are connected or stacked, at fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system in accordance with Section 715.

3114.8 Structural. Intermodal shipping containers that conform to ISO 1496-1 and are repurposed for use as buildings or structures, or as a part of buildings or structures, shall be designed in accordance with Chapter 16 and this section.

3114.8.1 Foundations. Intermodal shipping containers repurposed for use as a permanent building or structure shall be supported on foundations or other supporting structures designed and constructed in accordance with Chapters 16 through 23.

3114.8.1.1 Anchorage. Intermodal shipping containers shall be anchored to foundations or other supporting structures as necessary to provide a continuous load path for all applicable design and environmental loads in accordance with Chapter 16.

3114.8.2 Welds. All new welds and connections shall be equal to or greater than the original connections.

3114.8.3 Openings in containers. Where openings are made in container walls, floors, and roofs for doors, windows and other similar openings:

1. The openings shall be framed with steel elements that are designed in accordance with Chapter 16 and Chapter 22.

2. The cross section and material grade of any new steel element shall be equal to or greater than the steel element removed.

3114.8.4 Detailed structural design procedure. A structural analysis meeting the requirements of this section shall be provided to the building official to demonstrate the structural adequacy of the intermodal shipping containers.

Exception: Intermodal shipping containers that meet the limitation of Section 3114.8.5.1 and

designed in accordance with the simplified procedure in Section 3114.8.5.

3114.8.4.1 Material properties. Structural material properties for existing intermodal shipping container steel components shall be established by material testing where the steel grade and composition cannot be identified by the manufacturer's designation as to manufacture and mill test.

3114.8.4.2 Seismic design parameters. The seismic force-resisting system shall be designed and detailed in accordance with one of the following:

1. Where all or portions of the intermodal shipping container sides are considered to be the seismic force-resisting system, design and detailing shall be in accordance with the ASCE 7 Table 12.2-1 requirements for light-frame bearing-wall systems with shear panels of all other materials,

2. Where portions of intermodal shipping container sides are retained, but are not considered to be the seismic force-resisting system, an independent seismic force-resisting system shall be selected, designed and detailed in accordance with ASCE 7 Table 12.2-1, or

3. Where portions of the intermodal shipping container sides are retained and integrated into a seismic force-resisting system other than as permitted by Section 3114.8.4.2 Item 1, seismic design parameters shall be developed from testing and analysis in accordance with Section 104.11 and ASCE 7 Section 12.2.1.1 or 12.2.1.2.

3114.8.4.3 Allowable shear value. The allowable shear values for the intermodal shipping container side walls and end walls shall be demonstrated by testing and analysis

accordance with Section 104.11. Where penetrations are made in the side walls or end walls designated as part of the lateral force-resisting system, the penetrations shall be substantiated by rational analysis.

3114.8.5 Simplified structural design procedure of single-unit containers. Single-unit intermodal shipping containers conforming to the limitations of Section 3114.8.5.1 shall be permitted to be designed in accordance with Sections 3114.8.5.2 and 3114.8.5.3.

3114.8.5.1 Limitations. Use of Section 3114.8.5 is subject to all the following limitations:

1. The intermodal shipping container shall be a single stand-alone unit supported on a foundation and shall not be in contact with or supporting any other shipping container or other structure.

2. The intermodal shipping container's top and bottom rails, corner castings, and columns or any portion thereof shall not be notched, cut, or removed in any manner.

3. The intermodal shipping container shall be erected in a level and horizontal position with the floor located at the bottom.

3114.8.5.2 Structural design. Where permitted by Section 3114.8.5.1, single-unit stand-alone intermodal shipping containers shall be designed using the following assumptions for the side walls and end walls:

1. The appropriate detailing requirements contained in Chapters 16 through 23.

2. Response modification coefficient, $R = 2$,

3. Over strength factor, $\Omega_0 = 2.5$,

4. Deflection amplification factor, C_d = 2, and

5. Limits on structural height, h_n = 9.5 feet (2900 mm).

3114.8.5.3 Allowable shear value. The allowable shear values for the intermodal shipping container side walls (longitudinal) and end walls (transverse) for wind design and seismic design using the coefficients of Section 3114.8.5.2 shall be in accordance with Table 3114.8.5.3, provided that all of the following conditions are met:

1. The total linear length of all openings in any individual side walls or end walls shall be limited to not more than 50 percent of the length of that side walls or end walls, as shown in Figure 3114.8.5.3(1).

2. Any full height wall length, or portion thereof, less than 4 feet (305 mm) long shall not be considered as a portion of the lateral force-resisting system, as shown in Figure 3114.8.5.3(2).

3. All side walls or end walls used as part of the lateral force-resisting system shall have an existing or new boundary element on all sides to form a continuous load path, or paths, with adequate strength and stiffness to transfer all forces from the point of application to the final point of resistance, as shown in Figure 3114.8.5.3(3).

4. A maximum of one penetration not greater than a 6-inch (152 mm) diameter hole for conduits, pipes, tubes or vents, or not greater than 16 square inches (10 322mm^2) for electrical boxes, is permitted for each individual 8 feet length (2438 mm) lateral force resisting wall. Penetrations located in walls that are not part of the wall lateral force resisting

system shall not be limited in size or quantity. Existing intermodal shipping container's vents shall not be considered a penetration, as shown in Figure 3114.8.5.3(4).

5. End wall door or doors designated as part of the lateral force-resisting system shall be welded closed.

TABLE 3114.8.5.3
ALLOWABLE SHEAR VALUES FOR INTERMODAL SHIPPING CONTAINER SIDE WALLS AND END WALLS FOR WIND OR SEISMIC LOADING

CONTAINER DESIGNATION [2]	CONTAINER DIMENSION (Nominal Length)	CONTAINER DIMENSION (Nominal Height)	ALLOWABLE SHEAR VALUES (PLF) [1,3]	
			Side Wall	End Wall
1EEE	45 feet (13.7 M)	9.5 feet (2896 mm)	75	843
1EE		8.6 feet (2591 mm)		
1AAA	40 feet (12.2 M)	9.5 feet (2896 mm)	84	
1AA		8.5 feet (2592 mm)		
1A		8.0 feet (2438 mm)		
1AX		<8.0 feet (2483 mm)		
1BBB	30 feet (9.1 M)	9.5 feet (2896 mm)	112	
1BB		8.5 feet (2591 mm)		
1B		8.0 feet (2438 mm)		
1BX		<8.0 feet (2438 mm)		
1CC	20 feet (9.1 M)	8.5 feet (2591 mm)	168	
1C		8.0 feet (2438 mm)		
1CX		<8.0 feet (2438 mm)		

1. The allowable strength for the side walls and end walls of the intermodal shipping containers are derived from ISO 1496-1 and reduced by a factor of safety of 5.
2. Container designation type is derived from ISO 668.
3. Limitations of Sections 3114.8.5.1 and 3114.8.5.3 shall apply.

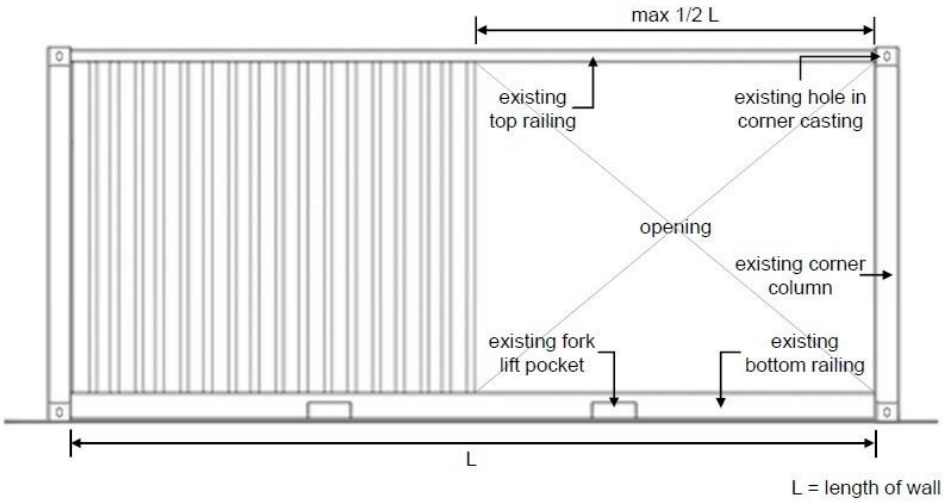


FIGURE 3114.8.5.3(1)
Bracing Unit Distribution – Maximum Linear Length

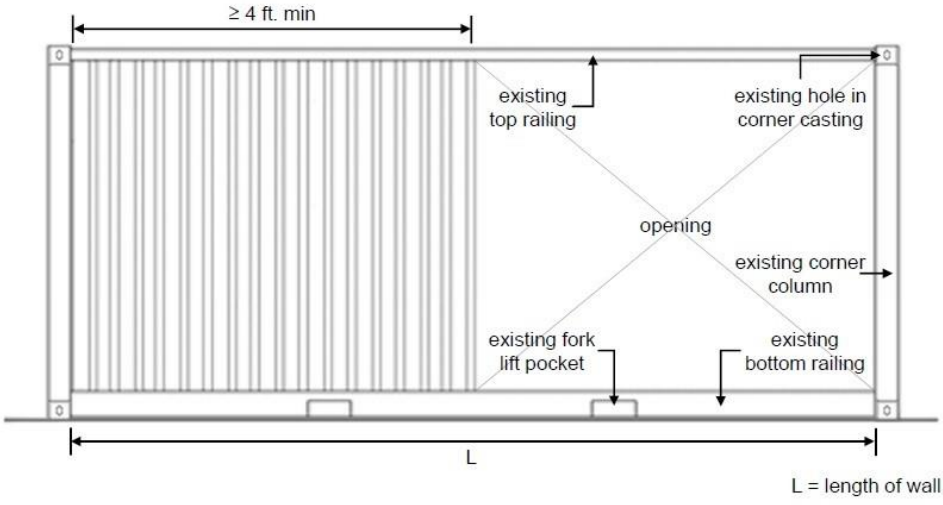


FIGURE 3114.8.5.3(2)
Bracing Unit Distribution – Minimum Linear Length

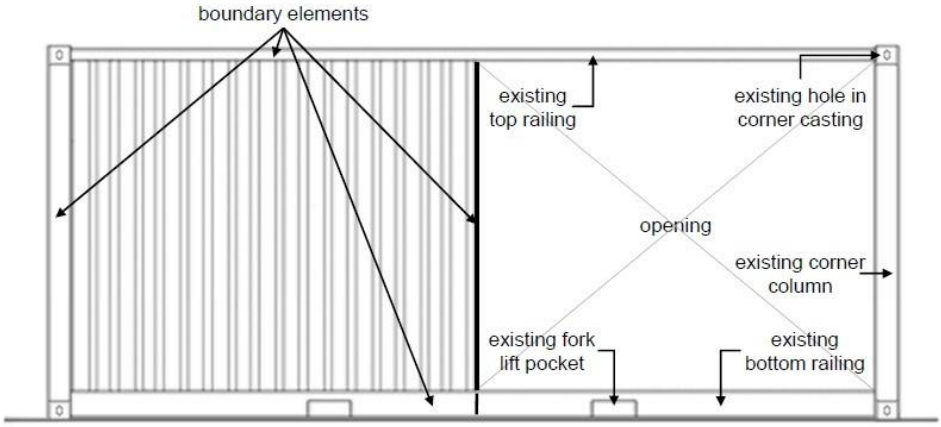


FIGURE 3114.8.5.3(3)
Bracing Unit Distribution – Boundary Elements

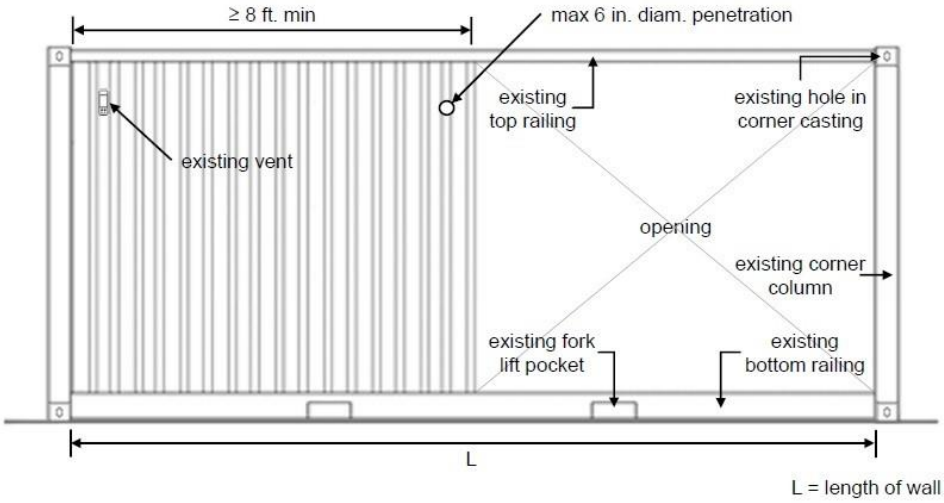


FIGURE 3114.8.5.3(4)
Bracing Unit Distribution – Penetrating Limitations

Section 3307.2 is added to read as follows:

> **3307.2 Temporary Shoring.** Allowable stresses used in the design of temporary shoring may be increased 33-1/3% for structural steel and reinforcing steel and 25% for wood. No increase will be permitted for concrete. Other values shall be those prescribed by this Code.

Chapter 35 is amended to add the following entries:

CHAPTER 35
REFERENCED STANDARDS

ISO	**International Organization for Standardization** **ISO Central Secretariat** **1 ch, de la Voie-Creuse, Casa Postale 566** **CH-1211 Geneva 20, Switzerland**	
Standard Reference Number	**Title**	**Referenced in code section number**

ISO 1496-1:2013	Series 1 Freight Containers – Specification and Testing – Part 1: General Cargo Containers for General Purposes	3114.8, Table 3114.8.5.3
ISO 6346:1995, with Amendment 3: 2012	Freight Containers – Coding, Identification and marking	3114.3
ISO 668:2013	Series 1 Freight Containers – Classifications, dimensions and ratings.	Table 3114.8.5.3

SECTION 3. Chapter 9.02 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

Chapter 9.02 EXISTING BUILDING CODE

9.02.010 Adoption of the 2019 California Existing Building Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Existing Building Code," including Appendix A Chapters A1, A2, A3, A4 and A5, and Appendix B and Standards therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed in the construction, alteration, improvements, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, demolition, conversion, area and height, of existing buildings or structures or any appurtenances connected or attached to such buildings or structures in the city; and subject to the additions, deletions and amendments set forth in this chapter, said Code with its Appendix A Chapters A1, A2, A3, A4 and A5, and Appendix B and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Existing Building Code" of and for the City.

9.02.020 Expiration of plan review.

Section [A] 105.3.2 is hereby amended to read as follows:

> **[A] 105.3.2 Time limitation of application**. Applications for which no permit is issued within 12 months following the date

of application shall expire by limitation and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by applicant for periods not exceeding 180 days upon written request by the applicant and justifiable cause demonstrated. No application shall be extended more than two years from original submittal date. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee and plans shall be reviewed under the current codes and ordinances at the time of the new applications.

9.02.030 Permit expiration.

Section [A] 105.5 is hereby amended to read as follows:

[A] 105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the work is commenced, or if the building or work authorized by such permit is not completed within 2 calendar years from the issuance date of the permit without the issuance of a permit renewal or extension.

Before such work can be recommenced, a new permit, or a renewed permit as specified below, shall be first obtained. No permit shall be valid for more than 4 years.

For permits where work has not commenced within 12 months from the date of such permit, a renewed permit may be obtained provided that: (1) no changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the original issuance date.

For permits where work had commenced and was subsequently suspended or abandoned for a period exceeding 180 days, a renewed permit may be obtained provided that: (1) No changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the issuance date and/or (3) where construction has progressed and has been approved to the point whereby only a final inspection(s) is required, a fee shall be determined based on

the number of estimated inspections, estimated staff time, and required meetings as determined by the Building Official.

For permits that have exceeded two years beyond the issuance date and have not received an extension prior to expiring, a new permit is required. The applicant shall pay the fee based on the valuation of the uncompleted work required for a plan check and a new permit and plans will be reviewed under the current codes and ordinances at the time of the new applications.

Any permittee holding an unexpired permit may apply for an extension of the time within which work under that permit may be continued when, for good and satisfactory reasons, the permittee is unable to continue to work within the time required by this section. The Building Official may extend the time for action by the permittee for periods not exceeding six calendar months upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented completion of the project. No permit shall be valid for more than 4 years.

If the owner or applicant fails to complete the construction work within the time required, the Building Official is authorized to obtain the abatement of any unsafe condition or nuisance created by such incomplete work. The City Attorney is authorized to file an action for the abatement of any such unsafe condition or nuisance if required to do so by the Building Official.

9.02.040 Fees.

Sections [A] 108.2 is amended to read as follows:

[A] 108.2 Schedule of permit fees. The fees shall be determined by the most current City Resolution of Fees.

Plan Review Fees. When submittal documents are required by the Building Official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate fees from the permit fees and are in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section [A] 106.3.4., an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

Section [A] 108.4 is amended to read as follows:

[A] 108.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current Manhattan Beach Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the City's most current Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

9.02.050 Violation and penalties.

Section [A] 113.4 is amended to read as follows:

[A] Section 113.4. Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

9.02.060 General Provisions.

Section 302.7 is added to read as follows:

302.7 Parapets and appendages.

302.7.1 General compliance. Whenever the Building Official determines by inspection that, as a result of inadequate construction or bracing to resist horizontal forces, an existing parapet or appendage attached to and supported by an exterior wall of a building is likely to become a hazard to life or property in the event of earthquake disturbance, and such parapet or appendage is not an immediate hazard or danger as described in Section 115, the Building Official may provide the owner of the building or other person or agent in control of the building where such parapet or other appendage exists, with a written notice specifying the hazards and the inadequacies of the construction or bracing. The owner of the building or other person or agent in control of the building shall, within 12 months from the date of such written notice, eliminate the hazard as set forth below. Any person receiving notice as set out in this Section may appeal, in the manner provided by Section 112, to the Building Board of Appeals.

302.7.2 Wall anchor. The parapet or appendage shall be removed and the remainder of the wall shall be anchored at the roof line, or it shall be reconstructed so that it will conform structurally as near as it is practicable to do so with the requirements of Chapter 16 of the California Building Code, or it shall be otherwise braced and strengthened in a manner

satisfactory to the Building Official, so that it will resist a reasonable degree of horizontal forces without becoming dislodged with danger of falling.

302.7.3 Inspection of existing condition. Where, in the opinion of the Building Official, it is necessary to open a portion of roof, wall, or ceiling of a building in order to determine the structural condition of any parapet or appendage, the Building Official may order the owner to make such opening and the owner shall comply with said order at the owner's sole cost and expense.

Section 302.8 is added to read as follows:

302.8 Existing glass. Whenever the Building Official determines by inspection that an existing glass installation, in rooms having an occupant load of more than 100 persons or a means of egress serving an occupant load of more than 100 persons, as determined by Chapter 10 of the California Building Code, is likely to become a hazard in the event of accidental human impact as described in Section 2406.4 of the Building Code and such installation does not comply with the provisions for glazing in such locations, the Building Official may provide the owner of the building or other person or agent in control of the building where such glazing exists with a written notice of such condition. The owner of the building or other person or agent in control of the building shall, within 90 days after receiving said notice, replace such glass or otherwise cause the installation to conform to the requirements of the Building Code.

Appendix A, Chapter A4, Section A401.2 is amended to read as follows:

A401.2 Scope. The provisions of this chapter may be used for voluntary seismic improvements to all existing Occupancy Group R buildings of wood construction or portions thereof where the structure has a soft, weak, or open-front wall line, and there exists one or more stories above.

Appendix A Chapter A4 Section A404.1 is hereby amended to read as follows:

[BS] A404.1 Limitation. These prescriptive measures shall apply only to two-story buildings and only when deemed appropriate by the Building Official. These prescriptive measures rely on rotation of the second floor diaphragm to

distribute the seismic load between the side and rear walls of the ground floor open area. In the absence of an existing floor diaphragm of wood structural panel or diagonal sheathing, a new wood structural panel diaphragm of minimum thickness of ¾ inch (19.1 mm) and with 10d common nails at 6 inches (152 mm) on center shall be applied. A California licensed architect or engineer shall demonstrate compliance with the requirements of Section A404, and shall approve and stamp the construction documents.

Appendix A Chapter A4 Section A407.1 is hereby amended to read as follows:

[BS] A407.1 Structural observation, testing and inspection. Structural observation, in accordance with Section 1704.6 of the California Building Code, shall be required for all structures in which seismic retrofit is being performed in accordance with this chapter. Structural observation shall include visual observation of work for conformance to the approved construction documents and confirmation of existing conditions assumed during design.

Structural testing and inspection for new construction materials shall be in accordance with the building code, except as modified by this chapter.

SECTION 4. Chapter 9.03 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

Chapter 9.03 RESIDENTIAL CODE

9.03.010 Adoption of California Residential Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Residential Code," including Chapter 1, Division 2 and Appendices J, K, Q, T, and V therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as set forth herein at length, are hereby established and adopted as the rules, regulations, and provisions and conditions to be observed and followed in the construction, enlargement, alteration, movement, replacement, repair, equipment, use

and occupancy, location, removal and demolition, conversion, use, height, area and maintenance of buildings, structures and improvements of every detached one-and two-family dwelling, townhouse not more than three stories above grade plane in height with a separate means of egress and structures accessory thereto in the city and related subjects, items and matters as set forth in said Code, within the City. Subject to the additions, deletions and amendments set forth in this chapter, said Code, with its said Chapter 1, Division 2 and Appendices J, K, Q, T, and V, is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Residential Code" of and for the City.

9.03.020 Work exempt from permit.

R105.2, Building Item 2 is amended to read as follows:

2. Fences not over 6 feet (1829 mm) high.

R105.2, Building Item 7 is amended to read as follows:

7. Prefabricated swimming pools that are less than 18 inches (457 mm) deep.

9.03.030 Expiration of plan review.

Section R105.3.2 is amended as follows:

> **Section R105.3.2 Time limitation of application**. Applications for which no permit is issued within 12 months following the date of application shall expire by limitation and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the Building Official. The Building Official may extend the time for action by applicant for periods not exceeding 180 days upon written request by the applicant and justifiable cause demonstrated. No application shall be extended more than two years from original submittal date. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee and plans shall be reviewed under the current codes and ordinances at the time of the new applications.

9.03.040 Permit Expiration.

Section R105.5 is amended to read as follows:

> **R105.5 Expiration.** Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance, or if the work

authorized by such permit is suspended or abandoned for a period of 180 days after the work is commenced, or if the building or work authorized by such permit is not completed within 2 calendar years from the issuance date of the permit without the issuance of a permit renewal or extension.

Before such work can be recommenced, a new permit, or a renewed permit as specified below, shall be first obtained. No permit shall be valid for more than 4 years.

For permits where work has not commenced within 12 months from the date of such permit, a renewed permit may be obtained provided that: (1) no changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the original issuance date.

For permits where work had commenced and was subsequently suspended or abandoned for a period exceeding 180 days, a renewed permit may be obtained provided that: (1) No changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the issuance date and/or (3) where construction has progressed and has been approved, to the point whereby only a final inspection(s) is required, a fee shall be determined based on the number of estimated inspections, estimated staff time, and required meetings as determined by the Building Official.

For permits that have exceeded two years beyond the issuance date and have not received an extension prior to expiring, a new permit is required. The applicant shall pay the fee based on the valuation of the uncompleted work required for a plan check and a new permit and plans will be reviewed under the current codes and ordinances at the time of the new applications.

Any permittee holding an unexpired permit may apply for an extension of the time within which work under that permit may be continued when, for good and satisfactory reasons, the permittee is unable to continue work within the time required by this section. The Building Official may extend the time for action by the permittee for periods not exceeding six calendar months upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented completion of the project. No permit shall be valid for more than 4 years.

If the owner or applicant fails to complete the construction work within the time required, the Building Official is authorized to obtain the abatement of any unsafe condition or nuisance created by such incomplete work. The City Attorney is authorized to file an action for the abatement of any such unsafe condition or nuisance if required to do so by the Building Official.

9.03.050 Fees.

Section R108.2 is amended to read as follows:

R108.2 Schedule of permit fees. The fees shall be determined by the most current City Resolution of Fees.

Plan Review Fees. When submittal documents are required by the Building Official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate fees from the permit fees and are in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves phased submittal items as defined in Section R106.3.3, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

Section R108.6 is amended to read as follows:

R108.6 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current City Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal

up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

9.03.060 Violation penalties.

Section R113.4 is amended to read as follows:

Section R113.4. Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

9.03.070 Definitions.

Section R202 is amended by adding and deleting a definition as follows:

ADDITION. An extension or increase in floor area or height of a building or structure. Also, major demolition which includes the removal of framing members or interior or exterior wall or ceiling coverings for the purpose of extending the life span of the building as determined by the Building Official, shall be considered a new building.

9.03.080 General residential structural provisions.

Section R301.1.3.2 is amended to read as follows:

> **R301.1.3.2 Woodframe structures.** The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than two stories and basement in height located in Seismic Design Category A, B or C. Notwithstanding other sections of law; the law establishing these provisions is found in Business and Professions Code Sections 5537 and 6737.1.
>
> The Building Official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than one story in height or with a basement located in Seismic Design Category D_0, D_1, or D_2.

Items 1, 3 and 5 of Section R301.2.2.6 are amended to read as follows:

1. **Shear wall or braced wall offsets out of plane**. Conditions where exterior shear wall lines or braced wall panels are not in one plane vertically from the foundation to the uppermost story in which they are required.

3. **Shear wall or braced wall offsets in** plane. Conditions where the end of a braced wall panel occurs over an opening in the wall below.

5. **Floor level** offset. Conditions where portions of a floor level are vertically offset.

Section R301.2.2.11 is added to read as follows:

> **R301.2.2.11 Anchorage of mechanical, electrical, or plumbing components and equipment.** Mechanical, electrical, or plumbing components and equipment shall be anchored to the structure. Anchorage of the components and equipment shall be designed to resist loads in accordance with the California Building Code and ASCE 7, except where the component is positively attached to the structure and flexible connections are provided between the component and associated ductwork, piping, and conduit; and either

1. The component weighs 400 lb (1,780 N) or less and has a center of mass located 4 ft (1.22 m) or less above the supporting structure; or

2. The component weighs 20 lb (89N) or less or, in the case of a distributed system, 5 lb/ft (73 N/m) or less.

Section R401.1 is amended to read as follows:

R401.1 Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for buildings. In addition to the provisions of this chapter, the design and construction of foundations in flood hazard areas as established by Table R301.2 (1) shall meet the provisions of Section R322. Wood foundations shall not be permitted.

Exception: In non-occupied, single-story, detached storage sheds and similar uses other than carport or garage, provided the gross floor area does not exceed 200 square feet, the plate height does not exceed 12 feet in height above the grade plane at any point, and the maximum roof projection does not exceed 24 inches.

Sections R403.1.2 is amended to read as follows:

R403.1.2 Continuous footing in Seismic Design Categories D_0, D_1 and D_2. Exterior walls of buildings located in Seismic Design Categories D_0, D_1 and D_2 shall be supported by continuous solid or fully grouted masonry or concrete footings. All required interior braced wall panels in buildings located in Seismic Design Categories D_0, D_1 and D_2 shall be supported on continuous foundations.

Section R403.1.3.6 is amended to read as follows:

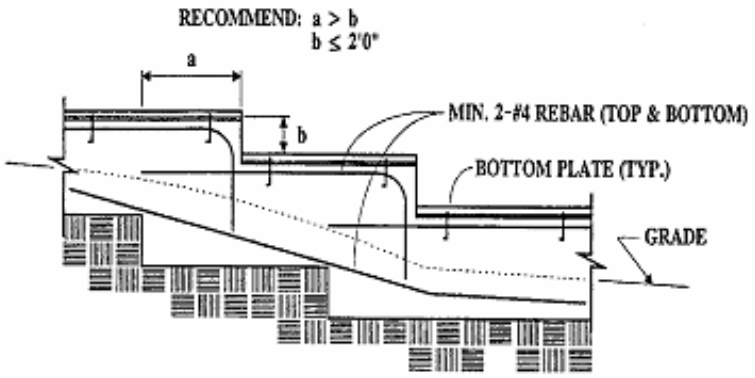
R403.1.3.6 Isolated concrete footings. In detached one- and two-family dwellings located in Seismic Design Category A, B, or C, that are three stories or less in height, and constructed with stud bearing walls, isolated plain concrete footings supporting columns or pedestals are permitted.

Section R403.1.5 is amended to read as follows:

R403.1.5 Slope. The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in 10 units horizontal (10-percent

slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in 10 units horizontal (10-percent slope).

For structures assigned to Seismic Design Categories D_0, D_1 or D_2, stepped footings shall be reinforced with four No. 4 rebar. Two bars shall be place at the top and bottom of the footings as shown in Figure R403.1.5.



STEPPED FOUNDATIONS

FIGURE R403.1.5
STEPPED FOOTING

Section R404.2 is amended to read as follows:

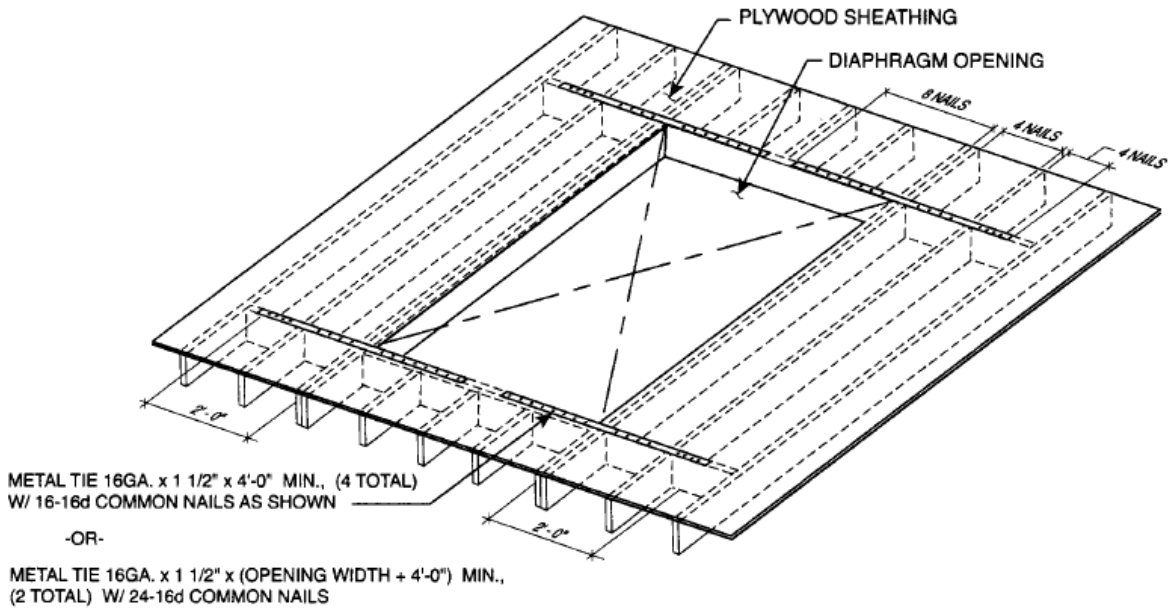
R404.2 Wood foundation walls. Wood foundation walls shall be constructed in accordance with the provisions of Sections R404.2.1 through R404.2.6 and with the details shown in Figures R403.1(2) and R403.1(3). Wood foundation walls shall not be used for structures located in Seismic Design Category D_0, D_1 or D_2.

Section R501.1 is amended to read as follows:

R501.1 Application. The provisions of this chapter shall control the design and construction of the floors for buildings, including the floors of attic spaces used to house mechanical or plumbing fixtures and equipment. Mechanical or plumbing fixtures and equipment shall be attached or anchored to the structure in accordance with Section R301.2.2.11.

Section R503.2.4 is added to read as follows:

R503.2.4 Openings in horizontal diaphragms. Openings in horizontal diaphragms with a dimension perpendicular to the joist that is greater than 4 feet (1.2 m) shall be constructed in accordance with Figure R503.2.4.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Blockings shall be provided beyond headers.
b. Metal ties not less than 0.058 inch [1.47 mm (16 galvanized gage)] by 1.5 inches (38 mm) wide with eight 16d common nails on each side of the header-joist intersection. The metal ties shall have a minimum yield of 33,000 psi (227 MPa).
c. Openings in diaphragms shall be further limited in accordance with Section R301.2.2.6.

FIGURE R503.2.4
OPENINGS IN HORIZONTAL DIAPHRAGMS

Rows 19, 20, 23, and 33 - 36 of Table R602.3(1) are amended to read as follows:

TABLE R602.3(1)—continued
FASTENING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION	
19 k	1″ × 6″ sheathing to each bearing	3-8d box ($2^1/_2$″ × 0.113″); or 2-8d common ($2^1/_2$″ × 0.131″); or 2-10d box (3″ × 0.128″); or 2 staples, 1″ crown, 16 ga., $1^3/_4$″ long	Face nail	
20 k	1″ × 8″ and wider sheathing to each bearing	3-8d box ($2^1/_2$″ × 0.113″); or 3-8d common ($2^1/_2$″ × 0.131″); or 3-10d box (3″ × 0.128″); or 3 staples, 1″ crown, 16 ga., $1^3/_4$″ long	Face nail	
		Wider than 1″ × 8″ 4-8d box ($2^1/_2$″ × 0.113″); or 3-8d common ($2^1/_2$″ × 0.131″); or 3-10d box (3″ × 0.128″); or 4 staples, 1″ crown, 16 ga., $1^3/_4$″ long		
Floor				
23 k	1″ × 6″ subfloor or less to each joist	3-8d box ($2^1/_2$″ × 0.113″); or 2-8d common ($2^1/_2$″ × 0.131″); or 3-10d box (3″ × 0.128″); or 2 staples, 1″ crown, 16 ga., $1^3/_4$″ long	Face nail	
Other wall sheathing[g]				
33 k	$1/_2$″ structural cellulosic fiberboard sheathing	$1^1/_2$″ galvanized roofing nail, $^7/_{16}$″ head diameter, or $1^1/_4$″ long 16 ga. staple with $^7/_{16}$″ or 1″ crown	3	6
34 k	$25/_{32}$″ structural cellulosic fiberboard sheathing	$1^3/_4$″ galvanized roofing nail, $^7/_{16}$″ head diameter, or $1^1/_2$″ long 16 ga. staple with $^7/_{16}$″ or 1″ crown	3	6
35 k	$1/_2$″ gypsum sheathing[d]	$1^1/_2$″ galvanized roofing nail; staple galvanized, $1^1/_2$″ long; $1^1/_4$″ screws, Type W or S	7	7
36 k	$5/_8$″ gypsum sheathing[d]	$1^3/_4$″ galvanized roofing nail; staple galvanized, $1^5/_8$″ long; $1^5/_8$″ screws, Type W or S	7	7

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 ksi = 6.895 MPa.

a. Nails are smooth-common, box or deformed shanks except where otherwise stated.

Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
f. For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or greater but less than 140 mph.
g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.
h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.
j. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.
k. Use of staples in braced wall panels shall be prohibited in Seismic Design Category D_0, D_1, or D_2.

The Exception in Section R602.3.2 is amended to read as follows:

Exception: In other than Seismic Design Category D_0, D_1 or D_2, a single top plate used as an alternative to a double top plate shall comply with the following:

1. The single top plate shall be tied at corners, intersecting walls, and at in-line splices in straight wall lines in accordance with Table R602.3.2.

2. The rafters or joists shall be centered over the studs with a tolerance of not more than 1 inch (25 mm).

3. Omission of the top plate is permitted over headers where the headers are adequately tied to adjacent wall sections in accordance with Table R602.3.2.

Table R602.3.2 is amended to read as follows:

Footnote “b” of Table R602.3(2) is amended to read as follows:

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted. Use of staples in roof, floor, subfloor, and braced wall panels shall be prohibited in Seismic Design Category D_0, D_1, or D_2.

Section R602.10.2.3 is amended to read as follows:

R602.10.2.3 Minimum number of braced wall panels. Braced wall lines with a length of 16 feet (4877 mm) or less shall have not less than two braced wall panels of any length

TABLE R602.3.2
SINGLE TOP-PLATE SPLICE CONNECTION DETAILS

CONDITION	TOP-PLATE SPLICE LOCATION			
	Corners and intersecting walls		Butt joints in straight walls	
	Splice plate size	Minimum nails each side of joint	Splice plate size	Minimum nails each side of joint
Structures in SDC A-C; ~~and in SDC D_0, D_1 and D_2 with braced wall line spacing less than 25 feet~~	3″ × 6″ × 0.036″ galvanized steel plate or equivalent	(6) 8d box (2½″ × 0.113″) nails	3′ × 12″ × 0.036″ galvanized steel plate or equivalent	(12) 8d box (2½″ × 0.113″) nails
~~Structures in SDC D_0, D_1 and D_2, with braced wall line spacing greater than or equal to 25 feet~~	~~3″ × 8″ by 0.036″ galvanized steel plate or equivalent~~	~~(9) 8d box (2½″ × 0.113″) nails~~	~~3′ × 16″ × 0.036″ galvanized steel plate or equivalent~~	~~(18) 8d box (2½″ × 0.113″) nails~~

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

or one braced wall panel equal to 48 inches (1219 mm) or more. Braced wall lines greater than 16 feet (4877 mm) shall have not less than two braced wall panels. No braced wall panel shall be less than 48 inches in length in Seismic Design Category D_0, D_1, or D_2.

Table R602.10.3(3) is amended to read as follows:

TABLE R602.10.3(3)
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

• SOIL CLASS D[b] • WALL HEIGHT = 10 FEET • 10 PSF FLOOR DEAD LOAD • 15 PSF ROOF/CEILING DEAD LOAD • BRACED WALL LINE SPACING ≤ 25 FEET			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE[a, f]				
Seismic Design Category	Story Location	Braced Wall Line Length (feet)[c]	Method LIB[d]	Method GB[g]	Methods DWB, SFB, PBS, PCP, HPS, CS-SFB[e,g]	Method WSP	Methods CS-WSP, CS-G, CS-PF
C (townhouses only)		10	2.5	2.5	2.5	1.6	1.4
		20	5.0	5.0	5.0	3.2	2.7
		30	7.5	7.5	7.5	4.8	4.1
		40	10.0	10.0	10.0	6.4	5.4
		50	12.5	12.5	12.5	8.0	6.8
		10	NP	4.5	4.5	3.0	2.6
		20	NP	9.0	9.0	6.0	5.1
		30	NP	13.5	13.5	9.0	7.7
		40	NP	18.0	18.0	12.0	10.2
		50	NP	22.5	22.5	15.0	12.8
		10	NP	6.0	6.0	4.5	3.8
		20	NP	12.0	12.0	9.0	7.7
		30	NP	18.0	18.0	13.5	11.5
		40	NP	24.0	24.0	18.0	15.3
		50	NP	30.0	30.0	22.5	19.1
D_0		10	NP	~~2.8~~ 5.6	~~2.8~~ 5.6	1.8	1.6
		20	NP	~~5.5~~ 11.0	~~5.5~~ 11.0	3.6	3.1
		30	NP	~~8.3~~ 16.6	~~8.3~~ 16.6	5.4	4.6
		40	NP	~~11.0~~ 22.0	~~11.0~~ 22.0	7.2	6.1
		50	NP	~~13.8~~ 27.6	~~13.8~~ 27.6	9.0	7.7
		10	NP	~~5.3~~ NP	~~5.3~~ NP	3.8	3.2
		20	NP	~~10.5~~ NP	~~10.5~~ NP	7.5	6.4
		30	NP	~~15.8~~ NP	~~15.8~~ NP	11.3	9.6
		40	NP	~~21.0~~ NP	~~21.0~~ NP	15.0	12.8
		50	NP	~~26.3~~ NP	~~26.3~~ NP	18.8	16.0
		10	NP	~~7.3~~ NP	~~7.3~~ NP	5.3	4.5
		20	NP	~~14.5~~ NP	~~14.5~~ NP	10.5	9.0
		30	NP	~~21.8~~ NP	~~21.8~~ NP	15.8	13.4
		40	NP	~~29.0~~ NP	~~29.0~~ NP	21.0	17.9
		50	NP	~~36.3~~ NP	~~36.3~~ NP	26.3	22.3

(continued)

TABLE R602.10.3(3)—continued
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

• SOIL CLASS D[b] • WALL HEIGHT = 10 FEET • 10 PSF FLOOR DEAD LOAD • 15 PSF ROOF/CEILING DEAD LOAD • BRACED WALL LINE SPACING ≤ 25 FEET			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE[a, f]				
Seismic Design Category	**Story Location**	**Braced Wall Line Length (feet)[c]**	**Method LIB[d]**	**Method GB[g]**	**Methods DWB, SFB, PBS, PCP, HPS, CS-SFB[e, g]**	**Method WSP**	**Methods CS-WSP, CS-G, CS-PF**
D_1		10	NP	~~3.0~~ 6.0	~~3.0~~ 6.0	2.0	1.7
		20	NP	~~6.0~~ 12.0	~~6.0~~ 12.0	4.0	3.4
		30	NP	~~9.0~~ 18.0	~~9.0~~ 18.0	6.0	5.1
		40	NP	~~12.0~~ 24.0	~~12.0~~ 24.0	8.0	6.8
		50	NP	~~15.0~~ 30.0	~~15.0~~ 30.0	10.0	8.5
		10	NP	~~6.0~~ NP	~~6.0~~ NP	4.5	3.8
		20	NP	~~12.0~~ NP	~~12.0~~ NP	9.0	7.7
		30	NP	~~18.0~~ NP	~~18.0~~ NP	13.5	11.5
		40	NP	~~24.0~~ NP	~~24.0~~ NP	18.0	15.3
		50	NP	~~30.0~~ NP	~~30.0~~ NP	22.5	19.1
		10	NP	~~8.5~~ NP	~~8.5~~ NP	6.0	5.1
		20	NP	~~17.0~~ NP	~~17.0~~ NP	12.0	10.2
		30	NP	~~25.5~~ NP	~~25.5~~ NP	18.0	15.3
		40	NP	~~34.0~~ NP	~~34.0~~ NP	24.0	20.4
		50	NP	~~42.5~~ NP	~~42.5~~ NP	30.0	25.5
D_2		10	NP	~~4.0~~ 8.0	~~4.0~~ 8.0	2.5	2.1
		20	NP	~~8.0~~ 16.0	~~8.0~~ 16.0	5.0	4.3
		30	NP	~~12.0~~ 24.0	~~12.0~~ 24.0	7.5	6.4
		40	NP	~~16.0~~ 32.0	~~16.0~~ 32.0	10.0	8.5
		50	NP	~~20.0~~ 40.0	~~20.0~~ 40.0	12.5	10.6
		10	NP	~~7.5~~ NP	~~7.5~~ NP	5.5	4.7
		20	NP	~~15.0~~ NP	~~15.0~~ NP	11.0	9.4
		30	NP	~~22.5~~ NP	~~22.5~~ NP	16.5	14.0
		40	NP	~~30.0~~ NP	~~30.0~~ NP	22.0	18.7
		50	NP	~~37.5~~ NP	~~37.5~~ NP	27.5	23.4
		10	NP	NP	NP	NP	NP
		20	NP	NP	NP	NP	NP
		30	NP	NP	NP	NP	NP
		40	NP	NP	NP	NP	NP
		50	NP	NP	NP	NP	NP
	Cripple wall below one- or two-story dwelling	10	NP	NP	NP	7.5	6.4
		20	NP	NP	NP	15.0	12.8
		30	NP	NP	NP	22.5	19.1
		40	NP	NP	NP	30.0	25.5
		50	NP	NP	NP	37.5	31.9

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.
NP = Not Permitted.

a. Linear interpolation shall be permitted.
b. Wall bracing lengths are based on a soil site class "D." Interpolation of bracing length between the S_{DS} values associated with the seismic design categories shall be permitted when a site-specific S_{DS} value is determined in accordance with Section 1613.2 of the *California Building Code*.
c. Where the braced wall line length is greater than 50 feet, braced wall lines shall be permitted to be divided into shorter segments having lengths of 50 feet or less, and the amount of bracing within each segment shall be in accordance with this table.
d. Method LIB shall have gypsum board fastened to not less than one side with nails

or screws in accordance with Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches.

e. Methods PFG and CS-SFB do not apply in Seismic Design Categories D_0, D_1 and D_2.
f. Where more than one bracing method is used, mixing methods shall be in accordance with Section R602.10.4.1.
g. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D_0, D_1 and D_2. Methods DWB, SFB, PBS, and HPS are not permitted in D_0, D_1 and D_2.

Table R602.10.4 is amended to read as follows:

TABLE R602.10.4
BRACING METHODS [f]

	METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA[a]	
				Fasteners	Spacing
Intermittent Bracing Methods	**LIB** Let-in-bracing	1 × 4 wood or approved metal straps at 45° to 60° angles for maximum 16″ stud spacing		Wood: 2-8d common nails or 3-8d ($2^1/_2$″ long x 0.113″ dia.) nails	Wood: per stud and top and bottom plates
				Metal strap: per manufacturer	Metal: per manufacturer
	DWB Diagonal wood boards	$^3/_4$″ (1″ nominal) for maximum 24″ stud spacing		2-8d ($2^1/_2$″ long × 0.113″ dia.) nails or 2 - $1^3/_4$″ long staples	Per stud
	WSP Wood structural panel (See Section R604)	~~$^3/_8$″~~ 15/32″	8d common (2 1/2"x0.131) nails 3/8" edge distance to panel edge	~~Exterior sheathing per Table R602.3(3)~~	6″ edges 12″ field
			8d common (2 1/2"x0.131) nails 3/8" edge distance to panel edge	~~Interior sheathing per Table R602.3(1) or R602.3(2)~~	~~Varies by fastener~~ 6" edges 12" field
	BV-WSP[e] Wood structural panels with stone or masonry veneer (See Section R602.10.6.5)	$^7/_{16}$″	See Figure R602.10.6.5	8d common ($2^1/_2$″ × 0.131) nails	4″ at panel edges 12″ at intermediate supports 4″ at braced wall panel end posts
	SFB Structural fiberboard sheathing	$^1/_2$″ or $^{25}/_{32}$″ for maximum 16″ stud spacing		$1^1/_2$″ long × 0.12″ dia. (for $^1/_2$″ thick sheathing) $1^3/_4$″ long × 0.12″ dia. (for $^{25}/_{32}$″ thick sheathing) galvanized roofing nails	3″ edges 6″ field
	GB Gypsum board	$^1/_2$″		Nails or screws per Table R602.3(1) for exterior locations	For all braced wall panel locations: 7″ edges (including top and bottom plates) 7″ field
				Nails or screws per Table R702.3.5 for interior locations	
	PBS Particleboard sheathing (See Section R605)	$^3/_8$″ or $^1/_2$″ for maximum 16″ stud spacing		For $^3/_8$″, 6d common (2″ long × 0.113″ dia.) nails For $^1/_2$″, 8d common ($2^1/_2$″ long × 0.131″ dia.) nails	3″ edges 6″ field
	PCP Portland cement plaster	See Section R703.7 for maximum 16″ stud spacing		$1^1/_2$″ long, 11 gage, $^7/_{16}$″ dia. head nails or $^7/_8$″ long, 16 gage staples [g]	6″ o.c. on all framing members
	HPS Hardboard panel siding	$^7/_{16}$″ for maximum 16″ stud spacing		0.092″ dia., 0.225″ dia. head nails with length to accommodate $1^1/_2$″ penetration into studs	4″ edges 8″ field
	ABW Alternate braced wall	$^3/_8$″		See Section R602.10.6.1	See Section R602.10.6.1

(continued)

a. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Categories C, D_0, D_1 and D_2.
b. Applies to panels next to garage door opening where supporting gable end wall or roof load only. Shall only be used on one wall of the garage. In Seismic Design Categories D_0, D_1 and D_2, roof covering dead load shall not exceed 3 psf.
c. Garage openings adjacent to a Method CS-G panel shall be provided with a header in accordance with Table R602.5(1). A full-height clear opening shall not be permitted adjacent to a Method CS-G panel.
d. Method CS-SFB does not apply in Seismic Design Categories D_0, D_1 and D_2.
e. Method applies to detached one- and two-family dwellings in Seismic Design Categories D_0 through D_2 only.
f. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D_0, D_1, or D_2. Methods LIB, DWB, SFB, PBS, HPS, and PFG are not permitted in SDC D_0, D_1, or D_2.
g. Use of staples in braced wall panels shall be prohibited in SDC D_0, D_1, or D_2.

Table R602.10.5 is amended to read as follows:

TABLE R602.10.5 MINIMUM LENGTH OF BRACED WALL PANELS

METHOD (See Table R602.10.4)		
		8 fee
DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP		48
GB		48
LIB		55
ABW	SDC A, B and C, ultimate design wind speed < 140 mph	28
	SDC D_0, D_1 and D_2, ultimate design wind speed < 140 mph	32
CS-G		24
CS-WSP, CS-SFB	Adjacent clear opening height (inches)	
	≤ 64	24
	68	26
	72	27
	76	30
	80	32
	84	35
	88	38
	92	43
	96	48
	100	—
	104	—
	108	—
	112	—
	116	—
	120	—
	124	—
	128	—
	132	—
	136	—
	140	—
	144	—
METHOD (See Table R602.10.4)		8 fee
PFH	Supporting roof only	~~16~~ 24
	Supporting one story and roof	24
PFG		24
CS-PF	SDC A, B and C	16
	SDC D_0, D_1 and D_2	~~16~~ 24

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.
NP = Not Permitted.

a. Linear interpolation shall be permitted.
b. Use the actual length where it is greater than or equal to the minimum length.
c. Maximum header height for PFH is 10 feet in accordance with Figure R602.10.6.2, but wall height shall be permitted to be increased to 12 feet with pony wall.
d. Maximum header height for PFG is 10 feet in accordance with Figure R602.10.6.3, but wall height shall be permitted to be increased to 12 feet with pony wall.
e. Maximum header height for CS-PF is 10 feet in accordance with Figure R602.10.6.4, but wall height shall be permitted to be increased to 12 feet with pony wall.

Figure R602.10.6.1 is amended to read as follows:

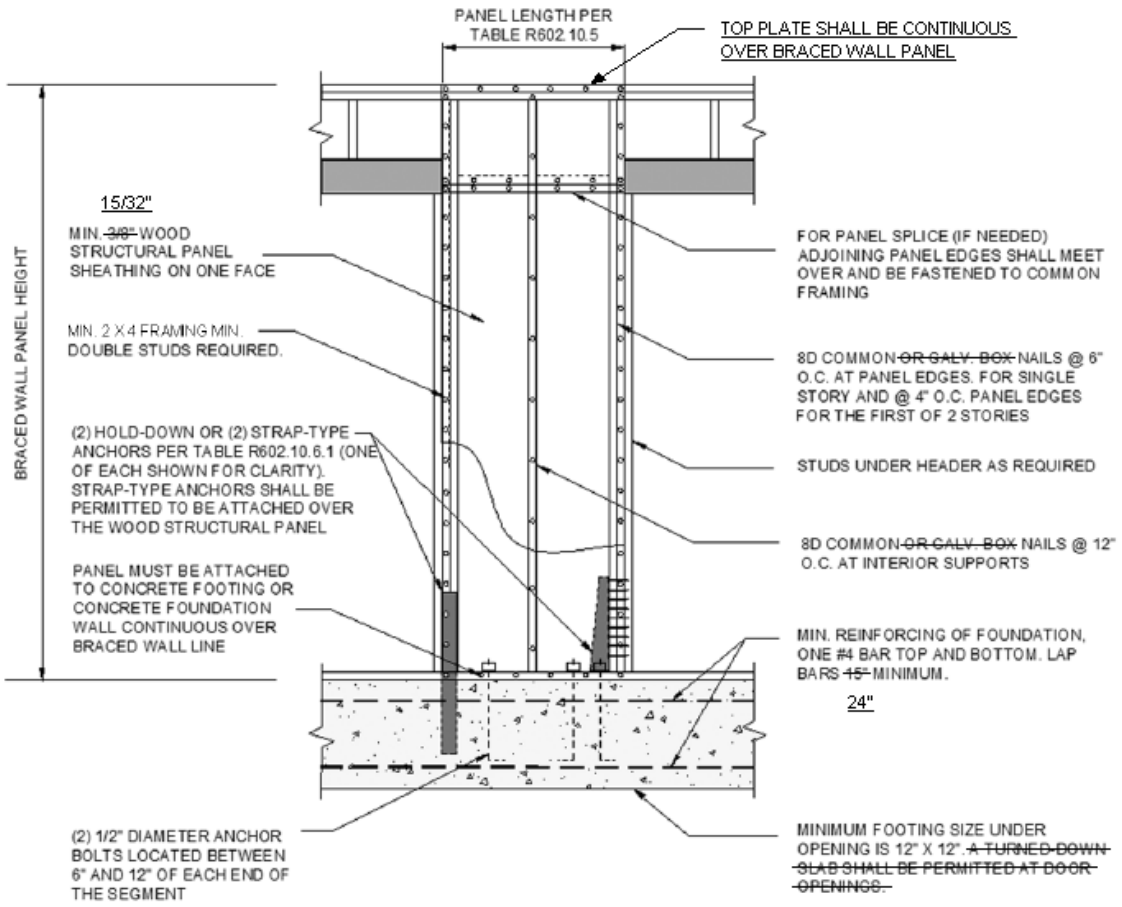
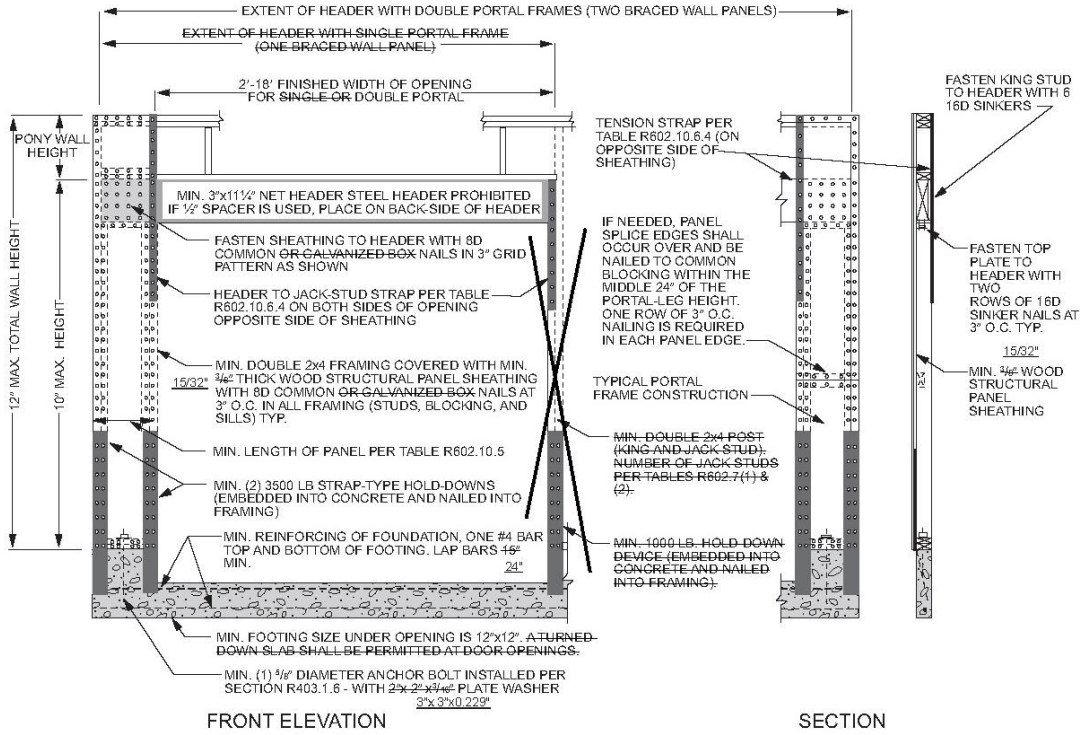


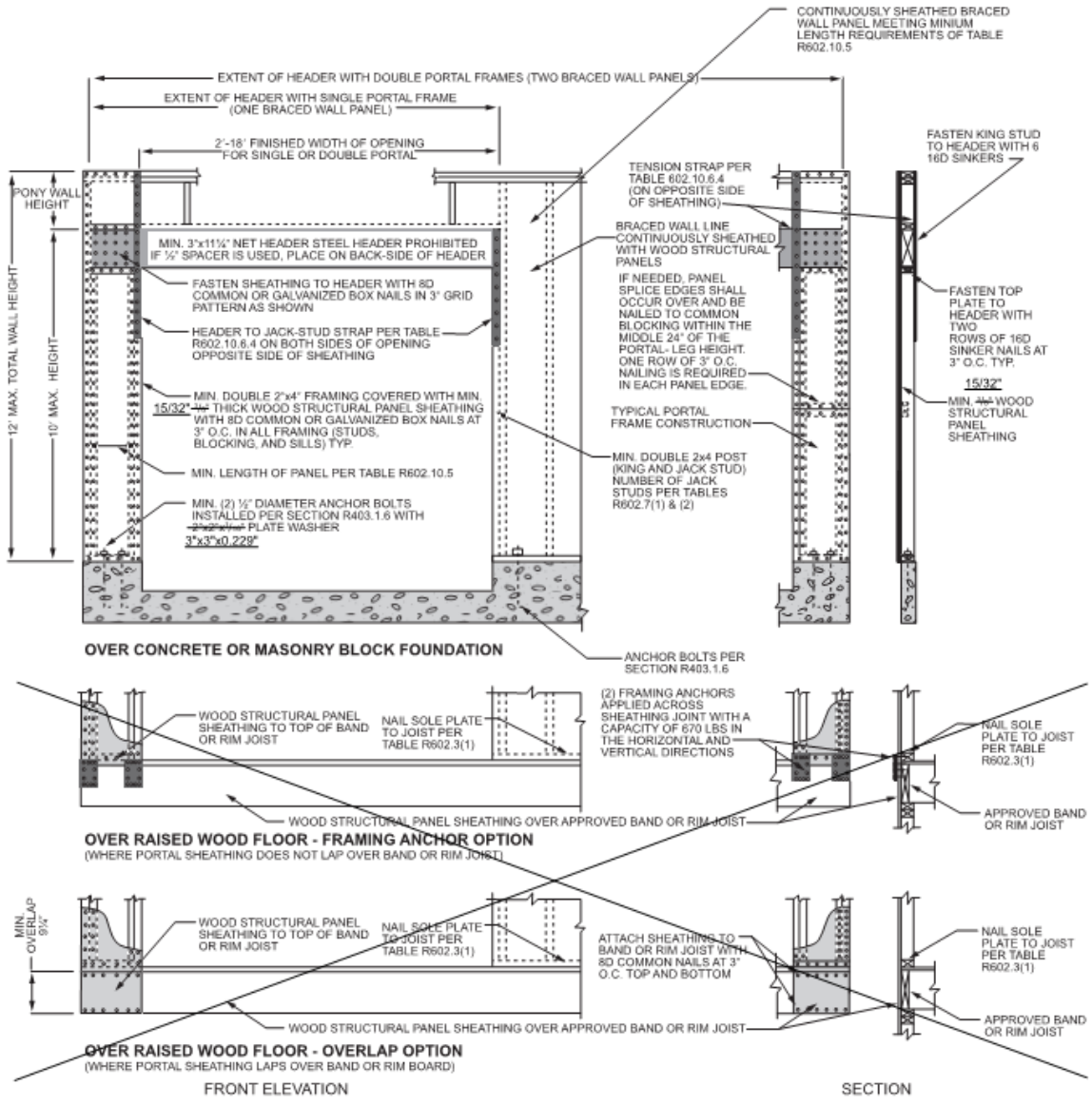
FIGURE R602.10.6.1
METHOD ABW—ALTERNATE BRACED WALL PANEL

Figure R602.10.6.2 is amended to read as follows:



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.2
METHOD PFH—PORTAL FRAME WITH HOLD-DOWNS
AT DETACHED GARAGE DOOR OPENINGS



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.4
METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

Figure R602.10.6.4 is amended to read as follows:

Section R606.4.4 is amended to read as follows:

> **R606.4.4 Parapet walls.** Unreinforced solid masonry parapet walls shall not be less than 8 inches (203 mm) thick and their height shall not exceed four times their thickness.

Unreinforced hollow unit masonry parapet walls shall be not less than 8 inches (203 mm) thick, and their height shall not exceed three times their thickness. Masonry parapet walls in areas subject to wind loads of 30 pounds per square foot (1.44 kPa) or located in Seismic Design Category D_0, D_1 or D_2, or on townhouses in Seismic Design Category C shall be reinforced in accordance with Section R606.12.

Section R606.12.2.2.3 is amended to read as follows:

R606.12.2.2.3 Reinforcement requirements for masonry elements. Masonry elements listed in Section R606.12.2.2.2 shall be reinforced in either the horizontal or vertical direction as shown in Figure R606.11(3) and in accordance with the following:

1. Horizontal reinforcement. Horizontal joint reinforcement shall consist of at least one No. 4 bar spaced not more than 48 inches (1219 mm). Horizontal reinforcement shall be provided within 16 inches (406 mm) of the top and bottom of these masonry elements.

2. Vertical reinforcement. Vertical reinforcement shall consist of at least one No. 4 bar spaced not more than 48 inches (1219 mm). Vertical reinforcement shall be within 8 inches (203 mm) of the ends of masonry walls.

Section R803.2.4 is added to Chapter 8 of the 2019 Edition of the California Residential Code to read as follows:

R803.2.4 Openings in horizontal diaphragms. Openings in horizontal diaphragms shall conform with Section R503.2.4.

Section R905.3.1 is amended to read as follows:

R905.3.1 Deck requirements. Concrete and clay tile shall be installed only over solid sheathing.

Exception: Spaced lumber shall be permitted in Seismic Design Categories A, B, and C.

Section R1001.3.1 is amended to read as follows:

R1001.3.1 Vertical reinforcing. For chimneys up to 40 inches (1016 mm) wide, four No. 4 continuous vertical bars adequately anchored into the concrete foundation shall be placed between wythes of solid masonry or within the cells of hollow unit masonry and grouted in accordance with Section

R606. Grout shall be prevented from bonding with the flue liner so that the flue liner is free to move with thermal expansion. For chimneys more than 40 inches (1016 mm) wide, two additional No. 4 vertical bars adequately anchored into the concrete foundation shall be provided for each additional flue incorporated into the chimney or for each additional 40 inches (1016 mm) in width or fraction thereof.

SECTION 5. Chapter 9.10 is hereby added to Title 9 of the Manhattan Beach Municipal Code to read as follows:

Chapter 9.10 - HISTORICAL BUILDING CODE

9.10.10 Adoption of the 2019 California Historical Building Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Historical Building Code," including the Appendix A therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed in the repair, alteration and additions necessary for the preservation, restoration, reconstruction, rehabilitation, relocation, or continued use of a qualified historical building or property when so elected by the private property owner in the city; and subject to the additions, deletions and amendments set forth in this chapter, said Code with its Appendix A and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Historical Building Code" of and for the City.

SECTION 6. Chapter 9.12 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

Chapter 9.12. ELECTRICAL CODE.

9.12.010 Adoption of California Electrical Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive of the Government Code of the State and subject to the particular additions, amendments, and deletions set forth in this chapter, the rules, regulations, provisions, and conditions set forth in those certain Codes entitled "2019

California Electrical Code",("CEC"), including the Annexes and Tables therein contained, promulgated and published by the National Fire Protection Association of Quincy, Massachusetts and the California Building Standards Commission, including the Annexes and Tables therein contained, one (1) full printed copy of which, printed as a Code in book form, was by the Council ordered filed and which has been actually filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the rules, regulations, standards, provisions, and conditions to be observed and followed in the installation, arrangement, alteration, repair, use, and operation of electrical wire connections, fixtures, and other electrical appliances, and subject to the additions, amendments, and deletions set forth in this chapter, said Code with its Annexes and Tables, containing said rules, regulations, standards, provisions, and conditions, is hereby established and adopted by reference, and the same shall be designated, known, and referred to as the "Electrical Code" of and for the City.

9.12.020 Fees.

Section 89.108.4.2 is amended as follows:

> **89.408.4.2 Fees.** The fees shall be determined by the most current City Resolution of Fees.
>
> **Plan Review Fees**. When submittal documents are required by the building official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.
>
> The plan review fees specified in this section are separate and in addition to any permit fees required.
>
> When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.
>
> **Work commencing before permit issuance**. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current Manhattan Beach Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The minimum investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law

9.12.030 Plans and specifications.

Section 89.108.4.3 is amended by adding the following paragraphs to the section:

Electrical Plans and Specifications. When required by the Building Official, electrical plans, specifications, and applications shall be filed and approved by the Building Official prior to any electrical wiring or installations.

Electrical plans and specifications for all occupancies listed in the current adopted California Building Code shall be prepared by an Electrical Engineer who possesses a valid Professional Electrical Engineering Registration issued pursuant to and in accordance with the laws of the State of California. All electrical sheets shall be stamped and signed by the licensed Professional Electrical Engineer.

Electrical plans shall include but are not limited to load schedule, wiring diagrams, homeruns, wire sizes, location and size of service panels and subpanels, method of grounding of service. Electrical plans for the following types of projects must be submitted for electrical plan check:

1. All Commercial and Industrial projects, tenant improvements, additions, and service changes.

2. The mixed Occupancy of R-2 and U Occupancy where U Occupancy is between 1000 and 3000 square feet and when service is over 400 amps.

3. R-3 Occupancy and U Occupancy when service is over 400 amps.

Electrical Load Calculations shall be prepared and submitted by a licensed electrical contractor and/or owner/builder under the following conditions:

1. R-3 Occupancy including new construction, additions, and service changes.

2. U Occupancy (which is part of the R -3 Occupancy), which does not exceed 1000 square feet in area.

Exception: The Building Official may waive the submission of electrical plans, calculations, etc., if it is found that the nature of the work applied for is such that reviewing of electrical plans is not necessary to obtain compliance with this Code.

9.12.040 Penalties.

Section 89.108.3.2.5 is added to read as follows:

89.108.3.2.5. Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with any City Building Official, or his or her authorized representative, in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

9.12.050 Services undergrounding.

Section 230-30 (A) is amended by the addition of subsection (5) to read as follows:

(5) Underground Utilities Required. All new buildings and structures in the City of Manhattan Beach shall provide underground electrical and communication service laterals on the premises to be served, as hereinafter required.

(a) New Construction. All electrical, telephone, cable television system, and similar service wires and cables which provide direct service to new main buildings, new accessory buildings, and structures, shall be installed underground in compliance with all applicable building and electrical codes, safety regulations, and orders, rules of the Public Utilities Commission of the State of California, and specifications or standards of the Public Works Department.

(b) Existing Buildings. Such service wires and cables shall also be placed underground when existing buildings, existing accessory buildings, and structures are repaired, remodeled, altered or expanded, except where the value, as determined for building permit fee purposes, by the Building Code of the City of Manhattan Beach, of such repairs or remodeling, or expansion does not exceed fifty percent (50%) of the value of the building or structure as determined by the California Building Code.

(c) Wiring between the accessory buildings and the main buildings shall be in an underground system.

(d) Responsibility for Compliance. The Contractor and Owner are jointly and severally responsible for complying with the requirements of this section and shall make the necessary arrangements with the utility companies servicing the structure for the installation of such facilities.

If a proposed building or structure would create a situation which would make unreasonable, impractical, or physically impossible the continuance of overhead utility service to an existing adjacent property (or properties), then the Contractor and owner of the proposed building or structure shall be responsible for relocating such utilities per utility company specifications, and shall be installed underground in compliance with all applicable codes, safety regulations, and orders, rules of the Public Utilities Commission of the State of California, and specifications or standards of the Public Works Department.

(e) Appurtenances. For the purpose of this section, appurtenances and associated equipment such as, but not limited to, service mounted transformers, pedestal mounted terminal boxes and meter cabinets may be placed above ground if permitted by and in accordance with the rules of the State Public Utilities Commission.

(f) Waiver of Underground Requirements. If topographical, soil, or any other conditions make such underground installations unreasonable or impractical, a waiver of the requirements of this section may be granted by the Building Official, (a written approval from Southern California Edison is required when necessary) subject to the installation of all necessary electrical conduits, terminal boxes and other appurtenances as may be required to provide underground service in the future.

If the utility pole(s) from which underground service would be provided are not situated on the same side of the public street as the permittee, or not within five (5) feet of the area enclosed by the extension of the side property lines to said public street, the permittee may have the alternative of installing all conduit, wires, pillboxes, electrical panel and other appurtenances which may be required for future underground utility services from the structure to an approved location on the property line of the

parcel which will facilitate future underground service; and that the property may continue to be served by overhead wires until said future underground utility conversion.

If a building or structure is served by the rear from utilities not located in the public right-of-way, the permittee may have the alternative of installing all conduit, wires, pull boxes, electrical panel, and other appurtenances which may be required for future underground utility services from the building or structure to an approved location on the property line of the parcel which will facilitate future underground service; and that the property may continue to be served by overhead wires until said future underground utility conversion.

Exceptions: This section shall not apply to:

(i) Utility lines which do not provide service to the area being developed.

(ii) Detached dwelling units with separate utility services which are not the subject of a common including permit.

9.12.060 Service equipment.

Section 230-62 is amended by the addition of subsection (C) to read as follows:

(C) **Minimum Size and Material of Overhead Service Equipment Conduit**. Service entry conduits shall be not less than 1-1/2” in diameter and fabricated of rigid galvanized steel.

Exception: A service entry conduit not less than 1-1/2” in diameter of rigid galvanized steel, except 100 amp service may be 1-1/4” rigid galvanized steel.

9.12.070 Reserved.

9.12.080 Conductor material.

Section 310.106(B) is amended to read as follows:

(B) **Conductor material.** Conductors in this article shall be of copper unless otherwise approved by the Building Official.

9.12.090 Reserved.

9.12.100 Ampacities of various conductors.

Tables 310.15 (B) (16) - 310.15 (B) (21), including Notes to said Tables, are amended to delete all references to aluminum or copper-clad aluminum.

SECTION 7. Chapter 9.16 of Title 9 of the Manhattan Beach Municipal Code is hereby repealed in its entirety and replaced with a new Chapter 9.16 to read as follows::

Chapter 9.16 - ADMINISTRATIVE CODE

9.16.10 Adoption of the 2019 California Administrative Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Administrative Code," promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the administrative regulations regarding the adoption of building standards; and subject to the additions, deletions and amendments set forth in this chapter, said Code and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Administrative Code" of and for the City.

SECTION 8. Chapter 9.32 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

Chapter 9.32: PLUMBING CODE

9.32.010 Adoption of California Plumbing Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Plumbing Code" including Appendices A, B, D, I, and J therein contained, promulgated and published by the International Association of Plumbing and Mechanical Officials of Ontario, California and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have

been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as set forth herein at length, are hereby established and adopted as the rules, regulations, and provisions and conditions to be observed and followed in the moving, removal, demolition, condemnation, maintenance and use of plumbing, house drainage, house sewers, sanitary sewers, cesspools, septic tanks, gas piping, gas water heater vents, swimming pools, and gas outlets for swimming pool heaters and related subjects, items and matters as set forth in said Code, within the City. Subject to the additions, deletions and amendments set forth in this chapter, said Code, with its said specified sections of Chapter 1, Division II, Chapters 2 through 17, and Appendices A, B, D, I, and J, is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Plumbing Code" of and for the City.

9.32.020 Violations and penalties.

Section 106.3 is amended to read as follows:

> **106.3 Violation penalties**. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, enlarges, alters, repairs, moves, improves, removes, converts, demolishes, equips, uses, or maintains plumbing in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.
>
> Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

9.32.030 Plumbing permit fees.

Table 104.5, Plumbing Permit Fees, of Chapter 1, Division II of the 2019 California Plumbing Code is deleted.

Schedule of permit fees. The fees shall be determined by the most current City Resolution of Fees.

Plan Review Fees. When submittal documents are required by the Building Official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate and in addition to any permit fees required.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

Section 104.5.1 is amended to read as follows:

> **104.5.1 Work commencing before permit issuance**. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current Manhattan Beach Resolution of Fees in addition to the required permit fees.
>
> **Investigation**. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation shall be made before a permit may be issued for such work.

Section 104.5.2 is amended to read as follows:

> **Section 104.5.2 Investigation Fee**. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

SECTION 9. Chapter 9.34 is hereby added to Title 9 of the Manhattan Beach Municipal Code to read as follows:

Chapter 9.34 - ENERGY CODE

9.34.10 Adoption of the 2019 California Energy Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Energy Code," including the Appendices therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed for the building envelope, space-conditioning systems, pool and spas, solar ready buildings, indoor lighting systems of buildings, outdoor lighting systems, electrical power distribution systems, and signs located either indoors or outdoors; and subject to the additions, deletions and amendments set forth in this chapter, said Code with its Appendices and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Energy Code" of and for the City.

SECTION 10. Municipal Code Chapter 9.36 (Green Building Standards Code) is hereby amended to adopt the 2019 California Green Building Standards Code and adding local amendments as follows: by deleting sections 9.36.040 - 9.36.140 and replacing Sections 9.36.010, 9.36.020 and 9.36.030 to read as follows:

9.36.010 Adoption of California Green Building Standards Code.

Pursuant to the provisions of Government Code Sections 50022.1 to 50022.10, inclusive, and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled "2019 California Green Building Standards Code" including the Appendices therein contained, promulgated and published by the International Code Council and the California Building Standards Commission, one (1) full printed copy of each, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as set forth herein at length, are hereby established and adopted as the rules,

regulations, and provisions and conditions to be observed and followed in the planning, design, operation, construction, demolition, use and occupancy, operations and maintenance regarding the planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality enhancement in the City and related subjects, items and matters as set forth in said Code, within the City. Subject to the additions, deletions and amendments set forth in this chapter, said Codes, with said Appendices, are hereby established and adopted by reference, and the California Green Building Standards Code shall be designated, known and referred to as "Sustainable Green Building Program" of and for the City.

Nothing in this chapter shall require the applicant to use covered products, as defined in the federal Energy Policy and Conservation Act (42 U.S.C. §6201 et seq.), that exceed any applicable federal energy conservation standards for such products.

9.36.020 Residential mandatory measures.

Section 4.106.4.2 is amended to read as follows:

> **4.106.4.2 New multifamily dwellings.** If residential parking is available, twenty-five (25) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE and five (5) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging stations (EVCS). Calculations for the required number of EV spaces and EVCS shall be rounded up to the nearest whole number.
>
> **Notes:**
>
> 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
>
> 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

Section 4.106.4.3 is amended to read as follows:

> **4.106.4.3 New hotels and motels.** All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE and EVCS. The

construction documents shall identify the location of the EV spaces and EVCS.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

Section 4.106.4.3.1 is amended to read as follows:

4.106.4.3.1 Number of required EV spaces and EVCS. The number of required EV spaces and EVCS shall be based on the total number of parking spaces provided for all type of parking facilities in accordance with Table 4.106.4.3.1. Calculation for the required number of EV spaces and EVCS shall be rounded up to the nearest whole number.

Table 4.106.4.3.1 is amended to read as follows:

TABLE 4.106.4.3.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES	NUMBER OF REQUIRED EVCS
0-9	0	0
10-25	3	1
26-50	7	2
51-75	13	3
76-100	19	4
101-150	26	6
151-200	38	8
201 and over	25 percent of total	5 percent of total

9.36.030 Nonresidential mandatory measures

Section 5.106.5.3.3 and Table 5.106.5.3.3 are amended to read as follows:

5.106.5.3.3 EV charging space and charging station calculation. (N) Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE and EVCS. Calculations for the required number of EV charging spaces and EVCS shall be rounded up to the nearest whole number.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.

2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES	NUMBER OF REQUIRED EVCS
0-9	0	0
10-25	3	1
26-50	7	2
51-75	13	3
76-100	19	4
101-150	26	6
151-200	38	8
201 and over	25 percent of total	5 percent of total

SECTION 11. Section 5.26.020 of Chapter 5.26 of Title 5 of the Manhattan Beach Municipal Code is hereby amended to read as follows:

5.26.020 - Diversion requirement for waste generated by construction and demolition.

All construction, renovation, and remodel projects within the City subject to the California Green Building Standards Code, all demolition projects, and all roofing projects that require tear-off of the existing roof shall comply with this chapter. Failure to comply with any of the terms of this chapter shall subject the project applicant to the full range of penalty and enforcement mechanisms set forth in Sections 5.26.040 and 5.26.080. Compliance with the provisions of this chapter shall be listed as a condition of approval on any building or demolition permit issued for a covered project. Failure to

include such a condition shall not relieve the project applicant from complying with this chapter.

All City-sponsored construction, demolition and renovation projects subject to the California Green Building Standards Code, shall be considered "covered projects" for the purposes of this chapter and shall submit a Waste Management Plan to the WMP Compliance Official prior to beginning any construction or demolition activities and shall be subject to all applicable provisions of this chapter.

SECTION 12. Subsection H of Municipal Code Section 9.44.020 (General requirements for construction activities) is amended to read as follows:

H. Existing sidewalks shall not be obstructed at any time, except as authorized by Section 9.44.050. Public areas and rights-of-way shall be kept clear of any debris and cleaned daily, in the same manner as the clean-up of excavation work in accordance with Section 7.16.150.

SECTION 13. A new Section 9.44.024 is hereby added to Municipal Code Chapter 9.44 (Construction Rules) to read as follows:

9.44.024 Permittee and property owner responsible for damage to public property.

A. Every person who damages public property or a public improvement in connection with construction activity and the owner of the property where the construction activity is located are jointly and severally liable for damage to public property and must, at the City's sole option, either repair the damage and restore the property to its condition prior to the damage to the City's full satisfaction, or pay for the total cost of the repairs.

B. In the event construction activity damages public property or a public improvement, renders public property unsafe, or interferes with the public ability to use such property, the City Manager or his or her designee shall notify the permittee or owner of the construction activity site of the obligation to repair the damage, replace the damaged improvement, or pay for the costs of such repairs and replacement.

C. The permittee or owner shall satisfactorily complete the required work in full compliance with all City ordinances, regulations, rules, and requirements.

SECTION 14. A new Section 9.44.026 is hereby added to Municipal Code Chapter 9.44 (Construction Rules) to read as follows:

9.44.026 Permittee and property owner responsible for keeping and maintaining adjacent property free of debris deposited by construction activity.

A. The Permittee and the owner of the property where the construction activity is located is responsible for keeping and maintaining adjacent property free of debris deposited by construction activity.

B. In the event construction activity creates debris on adjacent property, the City Manager or his or her designee shall notify the permittee or owner that the debris must be removed and the adjacent property restored to a clean and sanitary condition within 48 hours.

C. The permittee or owner shall satisfactorily complete the required removal in full compliance with all City ordinances, regulations, rules, and requirements.

SECTION 15. Subsection B.1 of Section 9.44.060 (Vehicular activity in connection with construction activity) is hereby amended to read as follows:

1. Vehicular activity shall only occur between 7:30 a.m. and 6:00 p.m. on weekdays, and between 9:00 a.m. and 6:00 p.m. on Saturdays, and is prohibited on Sundays and on all City-observed holidays in accordance with Section 9.44.030.

SECTION 16. Section 9.52.020 of Chapter 9.52 of Title 9 of the Manhattan Beach Municipal Code is hereby amended to read as follows:

9.52.020 – Violations and penalties.

Section 102.3.1 is amended to read as follows:

102.3.1 Violations. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any

duty of his or her office or employment shall be guilty of a violation of this Chapter.

Section 102.3. is amended to read as follows:

102.3.2 Penalties. Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

SECTION 17. Municipal Code Section 9.52.030 is hereby amended by deleting Table 1-1 and replacing it was a section on permit fees to read as follows:

9.52.030 – Swimming pool, spa, and hot tub permit fees.

Section 103.4 is amended to read as follows:

103.4.1 Permit Fees. The fees shall be determined by the most current City Resolution of Fees.

103.4.2 Plan Review Fees. When submittal documents are required by the building official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate and in addition to any permit fees required.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

103.4.3.1 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or

plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current Manhattan Beach Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

103.4.3.2 Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

SECTION 18. Municipal Code Chapter 9.56 is hereby deleted in its entirety.

SECTION 19. Municipal Code Chapter 9.64 is amended in its entirety to read as follows:

Chapter 9.64: MECHANICAL CODE

9.64.010 Adoption of California Mechanical Code.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled “2019 California Mechanical Code including Appendices A, B, and C therein contained, promulgated and published by the International Association of Plumbing and Mechanical Officials of Ontario, California and the California Building Standards Commission. One (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which has been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as set forth herein at length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed in the erection, installation, alteration, repair, relocation, replacement, addition to,

use or maintenance of any heating ventilating, comfort cooling, refrigerator systems, incinerators, or other miscellaneous heat producing appliances in the city; and subject to the additions, deletions, and amendments set forth in this chapter, said Code with Appendices A, B, and C, containing said rules, regulations, standards, provisions, and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the “Mechanical Code” of and for the City.

9.64.020 Violations and penalties.

Section 106.1 is amended to read as follows:

> **106.1 General.** Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, enlarges, alters, repairs, moves, improves, removes, converts, demolishes, equips, uses, or maintains a mechanical system in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.
>
> The issuance or granting of a permit or approval of plans shall not prevent the Administrative Authority from thereafter requiring the correction of errors in said plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or of any other ordinance or from revoking any certificate of approval when issued in error.

9.64.030 Mechanical permit fees.

Table 104.5 Mechanical Permit Fees is deleted.

Section 104.5 is amended to read follows:

> **104.5 Fees.** The fees shall be determined by the most current City Resolution of Fees.
>
> When submittal documents are required by the building official, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be determined by the most current City Resolution of Fees.

The plan review fees specified in this section are separate and in addition to any permit fees required.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items, an additional plan review fee shall be charged as determined by the most current City Resolution of Fees.

104.5.1 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the Building Official and the most current Manhattan Beach Resolution of Fees in addition to the required permit fees.

Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation may be required before a permit may be issued for such work.

104.5.2 Investigation Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal up to the amount of the permit fee required by this code as determined by the Building Official. The investigation fee shall be determined by the most current City Resolution of Fees. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

SECTION 20. Municipal Code Section 9.68.020 (substandard or dangerous property conditions)is hereby amended by adding a new paragraph V to read as follows:

V. Personal property, including but not limited to sporting equipment, toys, junk, trash or debris shall not be left within the public right of way, without the express written permission of the Director of Community Development.

SECTION 21. Municipal Code Chapter 9.84 is hereby deleted in its entirety.

SECTION 22. Subsection C of Municipal Code Section 9.92.030 is hereby amended to read as follows:

C. Building Code shall mean the edition of the California Building Code, published by the International Code Council, as adopted by the City in accordance with operation of law pursuant to Section 18941.5 of the State of California Health and Safety Code. The edition to be applied shall be that edition in effect at the time of the declaration of a local emergency.

SECTION 23. Municipal Code Chapter 9.96 is amended to read as follows:

Chapter 9.96 Postearthquake Safety Evaluation of Buildings

9.96.010 The City will follow the rules, regulations and provisions set forth in ATC-20 Procedures for Postearthquake Safety Evaluation of Buildings and ATC-20-1 Field Manual: Postearthquake Safety Evaluation of Buildings, 2nd edition, promulgated and published by the Applied Technology Council, California Office of Emergency Services, California Office of Statewide Health Planning and Development, and the Federal Emergency Management Agency.

9.96.020 – Violations.

It shall be unlawful for any person, firm or corporation to remove, alter or cover any placard until done so by an authorized representative of the department or upon written notification from the department.

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

SECTION 24. The City Council hereby adopts by reference the California Referenced Standards Code.

SECTION 25. Chapter 9.98 of Title 9 of the Manhattan Beach Municipal Code is hereby amended in its entirety to read as follows:

Chapter 9.98 UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS.

9.98.010 - Adoption of Code for the Abatement of Dangerous Buildings.

Pursuant to the provisions of Section 50022.1 to 50022.10, inclusive, of the Government Code of the State and subject to the particular additions, deletions and amendments set forth in this chapter, the rules, regulations, provisions and conditions set forth in that certain Code entitled the "1997 Uniform Code for the Abatement of Dangerous Buildings" promulgated and published by the International Conference of Building Officials, one (1) full printed copy of which, printed as a Code in book form were by the Council ordered filed and which have been filed in the office of the City Clerk, expressly incorporated herein and made a part hereof as fully and for all intents and purposes as though set forth herein at length, are hereby established and adopted as the rules, regulations, provisions and conditions to be observed and followed for the purpose of providing a just, equitable and practicable method to be cumulative with and in addition to any other remedy provided by the Building Code, Housing Code or otherwise available by law, where buildings or structures which from any cause endanger life, limb, health, morals, property, safety or welfare of the general public or their occupants may be required to be repaired, vacated or demolished, and related subjects, items and matters as set forth in said Code, within the City. Subject to the additions, deletions and amendments set forth in this chapter, said Code and the said Standards containing said rules, regulations, standards, provisions and conditions is hereby established and adopted by reference, and the same shall be designated, known and referred to as the "Uniform Code for the Abatement of Dangerous Buildings" of and for the City.

9.98.020 – Violations and penalties.

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the Building Official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the

discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of this Chapter.

Any person, firm, or corporation violating any of the provisions or failing to comply with any of the mandatory requirements of the ordinances of Manhattan Beach shall be guilty of a misdemeanor. Any person convicted of a misdemeanor under the ordinances of Manhattan Beach shall be punished by a fine of not more than one thousand dollars ($1,000), or by imprisonment not to exceed six (6) months, or by both such fine and imprisonment. Each such person shall be guilty of a separate offense for each and every day during any portion of which any violation of any provision of the ordinances of Manhattan Beach is committed, continued, or permitted by any such person, and shall be punished accordingly.

For permits where work has not commenced within 12 months from the date of such permit, a renewed permit may be obtained provided that: (1) no changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded two years from the original issuance date.

For permits where work had commenced and was subsequently suspended or abandoned for a period exceeding 180 days, a renewed permit may be obtained provided that: (1) No changes have been made or will be required in the original plans and specifications for such work; and (2) the expiration has not exceeded four years from the issuance date, and/or (3) where construction has progressed and has been approved, to the point whereby only a final inspection(s) is required, a fee shall be determined based on the number of estimated inspections, estimated staff time, and required meetings as determined by the Building Official.

For permits that have exceeded two years beyond the issuance date and have not received an extension prior to expiring, a new permit is required. The applicant shall pay the fee based on the valuation of the uncompleted work required for a plan check and a new permit and plans will be reviewed under the current codes and ordinances at the time of the new applications.

Any permittee holding an unexpired permit may apply for an extension of the time within which work under that permit may be continued when, for good and satisfactory reasons, the permittee is unable to continue work within the time required by this section. The Building Official may grant one or more extensions for periods not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented completion of the project. No permit shall be valid for more than 4 years.

If the owner or applicant fails to complete the construction work within the time required, the Building Official is authorized to obtain the abatement of

any unsafe condition or nuisance created by such incomplete work. The City Attorney is authorized to file an action for the abatement of any such unsafe condition or nuisance if required to do so by the Building Official.

SECTION 26. Any provisions of the Manhattan Beach Municipal Code, or appendices thereto, or any other ordinances of the City, to the extent that they are inconsistent with this ordinance, and no further, are hereby repealed.

SECTION 27. If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the ordinance. The City Council hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid or unconstitutional.

SECTION 28. Penalties.

a. Any violation of this Ordinance is unlawful, is hereby declared a public nuisance, and constitutes a misdemeanor punishable as set forth in Manhattan Beach Municipal Code Section 1.04.010. At the discretion of the City Prosecutor, a violation of this Chapter may be prosecuted as an infraction or misdemeanor. In any civil action brought pursuant to this chapter, a court of competent jurisdiction may award reasonable attorneys' fees and costs to the prevailing party. Pursuant to Municipal Code Chapter 1.06, the City may issue an administrative citation for any violation of this Chapter. Such administrative remedy may be exercised in place of, or in addition to, any administrative, criminal, civil, or equitable remedy allowed by law. The amount of the fine associated with the administrative citation will be assessed according to a schedule of fines adopted by the City Council.

b. In addition to the penalties set forth in section a above, any person who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents, permit requirements, directives and orders of the Building Official, or of a permit or certificate issued under the provisions of this ordinance, shall be subject to the penalties as prescribed by the Municipal Code or applicable law. Every person who willfully resists, delays, obstructs or interferes in any way with the Building Official or his or her authorized representative in the discharge or attempt to discharge any duty of his or her office or employment shall be guilty of a violation of the Municipal Code.

SECTION 29. The City Clerk shall certify to the adoption of this ordinance; shall cause the same to be entered in the book of original ordinances of said City; shall make a minute of the passage and adoption thereof in the records of the meeting at which the same is passed and adopted; and shall within fifteen (15) days after the passage and adoption thereof cause the same to be published by one insertion in *The Beach Reporter*, the official newspaper of the City and a weekly newspaper of general circulation,

published and circulated within the City of Manhattan Beach hereby designated for that purpose.

SECTION 30. This Ordinance will become effective at 12:01 a.m. on January 1, 2020.

SECTION 31. The City Clerk shall cause a summary of this Ordinance to be published as provided by law. The summary shall be published and a certified copy of the full text of this Ordinance shall be posted in the Office of the City Clerk at least five days prior to the City Council meeting at which this Ordinance is to be adopted. Within 15 days after the adoption of this Ordinance, the City Clerk shall cause a summary to be published with the names of those City Council members voting for and against this Ordinance and shall post in the Office of the City Clerk a certified copy of the full text of this Ordinance along with the names of those City Council members voting for and against the Ordinance.

PASSED, APPROVED and ADOPTED _____, 2019.

Ayes:
Noes:
Abstain:
Absent:

NANCY HERSMAN
Mayor

ATTEST:

LIZA TAMURA
City Clerk

APPROVED AS TO FORM:

QUINN M. BARROW
City Attorney