ORDINANCE NO. _____

An ordinance amending Title 26 – Building Code – of the Los Angeles County Code, to adopt and incorporate by reference the 2025 California Building Code, with certain changes and modifications, and to make other revisions thereto.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Sections 119.1.2 through 119.1.14 of Chapter 1, Chapters 2 through 35, and Appendices C, H, I, J, and P, of the Los Angeles County Code, which incorporate by reference and modify portions of the 2022 California Building Code, are hereby repealed.

SECTION 2. Chapter 1 is hereby amended to read as follows:

100 ADOPTION AND INCORPORATION BY REFERENCE

Except as hereinafter changed or modified, Sections 1.2 through 1.14 of Chapter 1 of Division I of that certain building code known and designated as the ~~2022~~2025 California Building Code, as published by the California Building Standards Commission, are adopted and incorporated by reference into this Title 26 of the Los Angeles County Code as if fully set forth below, and shall be known as Sections 119.1.2 through 119.1.14, respectively, of Chapter 1 of Title 26 of the Los Angeles County Code.

Except as hereinafter changed or modified, Chapters 2 through 35, and Appendices C, H, I, J, ~~and~~ P, and Q of that certain building code known and designated as the ~~2022~~2025 California Building Code, as published by the California Building Standards Commission, are adopted and incorporated by reference into this Title 26 of

the Los Angeles County Code as if fully set forth below, and shall be known as Chapters 2 through 35, and Appendices C, H, I, J, ~~and~~ P, and Q of Title 26 of the Los Angeles County Code.

A copy of said California Building Code, hereinafter referred to as the CBC, including the above-designated appendices, shall be at all times maintained by the Building Official for use and examination by the public.

. . .

SECTION 101 TITLE, PURPOSE, AND INTENT

. . .

101.3 Scope.

. . .

SECTION 103 VIOLATIONS AND PENALTIES

103.1 Compliance with Code.

It shall be unlawful for a person to erect, construct, enlarge, alter, extend, repair, move, improve, remove, connect, convert, demolish, equip, or perform any other work on any building or structure or portion thereof, or perform any grading within a property subject to this Code as defined in Section 101.3, or cause the same to be done, contrary to, or in violation of, any of the provisions of this Code.

. . .

SECTION 104 ORGANIZATION AND ENFORCEMENT

. . .

104.2.1 General.

The Building Official is hereby authorized and directed to enforce all the provisions of this Code, including the Electrical Code, the Plumbing Code, the Mechanical Code, the Residential Code, the Existing Building Code, ~~and~~ the Green Building Standards Code, and any other codes as indicated in this Code and to make all inspections pursuant to the provisions of each such Code. For such purposes, the Building Official shall have the powers of a law enforcement officer.

104.2.8 Alternate materials, designs and methods of construction.

. . .

104.2.8.1 Reports.

Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall comply with Sections 104.2.8.1.1 and 104.2.8.1.2.

104.2.8.1.1 Evaluation reports.

Evaluation reports shall be issued by an approved agency and use of the evaluation report shall require approval by the building official for the installation. The alternate material, design or method of construction and product evaluated shall be within the scope of the building official's recognition of the approved agency. Criteria used for the evaluation shall be identified within the report and, where required, provided to the building official.

104.2.8.1.2 Other reports.

Reports not complying with Section 104.2.8.1 shall describe criteria, including but

not limited to any referenced testing or analysis, used to determine compliance with code intent and justify code equivalence. The report shall be prepared by a qualified engineer, specialist, laboratory or specialty organization acceptable to the building official. The building official is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

104.2.8.2 Peer review.

The building official is authorized to require submittal of a peer review report in conjunction with a request to use an alternative material, design or method of construction, prepared by a peer reviewer that is approved by the building official.

SECTION 106 PERMITS

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106.3 Work Exempted.

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Exemption from the permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this Code, other laws, ordinances, or regulations or required approvals from other County Departments and State and Federal agencies. Structures shall still be regulated by Chapter 7A, despite exemption from permits.

106.5.7 Combined swimming pool permit.

A combined swimming pool permit, which includes all building, electrical, plumbing, heating, and excavation work, may be issued for ~~a~~the new construction,

addition, alteration, or repair work of a swimming pool, spa or hot tub. ~~which will include all building, electrical, plumbing, heating, and excavation work.~~ The combined swimming pool permit shall be subject to the requirements of this Code, the Residential Code, the Existing Building Code, the Green Building Standards Code, the Electrical Code, the Plumbing Code and the Mechanical Code, except that the fee for the combined swimming pool permit shall be as provided in Section 107.1 of this Code.

. . .

SECTION 107 FEES

. . .

107.14 Noncompliance Fee.

. . .

107.14.1.

In accordance with Health and Safety Code 17973, where the noncompliance occurs in a project related to exterior elevated elements, the Building Official may assess a civil penalty of not less than $100 nor more than $500 per day until the repairs are completed, unless an extension of time is granted by the local enforcement agency.

SECTION 108 INSPECTIONS

. . .

108.4.8 Types IV-A, IV-B and IV-C connection protection inspection.

In buildings of Types IV-A, IV-B and IV-C construction, where connection fire-resistance ratings are provided by wood cover calculated to meet the requirements of Section 2304.10.1, inspection of the wood cover shall be made after the cover is installed,

but before any other coverings or finishes are installed.

108.4.9 Weather-exposed balcony and walking surface waterproofing.

Where balconies or other elevated walking surfaces have weather-exposed surfaces, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious moisture barrier system shall not be concealed until inspected and approved.

Exception: Where special inspections are provided in accordance with Section 1705.1.1, Item 3.

108.4.~~8~~10 Final inspection.

. . .

108.9 Approval required.

Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the Building Official. The Building Official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or the permit holder's agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the Building Official.

108.~~9~~10 Reinspections.

. . .

SECTION 109 USE AND OCCUPANCY

109.3 Certificate Issued.

. . .

7. The edition of the code under which the permit was issued.

8. The type of construction as defined in Chapter 6.

9. The design occupant load

10. Where an automatic sprinkler system is provided, whether the sprinkler system is required.

11. Any special stipulations and conditions of the building permit.

SECTION 113 EARTHQUAKE FAULTS

113.5 Construction Limitations.

. . .

~~The Building Official may waive the requirements for an active earthquake fault investigation for additions to existing one- or two-family dwelling units when all of the following conditions are met:~~

~~1. There is no increase in the number of bedrooms or bedroom equivalent rooms in the dwelling unit;~~

~~2. The addition does not increase the permitted gross floor area of the structure by more than 20 percent as it existed on January 1, 2017, or 400 square feet, whichever is less;~~

~~3. The Building Official has determined that the addition is not located over or upon the trace of a known active earthquake fault as shown on the aforementioned maps; and~~

~~4. The owner shall record in the office of the Department of Registrar-Recorder a statement acknowledging that the owner is aware that the records of the Building Official indicate that the property is potentially subject to a hazard from a known active earthquake fault. The owner shall also record in the office of the Department of Registrar-Recorder an agreement relieving the County and all officers and employees thereof of any liability for any damage or loss which may result from the issuance of such a permit. This agreement shall provide that it is binding on all successors in interest of the owner and shall continue in effect until the Building Official records in the office of the Department of Registrar-Recorder a statement that the Building Official has determined that a hazard from a known active earthquake fault no longer exists.~~

. . .

113.5.1 Additions to One- or Two-Family Dwellings

The Building Official may waive the requirements for an active earthquake fault investigation for additions to existing one- or two-family dwelling units when all of the following conditions are met:

1. There is no increase in the number of bedrooms or bedroom equivalent rooms in the dwelling unit;

2. The addition does not increase the permitted gross floor area of the structure by more than 20 percent as it existed on January 1, 2017, or 400 square feet, whichever is less;

3. The Building Official has determined that the addition is not located over or upon the trace of a known active earthquake fault as shown on the aforementioned maps; and

4. The owner shall record in the office of the Department of Registrar-Recorder a statement acknowledging that the owner is aware that the records of the Building Official indicate that the property is potentially subject to a hazard from a known active earthquake fault. The owner shall also record in the office of the Department of Registrar-Recorder an agreement relieving the County and all officers and employees thereof of any liability for any damage or loss which may result from the issuance of such a permit. This agreement shall provide that it is binding on all successors in interest of the owner and shall continue in effect until the Building Official records in the office of the Department of Registrar-Recorder a statement that the Building Official has determined that a hazard from a known active earthquake fault no longer exists.

113.5.2 Replacement of single-family dwellings, their accessory dwelling units, or accessory structures destroyed by the 2025 Eaton and Palisades wildfires.

The Building Official may waive the requirements for an active earthquake fault investigation to allow the replacement of a single-family dwelling, its accessory dwelling units, or accessory structures subject to this Section when the structures were destroyed by the 2025 Eaton or Palisades wildfires and when all of the following conditions are met:

1. The structure is a wood-frame or steel-frame structure not exceeding two stories and a basement.

2. The structure is not part of a development of four or more dwellings.

3. The permit applicant is the owner of the property at the time of the loss, the owner's immediate heir(s), or their authorized representative.

4. The application for a permit is filed no later than ten (10) years following the date of the loss.

5. The replacement structure does not exceed the area of the previously existing, permitted structure, plus 10%.

6. The owner shall record in the office of the Department of Registrar-Recorder a statement acknowledging that the owner is aware that the records of the Building Official indicate that the property is potentially subject to a hazard from a known active earthquake fault. The owner shall also record in the office of the Department of Registrar-Recorder an agreement relieving the County and all officers and employees thereof of any liability for any damage or loss which may result from the issuance of such a permit. This agreement shall provide that it is binding on all successors in interest of the owner and shall continue in effect until the Building Official records in the office of the Department of Registrar-Recorder a statement that the Building Official has determined that a hazard from a known active earthquake fault no longer exists.

113.5.2.1. In addition to the work allowed under 113.5.2, the Building Official may waive the requirements for an active earthquake fault investigation to permit the construction of a new accessory dwelling unit on a property where a single-family

dwelling was destroyed by the 2025 Eaton or Palisades wildfires as part of a project permitted under 113.5.2.

SECTION 114 SERVICE UTILITIES

114.1 Connection of service utilities. A person shall not make connections from a utility, a source of energy, fuel, or power, or a water system or sewer system to any building or system that is regulated by this code for which a permit is required, until approved by the building official.

114.2 Temporary connection. The building official shall have the authority to authorize or disallow the temporary connection of the building or system to the utility, the source of energy, fuel, or power, or the water system or sewer system for the purpose of testing systems or for use under a temporary approval.

114.3 Authority to disconnect service utilities. The building official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connection has been made without the approval required by Section 114.1 or 114.2. The building official shall notify the serving utility, and wherever possible the owner or the owner's authorized agent and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

Sections 114<u>5</u> through 118 are hereby reserved.

SECTION 119 APPLICATION OF STATE AGENCIES

. . .

TABLE 1-A
BUILDING PERMIT FEES*[1,2,3]

TOTAL VALUATION	FEE
$0 to and including $700	$56.90
More than $700 to and including $25,000 plus for each additional $1,000 or fraction thereof in excess of $1,000	$85.40 $22.00
$25,001 to and including $50,000 plus for each additional $1,000 or fraction thereof in excess of $25,000	$614.70 $16.90
$50,001 to and including $100,000 plus for each additional $1,000 or fraction thereof in excess of $50,000	$1,044.00 $12.80
$100,000 or more plus for each additional $1,000 or fraction thereof	$1,680.90 $8.70

* For additional permit issuance fee, see Section 107.1.

1. The building permit fee specified in the table above shall be increased by a surcharge of 0.013 percent of the total valuation of a Group R Occupancy or by 0.028 percent of the total valuation of all other occupancies or $0.50, whichever amount is higher, pursuant to Section 2705, Chapter 8, Division 2 of the Public Resources Code of the State of California (State Strong-Motion Instrumentation Program). This surcharge shall not be included in the building permit fee for the purpose of determining the plan check fee.

2. The permit fee specified in the table above shall be increased by 10 percent for all construction work required to comply with the rules and regulations adopted by the ~~Energy Resources Conservation and Development Commission of the State of California~~California Energy Commission. This increase in fee shall be included in the building permit fee for the purpose of determining the plan checking fee.

3. The permit fee specified in the table above shall be increased by 5 percent for all construction work required to comply with Title 24, California Code of Regulations, Section 101, et seq., the

State's disabled access and adaptability requirements. The increase in fee shall be included in the building permit fee for the purpose of determining the plan check fee.

SECTION 3. Section 701A is hereby added to read as follows:

R701A MODIFICATIONS TO THE CALIFORNIA WILDLAND-URBAN INTERFACE CODE

Chapter 5 of the California Wildland-Urban Interface Code shall be modified as indicated in Sections 701A.1 through 701A.7

701A.1 California Wildland-Urban Interface Code, Section 501.1.

Modify the California Wildland-Urban Interface Code Section 501.1 to read as follows:

501.1 Scope and Application.

New b~~B~~uildings and structures in a wildland-urban interface area shall be constructed in accordance with the ~~California~~ Building Code and this Code. Additions, alterations, or repairs made to existing buildings erected, constructed, or moved within a Fire Hazard Severity Zone or Wildland-Urban Interface area shall be constructed in accordance with the Building Code and this Code. New buildings for which an application for a building permit is submitted on or after July 1, 2008, and any additions, alterations, or repairs made to existing buildings for which an application for a building permit is submitted on or after January 1, 2026, located in any Fire Hazard Severity Zone or Wildland-Urban Interface area shall comply with all sections of the Building Code and this Code.

Exceptions:

1. Group U accessory structures not exceeding 120 square feet (11m^2) in floor area where located not less than 50 feet (15 240 mm) from applicable buildings.

2. Group U agricultural buildings not less than 50 feet (15 240 mm) from applicable buildings.

501.1.1 Alternates for materials, design, tests, and methods of construction.

The Building Official is permitted to modify the provisions of this Chapter for site-specific conditions in accordance with Chapter 1, Section 104.2.2.

701A.2 California Wildland-Urban Interface Code, Section 503.1

Modify the California Wildland-Urban Interface Code Section 503.1 to read as follows:

503.1 General.

Buildings and structures hereafter constructed, modified or relocated into or within wildland-urban interface areas shall meet the construction requirements in accordance with Chapter 5. Materials required to be ignition-resistant building materials shall comply with the requirements of Section 503.2.

Exceptions:

1. New accessory buildings and miscellaneous structures complying with Section 504.11.

2. Reserved. ~~Additions to and remodels of buildings originally constructed prior to July 1, 2008.~~

3. Group C occupancy special buildings conforming to the limitations

specified in Section 450.4.1 of the ~~California~~ Building Code.

701A.3 California Wildland-Urban Interface Code, Section 503.2.3

Modify the California Wildland-Urban Interface Code Section 503.2.3 to read as follows:

503.2.3 Reserved. ~~Fire-retardant-treated wood roof coverings.~~

~~Roof assemblies containing fire-retardant-treated wood shingles and shakes shall comply with the requirements of Section 1505.6 of the California Building Code and shall be classified as Class A roof assemblies as required in Section 1505.2 of the California Building Code.~~

701A.4 California Wildland-Urban Interface Code, Section 503.3.1

Modify the California Wildland-Urban Interface Code Section 503.3.1 to read as follows:

503.3.1 Qualification by testing.

Material and material assemblies tested in accordance with the requirements of Section 503 shall be accepted for use when the results and conditions of those tests are met. Product evaluation testing of material and material assemblies shall be approved or listed by the State Fire Marshal, the Building Official, or identified in a current report issued by an approved agency.

701A.5 California Wildland-Urban Interface Code, Section 503.3.4

Modify the California Wildland-Urban Interface Code Section 503.3.4 to read as follows:

503.3.4 Reserved. ~~Fire-retardant-treated wood shingles and shakes.~~

~~Fire-retardant-treated wood shingles and shakes shall be approved and listed by the State Fire Marshal in accordance with Section 208(c), Title 19 California Code of Regulations.~~

701A.6 California Wildland-Urban Interface Code, Section 504.2.1

Modify the California Wildland-Urban Interface Code Section 504.2.1 to read as follows:

504.2.1 Roof covering voids.

Where there is a void under the roof covering it shall comply with Section 504.2.1.1 or 504.2.1.2. Roof coverings shall be Class A as specified in the Building Code. Wood shingles and wood shakes are prohibited in any Fire Hazard Severity Zone regardless of classification.

701A.7 California Wildland-Urban Interface Code, Section 504.5.2

Modify the California Wildland-Urban Interface Code Section 504.5.2 to read as follows:

504.5.2 Exterior wall coverings.

Exterior wall coverings shall comply with one or more of the following

requirements:

1. Noncombustible material.

2. Ignition-resistant building material labeled for exterior use.

3. Fire-retardant treated wood labeled for exterior use and complying with the requirements of Section 2303.2 of the ~~California~~ Building Code.

4. Reserved. ~~Fire-retardant-treated wood shingles and shakes which have been qualified in accordance with Section 1505.6 of the California Building Code for use as "Class B" roof covering shall be an acceptable alternative wall covering material where installed over solid sheathing.~~

Exception:

Exterior wall coverings which are a component of an approved wall assembly complying with Section 504.5.

SECTION 4. Section 1031.2.1 is hereby amended to read as follows:

1031.2.1 Operational constraints and opening control devices.

. . .

Where security bars (burglar bars) are installed on emergency egress and rescue windows or doors, ~~on or after July 1, 2000,~~ such devices shall comply with California Building Standards Code, Part 12, Chapter 12-3 and other applicable provisions of Part 2.

. . .

SECTION 5. Table 1507.3.7 is hereby amended to read as follows:

TABLE 1507.3.7
CLAY AND CONCRETE TILE ATTACHMENT [a, b, c]

GENERAL – CLAY OR CONCRETE ROOF TILE				
Maximum Allowable Stress Design Wind Speed, V_{asd}[f] (mph)	**Mean roof height (feet)**	**Roof slope <3:12**	**Roof slope 3:12 and over**	
85	0 - 60	*Minimum slope: 2.5:12* ~~One fastener per tile. Flat tile without vertical laps,~~ T~~t~~wo fasteners per tile.	Two fasteners per tile. ~~Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs/sq. ft. having a width no greater than 16 inches.~~	
100	0 - 40			
. . .	. . .	. . .		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e] (Installations on ~~spaced/~~solid sheathing with battens ~~or spaced sheathing~~)				
Maximum Allowable Stress Design Wind Speed, V_{asd}[f] (mph)	**Mean roof height (feet)**	**Roof slope <5:12**	**Roof slope 5:12<12:12**	**Roof slope 12:12 and over**
85	0 - 60	~~Fasteners are not required. Tiles with installed weight less than 9 lbs/sq. ft. require not fewer than~~Minimum slope is 4:12. ~~O~~one fastener per tile.	One fastener per tile ~~every other row. All perimeter tiles require one fastener~~. Tiles with installed weight less than 9 lbs/sq.ft. require not fewer than one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require not fewer than one fastener per tile.
100	0 - 40			
. . .	. . .	. . .		
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)				
Maximum Allowable Stress Design Wind Speed, V_{asd}[f] (mph)	**Mean roof height (feet)**	**~~All~~ Minimum roof slopes 4 units vertical in 12 units horizontal** **Maximum slope 7 units vertical in 12 units horizontal**		
. . .	. . .	. . .		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.

[a] Minimum fastener size. Hot dipped galvanized ring shank or other ~~C~~corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$-inch head. Fasteners shall be long enough to penetrate into the sheathing ¾ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch and shall be copper, brass, or stainless steel.

. . .

SECTION 6. Section 1613.8 is hereby added to read as follows:

1613.8 Modifications to ASCE 7.

The text of ASCE 7 shall be modified as indicated in Sections 1613.8.1 through 1613.5.3.

1613.8.1 ASCE 7, 12.2.3.1, Exception 3.

Modify ASCE 7, Section 12.2.3.1, Exception 3, to read as follows:

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

1613.8.2 ASCE 7, Section 12.11.2.2.3.

Modify ASCE 7, Section 12.11.2.2.3, to read 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 ~~s~~Section. Continuous ties required by this ~~s~~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 as providing 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 percent of the maximum diaphragm shear.

1613.8.3 ASCE 7, 12.12.3.

Modify ASCE 7, Section 12.12.2, to read as follows:

All portions of the structure shall be designed and constructed to act as an integral unit in resisting seismic forces unless separated structurally by a distance sufficient to avoid damaging contact as set forth in this section.

Separations shall allow for the Maximum Design Earthquake Displacements, δMDE, as determined in accordance with ~~Section 12.8.6~~Equation 12.12-1:

$$\delta_{MDE} = C_d \delta_e + \delta_{di}$$

(Equation 12.12-1)

SECTION 7. Section 1613.9 is hereby added to read as follows:

1613.9 Seismic design provisions for hillside buildings.

1613.9.1 Purpose.

The purpose of this Section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing such buildings on or into slopes steeper than one unit vertical in three units horizontal (33.3 percent). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.9.2 Scope.

The provisions of this Section shall apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level diaphragm shall be

in accordance with the provisions for seismic and wind design as required elsewhere in this Chapter.

Exceptions:

1. Non-habitable accessory buildings and decks not supporting or supported from the main building are exempt from these regulations.

2. Additions to existing buildings that do not exceed 10 percent of the existing floor area provided that the addition is being supported completely by the existing foundation.

1613.9.3 Definitions.

For the purposes of this Section certain terms are defined as follows:

BASE LEVEL DIAPHRAGM is the floor at, or closest to, the top of the highest level of the foundation.

DIAPHRAGM ANCHORS are assemblies that connect a diaphragm to the adjacent foundation at the uphill diaphragm edge.

DOWNHILL DIRECTION is the descending direction of the slope approximately perpendicular to the slope contours.

FOUNDATION is concrete or masonry that supports a building, including footings, stem walls, retaining walls, and grade beams.

FOUNDATION EXTENDING IN THE DOWNHILL DIRECTION is a foundation running downhill and approximately perpendicular to the uphill foundation.

HILLSIDE BUILDING is any building or portion thereof constructed on or into a slope steeper than one unit vertical in three units horizontal (33.3 percent). If only a

portion of the building is supported on or into the slope, these regulations apply to the entire building.

PRIMARY ANCHORS are diaphragm anchors designed for and providing a direct connection as described in Sections 1613.9.5 and 1613.9.7.3 between the diaphragm and the uphill foundation.

SECONDARY ANCHORS are diaphragm anchors designed for and providing a redundant diaphragm to foundation connection, as described in Sections 1613.9.6 and 1613.9.7.4.

UPHILL DIAPHRAGM EDGE is the edge of the diaphragm adjacent and closest to the highest ground level at the perimeter of the diaphragm.

UPHILL FOUNDATION is the foundation parallel and closest to the uphill diaphragm edge.

1613.9.4 Analysis and design.

1613.9.4.1 General.

Every hillside building within the scope of this Section shall be analyzed, designed, and constructed in accordance with the provisions of this Chapter. When the code-prescribed wind design produces greater effects, the wind design shall govern, but detailing requirements and limitations prescribed in this Section and all referenced Sections shall be followed.

1613.9.4.2 Base level diaphragm-downhill direction.

The following provisions shall apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

1613.9.4.2.1 Base for lateral force design defined.

For seismic forces acting in the downhill direction, the base of the building shall be the floor at, or closest to, the top of the highest level of the foundation.

1613.9.4.2.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm, including forces from the base level diaphragm.

1613.9.5 Base shear resistance for primary anchors.

1613.9.5.1 General.

The base shear in the downhill direction shall be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

1613.9.5.2 Location of primary anchors.

A primary anchor and diaphragm strut shall be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts shall also be provided where interior vertical lateral-force-resisting elements occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors shall in no case exceed 30 feet (9,144 mm).

1613.9.5.3 Design of primary anchors and diaphragm struts.

Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.9.8.

1613.9.5.4 Limitations.

The following lateral-force-resisting elements shall not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing;
2. Cement plaster and lath;
3. Gypsum wallboard; and
4. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.2 may be used to transfer forces from the primary anchors and diaphragm struts to the foundation provided lateral forces do not induce flexural stresses in any member of the frame or in the diaphragm struts. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.9.6 Base shear resistance for secondary anchors.

1613.9.6.1 General.

In addition to the primary anchors required by Section 1613.9.5, the base shear in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in the base level diaphragm.

Exception: Secondary anchors are not required where foundations extending in the downhill direction spaced at not more than 30 feet (9,144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70 percent of the diaphragm depth.

1613.9.6.2 Secondary anchor capacity and spacing.

Secondary anchors at the base level diaphragm shall be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm, but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced at a maximum of four feet (1,219 mm) on center.

1613.9.6.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.9.8.

1613.9.7 Diaphragms below the base level for downhill direction.

The following provisions shall apply to the lateral analysis and design of the connections for all diaphragms below the base level diaphragm in the downhill direction.

1613.9.7.1 Diaphragm defined.

Every floor level below the base level diaphragm shall be designed as a diaphragm.

1613.9.7.2 Design force.

Each diaphragm below the base level diaphragm shall be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

1613.9.7.3 Design force-resistance for primary anchors.

The design force described in Section 1613.9.7.2 shall be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation. Primary anchors shall be provided and designed in accordance with the requirements

and limitations of Section 1613.5.5.

1613.9.7.4 Design force-resistance for secondary anchors.

1613.9.7.4.1 General.

In addition to the primary anchors required in Section 1613.9.7.3, the design force in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in each diaphragm below the base level.

Exception: Secondary anchors are not required where foundations extending in the downhill direction, spaced at not more than 30 feet (9,144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70 percent of the diaphragm depth.

1613.9.7.4.2 Secondary anchor capacity.

Secondary anchors at each diaphragm below the base level diaphragm shall be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced at a maximum of four feet (1,219 mm) on center.

1613.9.7.4.3 Design.

Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.9.8.

1613.9.8 Primary and secondary anchorage and diaphragm strut design.

Primary and secondary anchors and diaphragm struts shall be designed in

accordance with the following provisions:

1. Fasteners. All bolted fasteners used to develop connections to wood members shall be provided with square plate washers at all bolt heads and nuts. Washers shall be minimum 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Nuts shall be tightened to finger tight plus one-half (1/2) wrench turn prior to covering the framing.

2. Fastening. The diaphragm to foundation anchorage shall not be accomplished by the use of toenailing, nails subject to withdrawal, or wood in cross-grain bending or cross-grain tension.

3. Size of Wood Members. Wood diaphragm struts, collectors, and other wood members connected to primary anchors shall not be less than three-inch (76 mm) nominal width. The effects of eccentricity on wood members shall be evaluated as required per Item 9.

4. Design. Primary and secondary anchorage, including diaphragm struts, splices, and collectors shall be designed for 125 percent of the tributary force.

5. Allowable Stress Increase. The one-third allowable stress increase permitted under Section 1605.2 shall not be taken when the working (allowable) stress design method is used.

6. Steel Element of Structural Wall Anchorage System. The strength design forces for steel elements of the structural wall anchorage system, with the exception of anchor bolts and reinforcing steel, shall be increased by 1.4 times the forces otherwise required.

7. Primary Anchors. The load path for primary anchors and diaphragm struts shall be fully developed into the diaphragm and into the foundation. The foundation must be shown to be adequate to resist the concentrated loads from the primary anchors.

8. Secondary Anchors. The load path for secondary anchors and diaphragm struts shall be fully developed in the diaphragm but need not be developed beyond the connection to the foundation.

9. Symmetry. All lateral force foundation anchorage and diaphragm strut connections shall be symmetrical. Eccentric connections may be permitted when demonstrated by calculation or tests that all components of force have been provided for in the structural analysis or tests.

10. Wood Ledgers. Wood ledgers shall not be used to resist cross-grain bending or cross-grain tension.

1613.9.9 Lateral-force-resisting elements normal to the downhill direction.

1613.9.9.1 General.

In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this Section.

1613.9.9.2 Base shear.

In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems.

1613.9.9.3 Vertical distribution of seismic forces.

For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 shall be determined using the height measured from the top of the lowest level of the building foundation.

1613.9.9.4 Drift limitations.

The story drift below the base level diaphragm shall not exceed 0.007 times the story height at strength design force level. The total drift from the base level diaphragm to the top of the foundation shall not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

1613.9.9.5 Distribution of lateral forces.

1613.9.9.5.1 General.

The design lateral force shall be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

1613.9.9.5.2 Wood structural panel sheathed walls.

The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by AWC SDPWS Section 4.3.2. Sheathing and fastening requirements for the stiffest section shall be used for the entire wall. Each section of wall shall be anchored for shear and uplift at each step. The

minimum horizontal length of a step shall be 8 feet (2438 mm) and the maximum vertical height of a step shall be 2 feet, 8 inches (813 mm).

1613.9.9.5.3 Reinforced concrete or masonry shear walls.

Reinforced concrete or masonry shear walls shall have forces distributed in proportion to the rigidity of each section of the wall.

1613.9.9.6 Limitations.

The following lateral force-resisting-elements shall not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

1. Cement plaster and lath;
2. Gypsum wallboard; and
3. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Section 2202.2.1.2 of this Code may be designed as lateral-force-resisting elements in the direction normal to the downhill direction, provided lateral forces do not induce flexural stresses in any member of the frame. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.9.10 Specific design provisions.

1613.9.10.1 Footings and grade beams.

All footings and grade beams shall comply with the following:

1. Grade beams shall extend at least 12 inches (305 mm) below the lowest adjacent grade and provide a minimum 24-inch (610 mm) distance horizontally from the

bottom outside face of the grade beam to the face of the descending slope.

2. Continuous footings shall be reinforced with at least two No. 4 reinforcing bars at the top and two No. 4 reinforcing bars at the bottom.

3. All main footing and grade beam reinforcement steel shall be bent into the intersecting footing and fully developed around each corner and intersection.

4. All concrete stem walls shall extend from the foundation and be reinforced as required for concrete or masonry walls.

1613.9.10.2 Protection against decay and termites.

All wood to earth separation shall comply with the following:

1. Where a footing or grade beam extends across a descending slope, the stem wall, grade beam, or footing shall extend up to a minimum 18 inches (457 mm) above the highest adjacent grade.

Exception: At paved garage and doorway entrances to the building, the stem wall need only extend to the finished concrete slab, provided the wood framing is protected with a moisture proof barrier.

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) based on Allowable Stress Design (ASD) levels and located within 48 inches (1219 mm) of adjacent grade are prohibited. Galvanized steel ledgers and anchor bolts, with or without wood nailers, or treated or decay resistant sill plates supported on a concrete or masonry seat, may be used.

1613.9.10.3 Sill plates.

All sill plates and anchorage shall comply with the following:

1. All wood framed walls, including nonbearing walls, when resting on a footing, foundation, or grade beam stem wall, shall be supported on wood sill plates bearing on a level surface.

2. Power-driven fasteners shall not be used to anchor sill plates except at interior nonbearing walls not designed as shear walls.

1613.9.10.4 Column base plate anchorage.

The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4,000 pounds (17.8 kN) or more based on ASD levels, and the base plate for a steel column shall comply with the following:

1. When the post or column is supported on a pedestal extending above the top of a footing or grade beam, the pedestal shall be designed and reinforced as required for concrete or masonry columns. The pedestal shall be reinforced with a minimum of four No. 4 bars extending to the bottom of the footing or grade beam. The top of exterior pedestals shall be sloped for positive drainage.

2. The base plate anchor bolts or the embedded portion of the post base, and the vertical reinforcing bars for the pedestal, shall be confined with two No. 4 or three No. 3 ties within the top 5 inches (127 mm) of the concrete or masonry pedestal. The base plate anchor bolts shall be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases shall be galvanized and each anchor bolt shall have at least two galvanized nuts above the base plate.

1613.9.10.5 Steel beam to column supports.

All steel beam to column supports shall be positively braced in each direction. Steel beams shall have stiffener plates installed on each side of the beam web at the column. The stiffener plates shall be welded to each beam flange and the beam web. Each brace connection or structural member shall consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

SECTION 8. Section 1613.7 is hereby added to read as follows:

1613.10 Suspended ceilings.

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

1613.10.1 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.

1613.10.2 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.

1613.10.3 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.

1613.10.4 Special requirements for means of egress.

Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies shall comply with the following provisions.

1613.10.4.1 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.

1613.10.4.2 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.

1613.10.4.3 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 1008.2.4 of this Code.

1613.10.4.4 Supports for appendages.

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

SECTION 9. Section 1704.2.3 is hereby amended to read as follows:

1704.2.3 Statement of special inspections.

The applicant shall submit a statement of special inspections in accordance with Section 106.4~~107.1, *Chapter 1, Division II*~~, as a condition for permit issuance. This statement shall be in accordance with Section 1704.3.

. . .

SECTION 10. Section 1704.6 is hereby amended to read as follows:

1704.6 Structural observations.

Where required by the provisions of Section 1704.6.1 the owner or the owner's authorized agent shall employ a ~~registered design professional~~structural observer to perform structural observations. The structural observer shall visually observe representative locations of structural systems, details and load paths for general conformance to the approved construction documents. Structural observation does not include or waive the responsibility for the inspections in Section ~~110~~108 or the special inspections in Section 1705 or other sections of this ~~c~~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 ~~b~~Building ~~o~~Official a written statement identifying the frequency and extent of structural observations.

~~At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.~~

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 11. Section 1704.6.1 is hereby amended to read as follows:

1704.6.1 Structural observations for structures.

. . .

3. ~~The structure is assigned to Seismic Design Category E, and is greater than two stories above the grade plane~~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 percent sloped), assigned to Seismic Design Category D.

. . .

SECTION 12. Section 1705.3 is hereby amended to read as follows:

1705.3 Concrete Construction.

Special inspections and tests of concrete construction shall be performed in accordance with this ~~s~~Section and Table 1705.3.

Exception: 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 greater 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.

. . .

~~4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.~~

~~5~~4. Concrete patios, ~~driveways~~ and sidewalks, on grade.

SECTION 13. Section 1705.13 is hereby amended to read as follows:

1705.13 Special inspections for seismic resistance.

. . .

Exception: The special inspections specified in Sections 1705.13.1 through 1705.13.9 are not required for structures designed and constructed in accordance with one of the following:

. . .

3. The structure is a detached one- or two-family dwelling not exceeding two stories above grade plane, provided the structure 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:

. . .

SECTION 14. Section 1807.1.4 is hereby amended to read as follows:

1807.1.4 Permanent wood foundations systems.

Permanent wood foundation systems shall be designed and installed in accordance with AWC PWF. Lumber and plywood shall be preservative-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 15. Section 1807.1.6 is hereby 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 ~~s~~Section. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E, or F.

SECTION 16. Section 1807.2 is hereby amended to read as follows:

1807.2 Retaining walls.

Retaining walls shall be designed in accordance with Section 1807.2.1 through 1807.2.4. Retaining walls assigned to Seismic Design Category D, E, or F shall not be partially or wholly constructed of wood.

SECTION 17. Section 1807.3.1 is hereby amended to read as follows:

1807.3.1 Limitations.

The design procedures outlined in this ~~s~~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 footing 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.

Wood poles and posts embedded in accordance with Methods 2 and 3 of Section 1807.3.3 shall not be permitted for structures assigned to Seismic Design Category D, E, or F, except when used to support nonhabitable, nonoccupiable structures such as fences when approved by the Building Official.

SECTION 18. Section 1808.7.2 is hereby amended to read as follows:

1808.7.2 Foundation setback from descending slope surface.

. . .

The Building Official may require a slope stability evaluation. If the evaluation demonstrates that the descending slope is not stable per the minimum required factors of safety for the gross stability, seismic stability, and surficial stability of descending slopes, as determined by the Building Official, the Building Official may require a foundation setback greater than that required by Figure 1808.7.1.

SECTION 19. Section 1809.3 is hereby amended to read as follows:

1809.3 Stepped footings.

. . .

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 reinforcing bars. Two bars shall be located at the top and bottom of the footings as shown in Figure 1809.3.

SECTION 20. Figure 1809.3 is hereby added to read as follows:

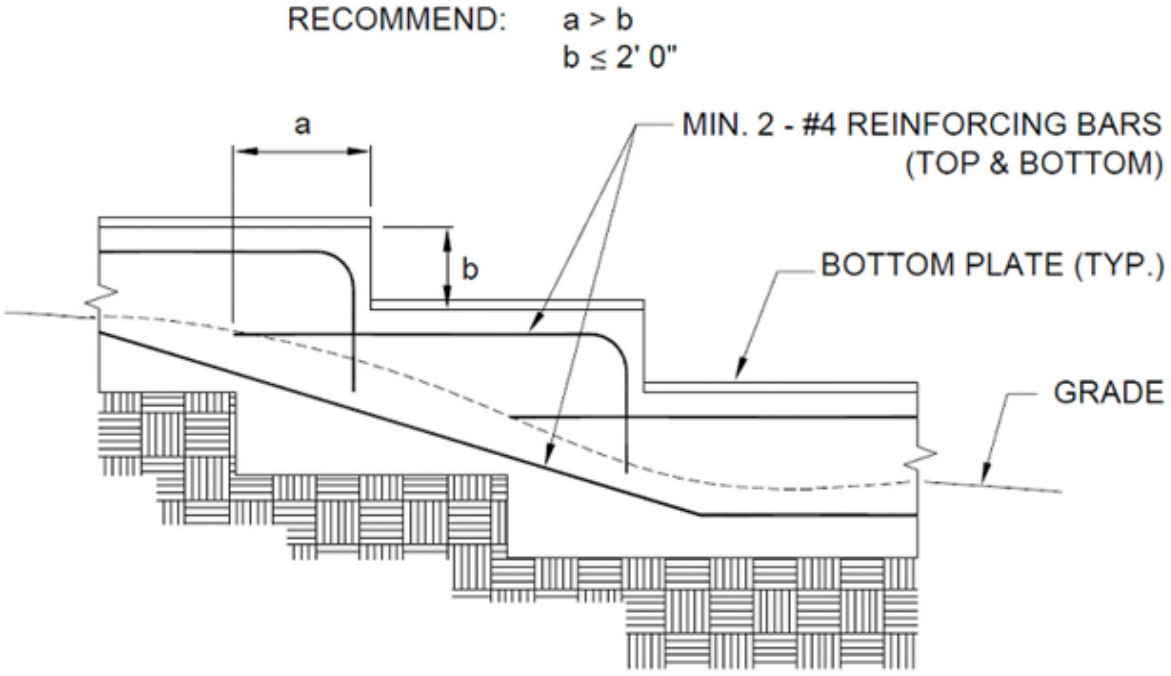


FIGURE 1809.3

STEPPED FOOTING

SECTION 21. Section 1809.7 is hereby 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. Prescriptive footings in accordance with Table 1809.7

shall not be used to support structures that exceed one story above grade plane and are assigned to Seismic Design Category D, E, or F.

SECTION 22. Table 1809.7 is hereby 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~~

. . .

c. ~~Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center.~~[Reserved].

. . .

~~g. Plain concrete footings for Group R-3 occupancies shall be permitted to be 6 inches thick.~~

SECTION 23. Section 1809.12 is hereby 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 ~~b~~Building ~~o~~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 upon 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 24. Section 1810.3.2.4 is hereby 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 D25. Sawn timber elements shall conform to DOC PS-20. Timber shall not be used in structures assigned to Seismic Design Category D, E, or F.

SECTION 25. Section 1905.1 is hereby amended to read as follows:

1905.1 General.

In addition to the provisions of ACI 318, structural concrete shall comply with the requirements of Section 1905. The text of ACI 318 shall be modified as indicated in Sections 1905.8 through 1905.10.

SECTION 26. Section 1905.6.2 is hereby amended to read as follows:

1905.6.2 Seismic Design Categories C, D, E, and F.

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

1. ~~Structural plain concrete basement, foundation or other walls below the base as defined in ASCE/SEI 7 are permitted in detached one- and two-family dwellings three stories or less in height constructed with stud-bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438~~

~~mm), the thickness shall not be less than 7½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 14.6.1 of ACI318.~~Concrete used for fill with a minimum cement content of 2 sacks of Portland cement or cementious material per cubic yard.

~~2~~1. Isolated footings of plain concrete supporting pedestals or columns are permitted, provided that the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

~~Exception: In detached one- and two-family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.~~

~~3~~2. Plain concrete footings supporting walls are permitted, provided that 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. ~~For footings that exceed 8 inches (203 mm) in thickness, n~~Not fewer than one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

~~Exceptions:~~

~~1. In Seismic Design Categories A, B and C, d~~Detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls are permitted to have plain concrete footings ~~without longitudinal reinforcement~~with at least two continuous longitudinal reinforcing bars not smaller than No. 4 and a total area of less than 0.002 times the gross cross-sectional area of the footing.

~~2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the footing.~~

~~3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.~~

SECTION 27. Section 1905.7 is hereby amended to read as follows:

1905.7 Design requirements for anchors.

For the design requirements for anchors, Sections 1905.7.1 and 1905.7.2 provide exceptions that are permitted to ACI 318. <u>These requirements shall be applicable to all buildings.</u>

. . .

SECTION 28. Section 1905.8 is hereby added to read as follows:

<u>1905.8 ACI 318, Section 18.7.5.</u>

Modify ACI 318, Section 18.7.5, by adding Sections 18.7.5.8 and 18.7.5.9 as follows:

18.7.5.8 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, Section 18.7.5.1, Items (a) through (c), over the full height of the member.

18.7.5.9 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 may be assumed to be of opposite sign. For the determination of the design strength, φP_n, of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

SECTION 29. Section 1905.9 is hereby added to read as follows:

1905.9 ACI 318, Section 18.10.4.

Modify ACI 318, Section 18.10.4, by adding Section 18.10.4.7 as follows:

18.10.4.7 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.

SECTION 30. Section 1905.10 is hereby added to read as follows:

1905.10 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 31. Section 2304.10.2 is hereby amended to read as follows:

2304.10.2 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 2304.10.2.

Staple fasteners in Table 2304.10.2 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 32. Table 2304.10.2 is hereby amended to read as follows:

TABLE 2304.10.2

FASTENING SCHEDULE[h]

. . .

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

SECTION 33. Section 2304.10.3.1 is hereby added to read as follows:

2304.10.3.1 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 34. Section 2304.12.2.8 is hereby amended to read as follows:

2304.12.2.8 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 freshwater use. Wood shall not be used in retaining or crib walls for structures assigned to Seismic Design Category D, E, or F.

SECTION 35. Section 2305.4 is hereby 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 75 percent of the allowable seismic load values. Such values shall be established in a valid research report from approved sources or by accepted engineering practice and the provisions of this Code.

Exception: Values established by specialized cyclic and dynamic testing may be used when approved by the Building Official in accordance with Section 104.2.8.

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 inches 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 36. Section 2306.2 is hereby 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 37. Section 2306.3 is hereby 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 560 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 from the panel edges and not less than 3/8 inch from the edge of the connecting members for shears 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.

For structures assigned to Seismic Design Category D, E, or F, application of Table 4.3B of ANSI/AWC SDPWS shall not be allowed.

For structures assigned to Seismic Design Category D, E, or F, application of Table 4.3C of ANSI/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.

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

SECTION 38. Section 2307.2 is hereby added to read as follows:

2307.2 Wood-frame panel shear walls.

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

SECTION 39. Table 2308.10.1 is hereby amended to read as follows:

TABLE 2308.10.1
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 ≤ S_{DS} < 0.75: Each end and ≤ 25′- 0″ o.c. (minimum 32% of wall length)[e]	0.5 ≤ S_{DS} < 0.75: Each end and ≤ 25′- 0″ o.c. (minimum 59% of wall length)[e]	
				0.75 ≤ S_{DS} ≤ 1.00: Each end and ≤ 25′- 0″ o.c. (minimum 37% of wall length)[e]	0.75 ≤ S_{DS} ≤ 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.

SECTION 40. Section 2308.10.5.1 is hereby amended to read as follows:

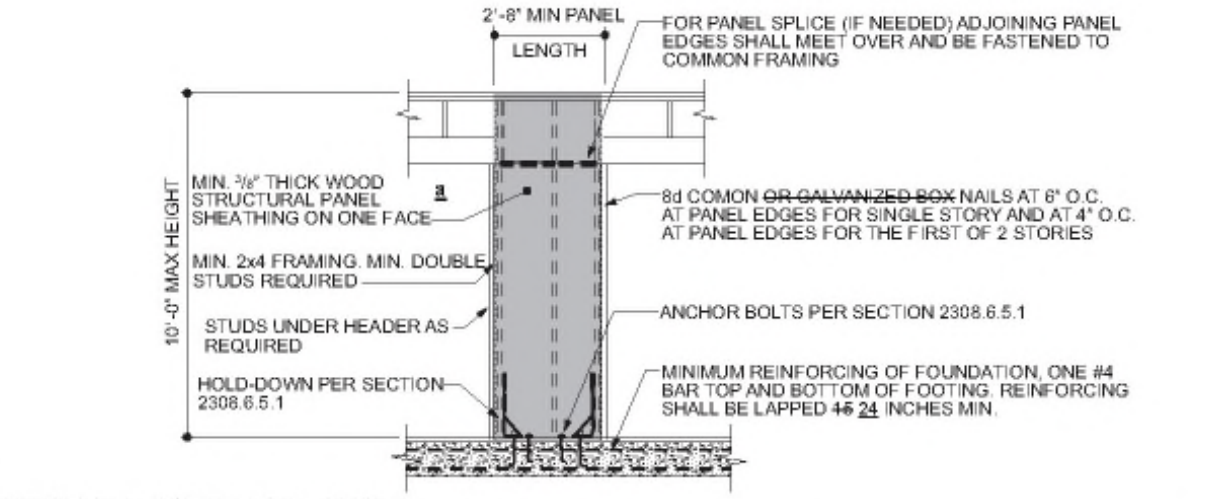
2308.10.5.1 Alternate braced wall (ABW).

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 2304.10.2 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 2308.7.1 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 ~~or turned-down slab edge~~ is permitted at door openings in the braced

wall line. This continuous footing ~~or turned-down slab edge~~ shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped ~~15~~24 inches (~~381~~610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

. . .

SECTION 41. Figure 2308.10.5.1 is hereby amended to read as follows:



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 2308.10.5.1
ALTERNATE BRACED WALL PANEL (ABW)

SECTION 42. Section 2308.10.5.2 is hereby amended to read as follows:

2308.10.5.2 Portal frame with hold-downs (PFH).

A PFH shall be constructed in accordance with this section and Figure 2308.10.5.2. 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 2308.10.5.2. 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 2308.10.5.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.10.5.2. 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 ~~or turned-down slab edge~~ is permitted at door openings in the braced wall line. This continuous footing ~~or turned-down slab edge~~ shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than ~~15~~24 inches (~~381~~610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

. . .

SECTION 43. Figure 2308.10.5.2 is hereby amended to read as follows:

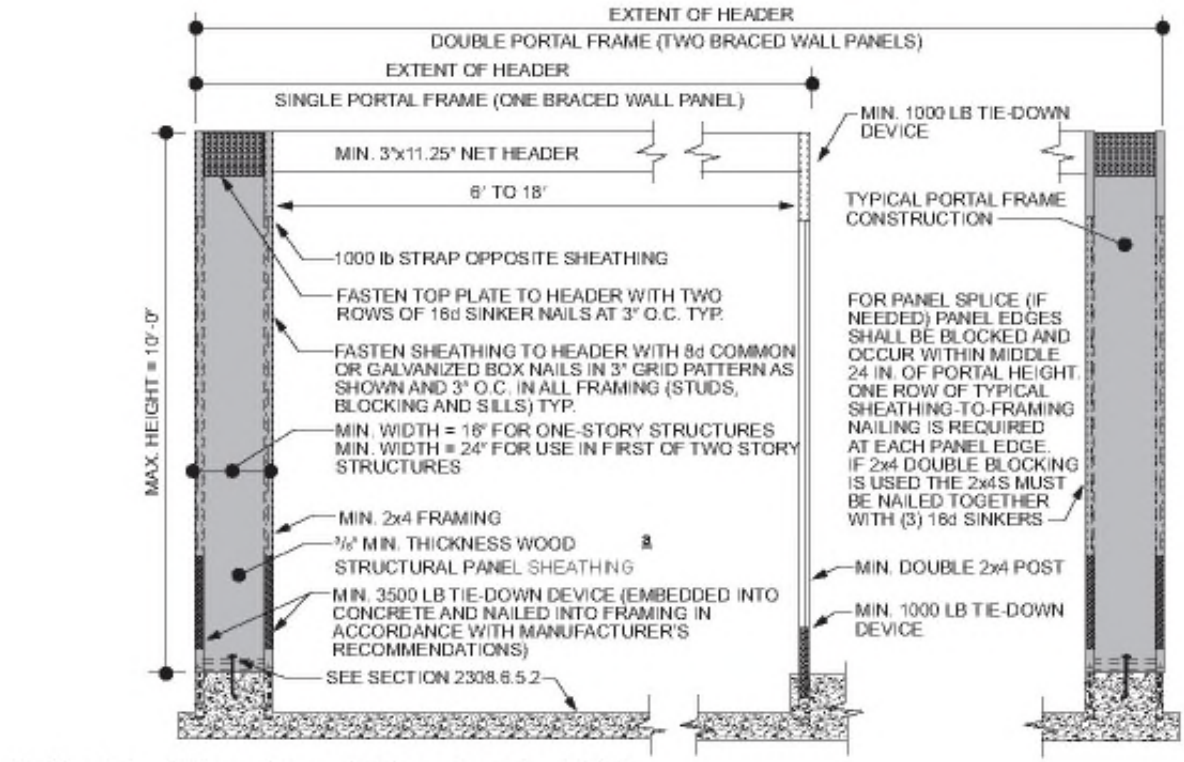


FIGURE 2308.10.5.2
PORTAL FRAME WITH HOLD-DOWNS (PFH)

SECTION 44. Section 2308.10.8.1 is hereby amended to read as follows:

2308.10.8.1 Foundation requirements.

. . .

Exception: For structures with a maximum plan dimension not more than 50 feet (15 240 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 2308.3.

~~**Exceptions:**~~

~~1. Exterior braced wall panels shall be permitted to be located not more than 4 feet (1219 mm) from the foundation below where supported by a floor constructed in accordance with all of the following:~~

~~1.1. Cantilevers or setbacks shall not exceed four times the nominal depth of the floor joists.~~

~~1.2. Floor joists shall be 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.~~

~~1.3. The ratio of the back span to the cantilever shall be not less than 2 to 1.~~

~~1.4. Floor joists at ends of braced wall panels shall be doubled.~~

~~1.5. A continuous rim joist shall be connected to the ends of cantilevered joists. The rim joist is permitted to be spliced using a metal tie not less than 0.058 inch (1.47 mm) (16 galvanized gage) and 11/2 inches (38 mm) in width fastened with six 16d common nails on each side. The metal tie shall have a yield stress not less than 33,000 psi (227 MPa).~~

~~1.6. Joists at setbacks or the end of cantilevered joists shall not carry gravity loads from more than a single story having uniform wall and roof loads nor carry the reactions from headers having a span of 8 feet (2438 mm) or more.~~

~~2. The end of a required braced wall panel shall be allowed to extend not~~

~~more than 1 foot (305 mm) over an opening in the wall below. This requirement is applicable to braced wall panels offset in plane and braced wall panels offset out of plane as permitted by Exception 1. Braced wall panels are permitted to extend over an opening not more than 8 feet (2438 mm) in width where the header is a 4-inch by 12-inch (102 mm by 305 mm) or larger member.~~

SECTION 45. Section 2308.10.9 is hereby amended to read as follows:

2308.10.9 Attachment of sheathing.

Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.10.1 or 2304.10.2. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.10.2 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-inch (6096 mm) intervals along the top plate of discontinuous vertical framing.

SECTION 46. Section 3114 is hereby amended to read as follows:

SECTION 3114 INTERMODAL SHIPPING CONTAINERS

3114.1 General.

. . .

Exceptions:

. . .

6. 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.

. . .

3114.8.4 Detailed structural design procedure.

A structural analysis meeting the requirements of this Section shall be provided to the ~~b~~Building ~~o~~Official to demonstrate the structural adequacy of the intermodal shipping containers.

3114.8.4.2 Seismic design parameters.

The seismic force-resisting system shall be designed and detailed in accordance with ASCE 7 and one of the following:

1. Where all or portions of the profiled steel panel elements are considered to be the seismic force-resisting system, design and detailing shall be in accordance with the AISI S100 and ASCE 7, Table 12.2-1 requirements for steel systems not specifically detailed for seismic resistance, excluding cantilevered column systems.

2. Where all or portions of the profiled steel panel elements are not

considered to be part of the seismic force-resisting system, an independent seismic force-resisting system shall be selected and detailed in accordance with ASCE 7, Table 12.2-1.

3. Where all or portions of the profiled steel panel elements 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 104.2.~~3~~9 and ASCE 7, Section 12.2.1.1 or 12.2.1.2.

. . .

3114.8.5.2 Structural design assumptions.

Where permitted by Section 3114.8.5.1, single-unit, stand-alone intermodal shipping containers shall be designed using the following assumptions for the profiled steel panel ~~lateral force resisting system~~ 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, Ω0 = 2.5,

4. Deflection amplification factor, Cd = 2, and

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

3114.8.5.3 Allowable shear.

The allowable shear for the profiled steel panel 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 wall or end wall shall be limited to not more than 50 percent of the length of that side wall or end wall, as shown in Figure 3114.8.5.3(1).

2. Any full height wall length, or portion thereof, less than 4 feet (305 mm) 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). The existing door interlocking mechanism shall not be considered as a component of the required load path.

. . .

SECTION 47. Table 3114.8.5.3 is hereby amended to read as follows:

TABLE 3114.8.5.3
ALLOWABLE SHEAR VALUES FOR PROFILED STEEL PANEL SIDE WALLS AND END WALLS FOR WIND OR SEISMIC LOADING

. . .

a. The allowable ~~strength~~ shear values 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.
b. Container designation type is derived from ISO 668.
c. Limitations of Sections 3114.8.5.1 and 3114.8.5.3 shall apply.

SECTION 48. Section H103.1 is hereby amended to read as follows:

H103.1 Location restrictions.

Signs shall not be erected, constructed, or maintained so as to obstruct any fire escape or any window or door or opening used as part of a means of egress or as part of the accessible route, except as permitted by Chapters 10, 11A, and 11B, or so as to prevent free passage from one part of a roof to any other part thereof. A sign shall not be attached in any form, shape or manner to a fire escape, nor be placed in such manner as to interfere with any opening required for ventilation.

SECTION 49. Section H103.2 is hereby added as follows:

H103.2 Projections and clearances.

Signs extending beyond the exterior wall of the building shall comply with Section 705.2 and the following requirements.

Signs may project over a public street, public sidewalk or building line in accordance with Section 3202 and a distance as determined by the clearance of the bottoms thereof above the level of the sidewalk or grade immediately below, whichever is more restrictive, as follows:

Clearance less than 8 feet (2438 mm) shall be prohibited.

Clearance 8 feet (2438 mm) and above, a 1-foot (305 mm) projection is permitted; and for each additional 2-foot clearance (610 mm), an additional 1-foot (305 mm) projection is permitted.

No structure shall have a projection of more than 5 feet (1524 mm). A projecting sign built above and in connection with a marquee may have such a projection of 5 feet

(1524 mm) without clearance between sign and marquee. No structure shall project beyond the curb line, regardless of clearance above grade.

Signs projecting more than 6 inches (152 mm) from the face of building over private property used or intended to be used by the general public shall have a minimum clearance of 8 feet (2438 mm) above said sidewalk or grade.

No sign shall project into any alley whatsoever below a height of 14 feet (4267 mm) above grade, and no sign shall project into any alley by more than 6 inches (152 mm) when its height is 14 feet (4267 mm) or more above grade.

SECTION 50. Chapter 99 is hereby amended to read as follows:

SECTION 9903 DEFINITION OF SUBSTANDARD BUILDING

9903.1. Any building or structure or portion thereof, regardless of zoning designation or approved uses of the building, including any dwelling unit, guestroom or suite or rooms, or the premises on which the same is located, in which there exists any of the conditions listed in Section 9904 to an extent that creates a public nuisance and endangers the life, limb, health, property, safety or welfare of the occupants of the building, nearby residents, or the public, shall be deemed and hereby is declared to be a substandard building.

SECTION 9904 SUBSTANDARD CONDITIONS

9904.1 Inadequate sanitation

. . .

9904.1.5 Lack of required electrical lighting.

9904.1.6 Infestation of insects, vermin, or rodents as determined by a health

officer or, if an agreement does not exist with an agency that has a health officer, the infestation can be determined by a code enforcement officer, upon successful completion of a course of study in the appropriate subject matter as determined by the local jurisdiction.

9904.1.7 Visible mold growth, as determined by a health officer or a code enforcement officer, excluding the presence of mold that is minor and found on surfaces that can accumulate moisture as part of their properly functioning and intended use.

9904.1.8 Lack of connection to required sewage disposal system.

9904.1.9 Lack of adequate garbage and rubbish storage and removal facilities, as determined by a health officer or, if an agreement does not exist with an agency that has a health officer, the lack of adequate garbage and rubbish removal facilities can be determined by a code enforcement officer.

. . .

9904.2 Structural Hazards

. . .

. . .

9904.2.5 Defective, damaged or inadequately constructed or sized fireplaces or chimneys.

. . .

9904.2.6 Inadequate structural resistance to horizontal forces.

. . .

9904.3 Inadequate or Hazardous Wiring.

9904.3.1 All wiring except that which conformed with all applicable laws in effect at the time of installation and which has been maintained in good and safe condition and is working properly and being used in a safe manner.

9904.4 Inadequate or Faulty Plumbing.

. . .

9904.4.2 All plumbing except that which conformed with all applicable laws in effect at the time of installation and which has been maintained in good condition and which is free of cross connections and siphonage between fixtures.

9904.5 Inadequate or Faulty Mechanical Equipment.

9904.5.1 Lack of safe, adequate heating facilities ~~in a dwelling~~.

. . .

9904.6 Faulty Weather Protection.

. . .

9904.6.2 Lack of a sound and effective exterior wall covering or weather protection for exterior wall covering.

. . .

9904.6.4 Deteriorated or ineffective waterproofing of exterior walls, roofs, foundations, foundation walls or floor, including broken windows or doors.

. . .

9904.9 Hazardous Buildings.

. . .

9904.13 Any Nuisance. Those premises on which contains anything which is

injurious to health, including, but not limited to, the illegal sale of controlled substances, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable public space.

SECTION 51. Section H104.1 is hereby amended to read as follows:

H104.1 Identification.

Every ~~outdoor advertising display~~ sign other than wall signs hereafter erected, constructed or maintained, for which a permit is required, shall be plainly marked with the name of the person, firm or corporation erecting and maintaining such sign, and the weight of the sign, and shall have affixed on the front thereof the permit number issued for said sign or other method of identification approved by the ~~b~~Building ~~o~~Official.

SECTION 52. Section H105.1 is hereby amended to read as follows:

H105.1 General requirements.

Signs shall be designed and constructed to comply with the provisions of this ~~c~~Code for use of materials, loads and stresses. Glass panels used in signs shall comply with the requirements of Chapter 24.

SECTION 53. Section H106.1 is hereby amended to read as follows:

H106.1 Illumination.

A sign shall not be illuminated by other than electrical means, and electrical devices and wiring shall be installed in accordance with the requirements of the ~~California~~ Electrical Code (Title 27) of the Los Angeles County Code, and a separate electrical permit shall be obtained. Any open spark or flame shall not be used for display

purposes unless specifically approved.

SECTION 54. Section H106.2 is hereby amended to read as follows:

H106.2 Electrical service.

Signs that require electrical service shall comply with ~~NFPA 70~~the Electrical Code (Title 27) of the Los Angeles County Code.

SECTION 55. Section H110.1 is hereby amended to read as follows:

H110.1 General.

Roof signs shall be constructed entirely of metal or other approved noncombustible material except as provided for in Sections H106.1.1 and H107.1. Provisions shall be made for electric grounding of metallic parts. Where combustible materials are permitted in letters or other ornamental features, wiring and tubing shall be kept free and insulated therefrom. Roof signs shall be so constructed as to leave a clear space of not less than 6 feet (1829 mm) between the roof level and the lowest part of the sign and shall have not less than 5 feet (11524 mm) clearance between the vertical supports thereof. Roof sign structures shall not project beyond an exterior wall.

Exception: Signs on flat roofs with every part of the roof accessible shall not be required to provide clear space between the roof level and the lowest part of the sign.

Blocks, angles, or supports fastened to the roof shall be located so as not to interfere with the drainage of the roof and, where necessary, flashing or counter flashing shall be placed.

SECTION 56. Section H116 is hereby deleted in its entirety:

~~**SECTION H116 REFERENCED STANDARDS**~~

~~**H.116.1 General.** See Table H116.1 for standards that are referenced in various sections of this appendix. Standards are listed by the standard definition with the effective date, standard title, and the section or sections of this appendix that reference the standard.~~

~~TABLE H116.1~~

~~REFERENCED STANDARDS~~

~~ASTM D635-18~~	~~Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position~~	~~H107.1.1~~
~~CEC - 25~~	~~California Electrical Code~~	~~H106.1, H106.2~~
~~NFPA 701-23~~	~~Methods of Fire Test for Flame Propagation of Textiles and Films~~	~~H106.1.1~~

SECTION 57. Section J101 is hereby amended to read as follows:

J101 GENERAL

J101.1 Scope.

The provisions of this ~~chapter~~Appendix apply to grading, excavation, and earthwork construction, including fills and embankments, and the control of runoff from graded sites, including erosion sediments and construction-related pollutants. ~~Where conflicts occur between the technical requirements of this chapter and the geotechnical report, the geotechnical report shall govern~~ The purpose of this Appendix is to safeguard life, limb, property, and the public welfare by regulating grading on property subject to this Code.

J101.2 Flood hazard areas.

Unless the applicant has submitted ~~an engineering analysis~~a hydrology and hydraulic analysis, prepared in accordance with standard engineering practice by a ~~registered design professional~~California licensed civil engineer, that demonstrates the proposed work will not result in any increase in the level of the base flood, grading, excavation and earthwork construction, including fills and embankments, shall not be permitted in floodways designated in Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code, or in floodways that are in flood hazard areas established in Section 1612.3 or in flood hazard areas where design flood elevations are specified but floodways have not been designated.

J101.3 General hazards.

Whenever the Building Official determines that any existing excavation, embankment, or fill on property subject to this Code has become a hazard to life and limb, or endangers property, or adversely affects the safety, use, or stability of a public way or drainage channel, the Building Official may give written notice thereof to the owner of the property upon which the excavation, embankment, or fill is located, or other person or agent in control of said property. Upon receipt of said notice, the owner or other person or agent in control of the property shall repair, eliminate, or secure such excavation, embankment, or fill so as to eliminate the hazard, in conformance with the requirements of this Code, within the period specified in said notice.

J101.4 Safety precautions.

If at any stage of the work the Building Official determines by inspection that

unpermitted grading or grading work pursuant to a grading permit is likely to endanger any public or private property, or result in the deposition of debris on any public way, or interfere with any existing drainage course, the Building Official may order the work stopped by notice in writing served on any persons engaged in doing such work or causing such work to be done, and any such person shall immediately stop such work. The Building Official may authorize the work to proceed if the Building Official finds that adequate safety precautions can be taken or corrective measures incorporated in the work to avoid likelihood of such danger, deposition, or interference.

If the grading work as done was performed without a grading permit or has created or resulted in a hazardous condition, the Building Official shall give written notice requiring correction thereof as specified in Section J103 and Section J101 of this Code.

J101.5 Protection of utilities.

Both the permittee and the owner of the property on which the grading is performed shall be responsible for the prevention of damage to any public and/or private utilities or services.

J101.6 Protection of adjacent property.

Both the permittee and owner of the property on which the grading is performed shall be responsible for the prevention of damage to adjacent property. No person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property without taking adequate measures to support and protect such property from settling, cracking, or other damage

that might result from the proposed work. Any person performing any grading that involves imported or exported materials shall take special precautions, as approved by the Building Official, to prevent such materials from being deposited on adjacent properties, any public way, and/or any drainage course.

J101.7 Storm water control measures.

Both the permittee and the owner of the property on which the grading is performed shall put into effect and maintain all precautionary measures necessary to protect adjacent water courses and public or private property from damage by erosion, flooding, and deposition of mud, debris, and construction-related pollutants originating from the site during grading and related construction activities.

J101.8 Maintenance of protective devices and rodent control.

All drainage structures and other protective devices and all burrowing rodent control measures, as shown on the grading plans approved by the Building Official, shall be maintained in a good condition and, when necessary, promptly repaired by the permittee or the owner of the property on which grading has been performed or by any other person or agent in control of such property.

J101.9 Correlation with other sections.

The provisions of this Appendix are independent of the provisions of Chapter 99 – Building and Property Rehabilitation – of Title 26 of this Code. This Section may be applied even though the same facts have been used to determine that there is a building, structure, or substandard property subject to the provisions of Chapter 99.

J101.10 Conditions of approval.

In granting any permit under this Code, the Building Official may include such conditions as may be reasonably necessary to prevent the creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

1. Improvement of any existing grading to comply with the standards of this Code.

2. Requirements for securing of excavations or fills that would otherwise be hazardous.

3. Requirements for temporary excavations and shoring that are to be implemented on site and shown on the plans.

4. Requirements for mitigating, stabilizing, or eliminating unpermitted grading conducted on site.

SECTION 58. Section J102.1 is hereby amended to read as follows:

J102.1 Definitions.

~~The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions~~For the purposes of this Appendix, the terms, phrases, and words listed in this Section and their derivatives shall have the indicated meanings.

APPROVAL. When the proposed work or completed work conforms to this Appendix, as determined by and to the satisfaction of the Building Official.

AS-BUILT. See Section J105.12.

BEDROCK. The relatively solid, undisturbed rock in place either at the ground

surface or beneath superficial deposits of alluvium, colluvium, and/or soil.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

BEST MANAGEMENT PRACTICE (BMP). Practices, prohibitions of practices, or other activities to reduce or eliminate the discharge of pollutants to surface waters. BMPs include structural and nonstructural controls, management practices, operation and maintenance procedures, and system, design, and engineering methods that are required to be employed in order to comply with the requirements of the National Pollution Discharge Elimination System (NPDES) permit issued to the County of Los Angeles (see Section 106.4.3 and Title 31 – Green Building Standards Code – of the Los Angeles County Code).

BORROW. Earth material acquired from an off-site location for use in grading on a site.

CIVIL ENGINEER. A professional engineer licensed in the State of California to practice in the field of civil works.

CIVIL ENGINEERING. The application of the knowledge of the forces of nature, principles of mechanics, and the properties of materials to the evaluation, design, and construction of civil works.

COMPACTION. The densification of a fill by mechanical means.

CUT. See "Excavation."

DESILTING BASINS. Physical structures, constructed for the removal of sediments from surface water runoff.

DESIGN ENGINEER. The Civil Engineer responsible for the preparation of the grading plans for the site grading work.

DOWN DRAIN. A device for collecting water from a swale or ditch located on or above a slope, and safely delivering it to an approved drainage facility.

EARTH MATERIAL. Any rock, natural soil, or fill, or any combination thereof.

ENGINEERING GEOLOGIST. A geologist experienced and knowledgeable in engineering geology, holding a license as a geologist in the specialty of engineering geology issued by the State of California under the applicable provisions of the Geologist and Geophysicist Act of the Business and Professions Code.

ENGINEERING GEOLOGY. The application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water, or ice.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FIELD ENGINEER. The Civil Engineer responsible for performing the functions as set forth in Section J105.3.

FILL. Deposition of earth materials by artificial means.

GEOTECHNICAL ENGINEER. See "Soils Engineer."

GEOTECHNICAL HAZARD. An adverse condition due to landslide, settlement, and/or slippage. These hazards include, but are not limited to, loose debris, slopewash,

and mud flows from natural or graded slopes.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade prior to grading.

GRADE, FINAL. See Section J105.7.

GRADE, FINISHED. The grade of the site at the conclusion of all grading efforts.

GRADE, INITIAL. See Section J105.7.

GRADE, ROUGH. See Section J105.7.

GRADING. An excavation or fill or combination thereof.

KEY. A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

LANDSCAPE ARCHITECT. A person who holds a certificate to practice landscape architecture in the State of California under the applicable landscape architecture provisions of Division 3, Chapter 3.5, of the Business and Professions Code.

LINE. The horizontal location of the ground surface.

PERMITTEE. See Section J105.6.

PRIVATE SEWAGE DISPOSAL SYSTEM. A septic tank with effluent discharging into a subsurface disposal field, into one or more seepage pits, or into a combination of a subsurface disposal field and a seepage pit or of such other facilities as may be permitted in accordance with the procedures and requirements set forth in Title 28 – Plumbing Code – of the Los Angeles County Code and as required by the Los Angeles County Department of Public Health.

PROJECT CONSULTANTS. The professional consultants required by this Code, which may consist of the Design Engineer, Field Engineer, Soils Engineer, Engineering Geologist, and Landscape Architect as applicable to this Appendix.

PROFESSIONAL INSPECTION. The inspection required by this Code to be performed by the Project Consultants. Such inspections shall be sufficient to form an opinion relating to the conduct of the work.

QSD. Qualified SWPPP Developer as defined in the California State Construction General Permit.

QSP. Qualified SWPPP Practitioner as defined in the California State Construction General Permit.

SITE. A lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE. An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL. Naturally occurring superficial deposits overlying parent bedrock.

SOILS ENGINEER (GEOTECHNICAL ENGINEER). A licensed civil engineer experienced and knowledgeable in the practice of soils engineering.

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING). The application of the principles of soils mechanics in the investigation, evaluation, and design of civil works involving the use of earth materials and the inspection or testing of construction thereof.

STORM DRAIN SYSTEM. A conveyance or system of conveyances, including

roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, and man-made channels, designed or used for collecting and conveying storm water.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A site drawing with details, notes, and related documents that identify the measures proposed by the permittee to: (1) control erosion and prevent sediment and construction-related pollutants from being carried offsite by storm water, and (2) prevent non-storm-water discharges from entering the storm drain system.

SURFACE DRAINAGE. Flows over the ground surface.

SOIL TESTING AGENCY. An agency regularly engaged in the testing of soils and rock under the direction of a Civil Engineer experienced in soil testing.

TERRACE. A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

SECTION 59. Section J103 is hereby amended to read as follows:

SECTION J103 PERMITS REQUIRED

J103.1 Permits required.

Except as exempted in Section J103.2, grading shall not be performed without first having obtained a permit ~~therefor~~ from the ~~b~~Building ~~o~~Official. A grading permit does not include the construction of retaining walls or other structures. A separate permit shall be obtained for each site and may cover both excavations and fills. Any engineered grading as described in Section J104.2.3 shall be performed by a contractor licensed by the State of California to perform the work described hereon. Regular grading less than 5,000 cubic yards may require a licensed contractor if the Building

Official determines that special conditions or hazards exist.

J103.2 Exemptions.

A grading permit shall not be required for the following:

1. When approved by the Building Official, ~~G~~grading in an isolated, self-contained area, provided that the public is not endangered and that such grading will not adversely affect adjoining properties or public rights of way.

. . .

7. Exploratory excavations performed under the direction of a ~~registered design professional~~Geotechnical Engineer or Engineering Geologist. This shall not exempt grading of access roads or pads created for exploratory excavations. Exploratory excavations must not create a hazardous condition to adjacent properties or the public in accordance with Section J101.3. A restoration plan must be provided and approved by the Building Official for all grading of access roads or pads. Restoration shall be completed within 90 days after the completion of soils testing unless otherwise approved by the Building Official.

8. An excavation that does not exceed 50 cubic yards (38.3 m^3) and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 2 feet (0.6 m) in depth.

(b) Does not create a cut slope greater than 5 feet (1.5 m) measured vertically upward from the cut surface to the surface of the natural grade and is not steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

9. A fill not intended to support a structure that does not obstruct a drainage

course and complies with one of the following conditions and as shown in Figure J103.2:

(a) Is less than 1 foot (0.3 m) in depth and is placed on natural terrain with a slope flatter than 5 units horizontal to 1 unit vertical (20 percent slope).

(b) Is less than 3 feet (0.9 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 50 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

(c) Is less than 5 feet (1.5 m) in depth at its deepest point measured vertically upward from natural grade to the surface of the fill, does not exceed 20 cubic yards, and creates a fill slope no steeper than 2 units horizontal to 1 unit vertical (50 percent slope).

Exemption from the permit requirements of this ~~a~~Appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this ~~c~~Code or any other laws or ordinances of this jurisdiction.

J103.3 Unpermitted grading.

A person shall not own, use, occupy, or maintain any site containing unpermitted grading. For the purposes of this Code, unpermitted grading shall be defined as either of the following:

(1) Grading that was performed, at any point in time, without the required permit(s) having first been obtained from the Building Official, pursuant to Section J103.1;

(2) Grading for which a permit was obtained pursuant to this Section, but which was not completed, pursuant to Section J105, prior to the expiration of the permit, pursuant to Section 106.5.4, or

(3) Grading for which a permit was obtained pursuant to this Section, but where grading was performed outside the scope of the permit, pursuant to Section J105.

If the Building Official has determined that unpermitted grading was performed or has created or resulted in a hazardous condition, the Building Official shall give written notice requiring correction thereof as specified in Section 103, and in accordance with J101 of this Code.

The Building Official may require such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to, conditions set forth in Section J101.10.

J103.4 Availability of permit at site.

No person shall perform any grading that requires a permit under this Appendix unless a copy of the grading permit and approved grading plans are in the possession of a responsible person and available at the site for the Building Official's reference.

J103.5 Grading fees.

Fees shall be assessed in accordance with the provisions of this Section. The amount of the fees shall be as specified in Section 107.

1. Plan Review Fees. When a plan or other data are required to be submitted, a plan review fee shall be paid at the time of submitting plans and

specifications for review. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is greater.

2. Permit Fees. A fee for each grading permit shall be paid to the Building Official at the time of issuance of the permit. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this Code.

3. Site Inspection Fee. When the Building Official finds that a visual inspection of the site is necessary to establish drainage requirements for the protection of property, existing buildings, or the proposed construction, a site inspection shall be made during plan check of grading plans. A fee for such inspection shall be paid to the Building Official at the time of submitting plans and specifications for review.

J103.6 Compliance with zoning code.

The Building Official may refuse to issue a grading permit for work on a site if either the proposed grading or the proposed land use for the site shown on the grading plan application does not comply with the provisions of Title 22 – Planning and Zoning – of the Los Angeles County Code.

J103.7 Grading security.

J103.7.1 Scope and purpose.

The Building Official may require a permittee or the owner(s) of the property on which the grading is proposed to occur to provide security as a condition of the issuance of a grading permit for any grading involving more than 1,000 cubic yards (764.6 m^3).

Where unusual conditions or special hazards exist, the Building Official may require security for grading involving less than 1,000 cubic yards (764.6 m^3). The purpose of the security shall be to guarantee the permittee's obligation to mitigate any hazardous conditions, including flood and geotechnical hazards, that may be created if the grading is not completed in accordance with the approved plans and specifications, and to complete any work that the Building Official determines is necessary to bring the property into compliance with this Appendix.

Security required by this Section may include incidental off-site grading on property contiguous with the site to be developed, provided written consent of the owner of such contiguous property is filed with the Building Official.

The Building Official may waive the requirements for security for the following:

1. Grading being done by or for a governmental agency.

2. Grading necessary to remove a geotechnical hazard, where such work is covered by an agreement and security is posted pursuant to the provisions of Title 21 – Subdivisions – of the Los Angeles County Code.

3. Grading on a site, not exceeding a slope of 3 units horizontal to 1 unit vertical, provided such grading as determined by the Building Official will not affect drainage from or to adjacent properties.

4. Filling of holes or depressions, provided such grading will not affect the drainage from or to adjacent properties.

J103.7.2 Form of security.

The security referred to in Section J103.7.1 shall be in one of the following forms:

1. A bond furnished by a corporate surety authorized to do business in this state.

2. Cash.

3. Savings and loan certificates or shares deposited and assigned to the County as provided in Chapter 4.36 of Title 4 – Revenue and Finance – of the Los Angeles County Code.

4. An instrument of credit from a financial institution subject to regulation by the State or federal government and pledging that funds in the amount required by the Building Official are on deposit and guaranteed for payment, or a letter of credit is issued by such a financial institution.

J103.7.3 Amount of security.

The amount of security shall be based on the number of cubic yards of material in either excavation or fill, whichever is greater, and the cost of all drainage or other protective devices or work necessary to eliminate potential flooding and geotechnical hazards. That portion of the security valuation based on the volume of material in either excavation or fill shall be computed as follows:

100,000 cubic yards or less – 50 percent of the estimated cost of grading work.

Over 100,000 cubic yards – 50 percent of the estimated cost of the first 100,000 cubic yards plus 25 percent of the estimated cost of that portion in excess of 100,000 cubic yards.

When the rough grading has been completed in conformance with the requirements of this Code, the Building Official may, at his or her discretion, consent to

a proportionate reduction of the security to an amount estimated to be adequate to ensure completion of the grading work, site development, or planting remaining to be performed. The costs referred to in this Section shall be as estimated by the Building Official.

J103.7.4 Conditions.

All security shall include conditions that the principal shall:

1. Comply with all of the provisions of this Code, applicable laws, and ordinances;

2. Comply with all of the terms and conditions of the grading permit; and

3. Complete all of the work authorized by the permit.

J103.7.5 Term of security.

The term of each security shall begin upon the filing with the Building Official, and the security shall remain in effect until the work authorized by the grading permit is completed and approved by the Building Official.

J103.7.6 Default procedures.

In the event any grading for which a permit has been issued is not completed in accordance with the approved plans and specifications for said work or with all terms and conditions of the grading permit, the Building Official may declare that a default has occurred. The Building Official shall give notice thereof to the principal and surety or financial institution executing the security, or to the owner in the case of a cash bond or assignment.

The Building Official may thereafter determine the work that is necessary to

mitigate any hazardous or unsafe conditions on the site and cause such work to be performed.

Where the security consists of a bond or instrument of credit, the surety or financial institution executing the security shall be responsible for the payment of all costs and expenses incurred by the Building Official in causing such work to be performed, up to the full amount of the security. In the case of cash security or assignment, the Building Official may pay all costs and expenses incurred in causing such work to be performed from the funds deposited and return any unused portion of such deposit or funds to the person making said deposit or assignment.

J103.7.7 Right of entry.

The Building Official or the authorized representative of any surety company or financial institution furnishing the security shall have access to the premises described in the permit for the purpose of inspecting the work.

In the event of default, as described in Section J103.7.6, the surety or financial institution furnishing the security, or the Building Official, or any person employed or engaged on the behalf of any of these parties, shall have the right to go upon the premises to perform the mitigation work, as described in Section J103.7.6.

Neither the permittee, owner, or any other person shall interfere with or obstruct the ingress into or egress from any such premises of any authorized representative of the surety or financial institution executing the security or the Building Official engaged to perform the mitigation work, as described in Section J103.7.6.

SECTION 72. Figure J103.2 is hereby added to read as follows:

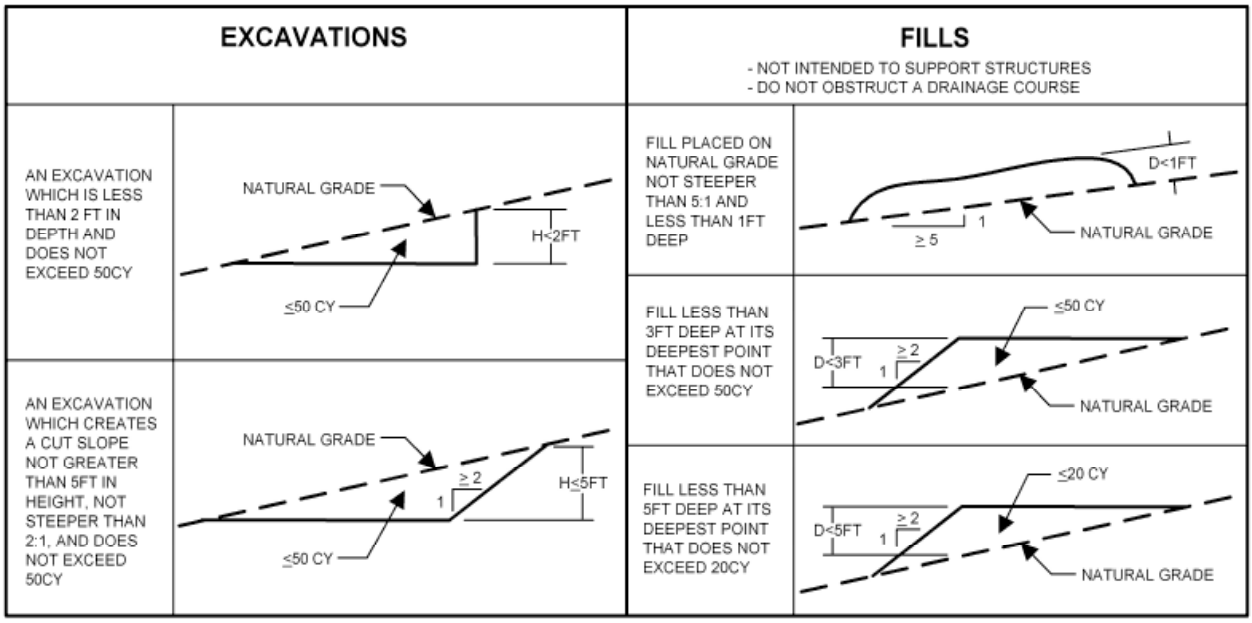


FIGURE J103.2

GRADING EXEMPTION CASES

SECTION 60. Section J104 is hereby amended to read as follows:

SECTION J104 PERMIT APPLICATION AND SUBMITTALS

J104.1 Submittal requirements.

In addition to the provisions of Section ~~105.3 and 1.8.4, as applicable~~106.4, the applicant shall state the ~~estimated quantities of excavation and fill~~following:

1. The estimated quantities of excavation, fill, borrow, removal, or combination thereof.

2. The proposed land use for the site on which the grading is to be performed.

J104.2 Site plan requirements.

In addition to the provisions of Section ~~107~~106, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this ~~c~~Code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this ~~c~~Code.

J104.2.1 Grading designation.

Grading in excess of 5,000 cubic yards (3,825 m^3), or that is proposed to support any structure, shall be designated as "engineered grading." All engineered grading shall be performed in accordance with an approved grading plan and specifications prepared by a Civil Engineer, unless otherwise required by the Building Official.

Grading involving less than 5,000 cubic yards (3,825 m^3), and that will not support any structure, shall be designated "regular grading" unless the permittee chooses to have the grading be designated as engineered grading, or the Building Official determines that, due to the existence of special conditions or unusual hazards, the grading should be designated as engineered grading.

J104.2.2 Regular grading requirements.

In addition to the provisions of Sections 106 and J104.2, an application for a regular grading permit shall be accompanied by plans of sufficient clarity to indicate the nature and extent of the work. The plans shall give the location of the work, the name of the owner, and the name of the person who prepared the plan. The plan shall

include the following information:

1. General vicinity of the proposed site.

2. Limits and depths of cut and fill.

3. Location of any buildings or structures where work is to be performed, and the location of any buildings or structures within 15 feet (4.6 m) of the proposed grading.

4. Contours, flow areas, elevations, or slopes that define existing and proposed drainage patterns.

5. Storm water mitigation measures in accordance with the requirements of Section 106.4.3 of this Code. See Section J110.8 for specific requirements.

6. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.

7. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code.

8. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.2.3 Engineered grading requirements.

In addition to the provisions of Sections 106 and J104.2, an application for a permit for engineered grading shall be accompanied by plans and specifications and supporting data consisting of a geotechnical report and engineering geology report.

Specifications shall contain information covering construction and material requirements. Plans shall be drawn to scale on paper and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the

proposed work will conform to the provisions of this Code and all relevant laws, ordinances, rules, and regulations. The first sheet of the plans shall depict the location of the proposed work, the name and address of the owner, and the name and address of the person who prepared the plans.

The plans shall include or be accompanied by the following information:

1. General vicinity of the proposed site.

2. Property limits and accurate contours of existing ground and details of terrain and area drainage.

3. Limiting dimensions, elevations, or finish contours to be achieved by the grading, proposed drainage channels, and related construction.

4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with, or as a part of, the proposed work. In addition, a map showing the drainage area and the estimated runoff of the area served by any drains.

5. Location of any existing or proposed buildings or structures located on the property on which the work is to be performed and the location of any buildings or structures on adjacent properties that are within 15 feet (4.6 m) of the property or that may be affected by the proposed grading operations.

6. Recommendations in the geotechnical report and the engineering geology report shall be incorporated into the grading plans or specifications. When approved by the Building Official, specific recommendations contained in the soils engineering report and the engineering geology report, that are applicable to grading, may be included by

reference.

7. The dates of the geotechnical and engineering geology reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports.

8. A statement of the quantities of material to be excavated and/or filled. Earthwork quantities shall include quantities for geotechnical and geological remediation. In addition, a statement of the quantities of material to be imported or exported from the site.

9. A statement of the estimated starting and completion dates for proposed work.

10. A statement signed by the owner, acknowledging that a Design Engineer, Field Engineer, Geotechnical Engineer, and Engineering Geologist, when appropriate, will be employed to perform the services required by this Code, when the Building Official requires that such professional persons be so employed. These acknowledgments shall be on a form furnished by the Building Official.

11. Storm water mitigation measures are required to be shown on the grading plan in accordance with the requirement of Section 106.4.3 of this Code. See Section J110.8 for specific requirements.

12. A drainage plan for those portions of property proposed to be utilized as a building site (building pad), including elevations of floors with respect to finish site grade and locations of proposed stoops, slabs, and fences that may affect drainage.

13. Location and type of any proposed private sewage disposal system,

including the location of the expansion area.

14. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and restricted use areas.

15. Location of all recorded floodways as established by Chapter 11.60 of Title 11 – Health and Safety – of the Los Angeles County Code.

16. Location of all Special Flood Hazard Areas as designated and defined in Title 44 of the Code of Federal Regulations.

J104.3 Geotechnical and engineering geology reports.

~~A geotechnical report prepared by registered design professionals shall be provided. The report shall contain not less than the following:~~

~~1. The nature and distribution of existing soils.~~

~~2. Conclusions and recommendations for grading procedures.~~

~~3. Soil design criteria for any structures or embankments required to accomplish the proposed grading.~~

~~4. Where necessary, slope stability studies, and recommendations and conclusions regarding site geology.~~

The geotechnical report required by Section J104.2.3 shall include data regarding the nature, distribution, and strength of existing soils, conclusions, and recommendations for grading procedures and design criteria for corrective measures, including buttress fills, when necessary, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading as affected by geotechnical factors, including the stability of slopes. All reports shall conform with the

requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

The engineering geology report required by Section J104.2.3 shall include an adequate description of the geology of the site, conclusions, and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy for the intended use of sites to be developed by the proposed grading, as affected by geologic factors. The engineering geology report shall include a geologic map and cross sections utilizing the most recent grading plan as a base. All reports shall conform with the requirements of Section 111 and shall be subject to review by the Building Official. Supplemental reports and data may be required as the Building Official may deem necessary. Recommendations included in the reports and approved by the Building Official shall be incorporated in the grading plan or specifications.

Exception: A geotechnical or engineering geology report is not required where the ~~b~~Building ~~code o~~Official determines that the nature of the work applied for is such that a report is not necessary.

J104.4 Liquefaction study.

For sites with maximum considered earthquake spectral response accelerations at short periods (S_s) greater than 0.5g as determined by Chapter 11 of ASCE 7, a study of the liquefaction potential of the site shall be provided and the recommendations

incorporated in the plans. A geotechnical investigation will be required when the proposed work is a "Project" as defined in Public Resources Code section 2693, and is located in an area designated as a "Seismic Hazard Zone" as defined in section 3722 of Title 14 of the Code of Regulations and on Seismic Hazard Zone Maps issued by the State Geologist under Public Resources Code section 2696.

Exception: A liquefaction study is not required where the ~~b~~Building ~~o~~Official determines from established local data that the liquefaction potential is low.

SECTION 61. Section J105 is hereby amended to read as follows:

SECTION J105 INSPECTIONS

J105.1 General.

Grading ~~l~~inspections shall be governed by Section ~~110, Chapter 1, Division II of this code~~108 and as indicated herein. Grading operations for which a permit is required shall be subject to inspection by the Building Official. In addition, professional inspection of grading operations shall be performed by the Field Engineer, the Geotechnical Engineer, and the Engineering Geologist retained to provide such services in accordance with this Section for engineered grading and as required by the Building Official for regular grading.

J105.2 Special and supplemental inspections.

The special inspection requirements of Section 1705.6 shall apply to work performed under a grading permit where required by the ~~b~~Building ~~o~~Official. In addition to the called inspections specified in Section J105.7, the Building Official may make such other inspections as may be deemed necessary to determine that the work is

being performed in conformance with the requirements of this Code. The Building Official may require investigations and reports by an approved soil testing agency, Geotechnical Engineer and/or Engineering Geologist, and Field Engineer. Inspection reports shall be provided when requested in writing by the Building Official.

The Building Official may require continuous inspection of drainage devices by the Field Engineer in accordance with this Section when the Building Official determines that the drainage devices are necessary for the protection of the structures in accordance with Section 110.

J105.3 Field engineer.

The Field Engineer shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, oversee and coordinate all field surveys, including setting grade stakes, and provide site inspections during grading operations to ensure the site is graded in accordance with the approved grading plan and the appropriate requirements of this Code. During site grading, and at the completion of both rough grading and final grading, the Field Engineer shall submit statements and reports as required by Sections J105.11 and J105.12. If revised grading plans are required during the course of the work, they shall be prepared by a Civil Engineer and approved by the Building Official.

J105.4 Geotechnical engineer.

The Geotechnical Engineer shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The

Geotechnical Engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this Appendix. If conditions differing from the approved geotechnical engineering and engineering geology reports are encountered during grading, the Geotechnical Engineer shall provide revised recommendations to the permittee, the Building Official, and the Field Engineer.

J105.5 Engineering geologist.

The Engineering Geologist shall provide professional inspection of those parts of the grading project within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. If conditions differing from the approved engineering geology report are encountered, the Engineering Geologist shall provide revised recommendations to the Geotechnical Engineer.

J105.6 Permittee.

The permittee shall be responsible for ensuring that the grading is performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code. The permittee shall engage project consultants, if required under the provisions of this Code, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the project consultants, the contractor, and the Building Official. In the event of changed conditions, the permittee shall be responsible for informing the Building Official of such change and shall provide revised

plans for approval.

J105.7 Required inspections.

The permittee shall call for and schedule an inspection by the Building Official at the following various stages of work and shall obtain the approval of the Building Official prior to proceeding to the next stage of work:

Pre-grade – Before any construction or grading activities occur at the site. The permittee shall ensure that all project consultants are present at the pre-grade inspection.

Initial grade – When the site has been cleared of vegetation and unapproved fill, and has been scarified, benched, or otherwise prepared for fill. No fill shall have been placed prior to this inspection.

Rough grade – When approximate final elevations have been established, drainage terraces, swales, and other drainage devices necessary for the protection of the building sites from flooding have been installed, berms have been installed at the top of the slopes, and the statements required by Section J105.12 have been received.

Final grade – When grading has been completed, all drainage devices necessary to drain the building pad have been installed, slope planting has been established, irrigation systems have been installed, and the as-built plans and required statements and reports have been submitted.

J105.8 Notification of noncompliance.

If, in the course of fulfilling their respective duties under this Appendix, the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist determines that the

work is not being done in conformance with this Appendix or the approved grading plans, the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist shall immediately report, in writing, the discrepancies and the recommended corrective measures to the permittee and to the Building Official.

J105.9 Transfer of responsibility.

If the Field Engineer, the Geotechnical Engineer, or the Engineering Geologist of record is changed at any time after the grading plans required pursuant to Section J104.2.2 or J104.2.3 have been approved by the Building Official, the permittee shall immediately provide written notice of such change to the Building Official. The Building Official may stop the grading from commencing or continuing until the permittee has identified a replacement and the replacement has agreed in writing to assume responsibility for those parts of the grading project that are within the replacement's area of technical competence.

J105.10 Non-inspected grading.

No person shall own, use, occupy, or maintain any non-inspected grading. For the purposes of this Code, non-inspected grading shall be defined as any grading for which a grading permit was first obtained, pursuant to Section J103, above, but which has progressed beyond any point requiring inspection and approval by the Building Official without such inspection and approval having been obtained.

J105.11 Routine field inspections and reports.

Unless otherwise directed by the Building Official, the Field Engineer for all engineered grading projects shall prepare routine inspection reports and shall file these

reports with the Building Official as follows:

1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;

2. Monthly, at all other times; and

3. At any time when requested in writing by the Building Official.

Such reports shall certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, this Code, all grading permit conditions, and all other applicable ordinances and requirements. The reports shall conform to a standard "Report of Grading Activities" form, which shall be provided by the Building Official.

J105.12 Completion of work.

Upon completion of the rough grading work and at the final completion of the work, the following reports and drawings and supplements thereto are required for engineered grading or when professional inspection is otherwise required by the Building Official:

1. An "as-built" grading plan prepared by the Field Engineer retained to provide such services in accordance with Section J105.3 showing all plan revisions as approved by the Building Official. This shall include original ground surface elevations, as-built ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and the outlets of subsurface drains. As-built locations, elevations, and details of subsurface drains shall be shown as reported by the

Geotechnical Engineer.

The as-built grading plan shall be accompanied by a certification by the Field Engineer that to the best of his or her knowledge, the work within the Field Engineer's area of responsibility was done in accordance with the final approved grading plan.

2. A report prepared by the Geotechnical Engineer retained to provide such services in accordance with Section J105.4, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during grading and their effect on the recommendations made in the approved geotechnical engineering investigation report. The report shall include a certification by the Geotechnical Engineer that, to the best of his or her knowledge, the work within the Geotechnical Engineer's area of responsibility is in accordance with the approved geotechnical engineering report and applicable provisions of this Appendix. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from landslide, settlement, or slippage.

3. A report prepared by the Engineering Geologist retained to provide such services in accordance with Section J105.5, including a final description of the geology of the site and any new information disclosed during the grading and the effect of such new information, if any, on the recommendations incorporated in the approved grading plan. The report shall contain a certification by the Engineering Geologist that, to the best of his or her knowledge, the work within the Engineering Geologist's area of responsibility is in accordance with the approved engineering geology report and

applicable provisions of this Appendix. The report shall contain a finding regarding the safety of the completed grading and any proposed structures against hazard from landslide, settlement, or slippage. The report shall contain a final as-built geologic map and cross-sections depicting all the information collected prior to and during grading.

4. The grading contractor shall certify, on a form prescribed by the Building Official, that the grading conforms to said as-built plan and the approved specifications.

5. When a landscape permit is required by Section 490.1 of the California Department of Water Resources Model Water Efficient Landscape Ordinance, the Landscape Architect shall certify on a form prescribed by the Building Official that the landscaping conforms to approved landscape plans and specifications.

J105.13 Notification of completion.

The permittee shall notify the Building Official when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures, have been completed in accordance with the final approved grading plan, and all required reports have been submitted and approved.

J105.14 Change of ownership.

Unless otherwise required by the Building Official, when a grading permit has been issued on a site and the owner sells the property prior to final grading approval, the new property owner shall be required to obtain a new grading permit.

SECTION 62. Section J106.1 is hereby amended to read as follows:

J106.1 Maximum cut slope.

The slope of cut surfaces shall be not steeper than is safe for the intended use, and shall be not more than 1 unit vertical in 2 units horizontal (50-percent slope) unless the owner or the owner's authorized agent furnishes a geotechnical or an engineering geology report, or both, justifying a steeper slope. The reports must contain a statement by the Geotechnical Engineer or Engineering Geologist that the site was investigated and an opinion that a steeper slope will be stable and will not create a hazard to public or private property, in conformance with the requirements of Section 111. The Building Official may require the slope of the cut surfaces to be flatter in slope than 2 units horizontal to 1 unit vertical (50-percent slope) if the Building Official finds it necessary for the stability and safety of the slope.

Exceptions:

1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical (67-percent slope) provided that all of the following are met:

1.1. It is not intended to support structures or surcharges.

1.2. It is adequately protected against erosion.

1.3. It is no more than 8 feet (2438 mm) in height.

1.4. It is approved by the bBuilding code oOfficial.

1.5. Ground water is not encountered.

2. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical (100 percent slope).

SECTION 63. Section J107 is hereby amended to read as follows:

SECTION J107 FILLS

J107.1 General.

Unless otherwise recommended in the geotechnical report, fills shall comply with the provisions of this ~~s~~Section.

Exception: The Building Official may permit a deviation from the provisions of this Appendix for minor fills not intended to support structures, where no geotechnical report has been prepared.

J107.2 Surface Preparation.

Fill slopes shall not be constructed on natural slopes steeper than 2 units horizontal to 1 unit vertical (50 percent slope). The ground surface shall be prepared to receive fill by removing vegetation, topsoil, and other unsuitable materials (including any existing fill that does not meet the requirements of this Appendix), and scarifying the ground to provide a bond with the fill material.

Subdrains shall be provided under all fills placed in natural drainage courses and in other locations where seepage is evident, except where the Geotechnical Engineer or Engineering Geologist recommends otherwise. Such sub-drainage systems shall be of a material and design approved by the Geotechnical Engineer and acceptable to the Building Official. The Geotechnical Engineer shall provide continuous inspection during the process of subdrain installations. The location of the subdrains shall be shown on a plan prepared by the Geotechnical Engineer. Excavations for the subdrains shall be inspected by the Engineering Geologist when such subdrains are included in the recommendations of the Engineering Geologist.

J107.3 Benching.

Where existing grade is at a slope steeper than one unit vertical in five units horizontal (20-percent slope) and the depth of the fill exceeds 5 feet (1524 mm), benching shall be provided into sound bedrock or other competent material as determined by the Geotechnical Engineer in accordance with Figure J107.3, or as determined by the Geotechnical Engineer. When fill is to be placed over a cut, A a key shall be provided that is not less than 10 feet (3048 mm) in width and 2 feet (610 mm) in depth. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be constructed thereon. The Geotechnical Engineer or Engineering Geologist, or both, shall inspect and approve the cut as being suitable for the foundation and placement of fill material before any fill material is placed on the excavation.

J107.4 Fill material.

Fill material shall not include organic, frozen, or other deleterious materials. Rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall not be included in fills.

Exception: The Building Official may permit placement of larger rock when the Geotechnical Engineer properly devises and recommends a method of placement, and continuously inspects the placement and approves the fill stability. The following requirements shall also apply:

1. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.

2. Rock sizes greater than 12 inches (0.3 m) in maximum dimension shall be 10 feet (3.0 m) or more below grade, measured vertically.

3. Rocks shall be placed so as to assure filling of all voids with well-graded soil.

4. The reports submitted by the Geotechnical Engineer shall acknowledge the placement of the oversized material and whether the work was performed in accordance with the engineer's recommendations and the approved plans.

5. The location of oversized rock dispersal areas shall be shown on the as-built plan.

J107.5 Compaction.

All fill material shall be compacted to a minimum of 90 percent of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth within 40 feet (12.2 m) below finished grade and 93 percent of maximum dry density deeper than 40 feet (12.2 m) below finished grade, unless a lower relative compaction (not less than 90 percent of maximum dry density) is justified by the Geotechnical Engineer and approved by the Building Official. Where ASTM D1557, Modified Proctor, is not applicable, a test acceptable to the Building Official shall be used.

Field density shall be determined by a method acceptable to the Building Official. However, not less than ten percent of the required density tests, uniformly distributed, shall be obtained by the Sand Cone Method.

Fill slopes steeper than 2 units horizontal to 1 unit vertical (50-percent slope) shall be constructed by the placement of soil a sufficient distance beyond the proposed finish slope to allow compaction equipment to operate at the outer surface limits of the

final slope surface. The excess fill is to be removed prior to completion or rough grading. Other construction procedures may be utilized when it is first shown to the satisfaction of the Building Official that the angle of slope, construction method, and other factors will comply with the intent of this Section.

J107.6 Maximum slope.

The slope of fill surfaces shall be not steeper than is safe for the intended use. Fill slopes steeper than one unit vertical in two units horizontal (50-percent slope) shall be justified by ~~a~~ geotechnical reports ~~or engineering data~~conforming to the requirements of Section 111, containing a statement by the Geotechnical Engineer that the site has been investigated and an opinion that a steeper fill slope will be stable and will not create a hazard to public or private property. Substantiating calculations and supporting data may be required where the Building Official determines that such information is necessary to verify the stability and safety of the proposed slope. The Building Official may require the fill slope to be constructed with a face flatter in slope than 2 units horizontal to 1 unit vertical (50-percent slope) if the Building Official finds it necessary for stability and safety of the slope.

J107.7 Slopes to receive fill.

Where fill is to be placed above the top of an existing slope steeper than 3 units horizontal to 1 unit vertical (33-percent slope), the toe of the fill shall be set back from the top edge of the existing slope a minimum distance of 6 feet (1.8 m) measured horizontally or such other distance as may be specifically recommended by a Geotechnical Engineer or Engineering Geologist and approved by the Building Official.

J107.8 Inspection of fill.

For engineered grading, the Geotechnical Engineer shall provide sufficient inspections during the preparation of the natural ground and the placement and compaction of the fill to ensure that the work is performed in accordance with the conditions of plan approval and the appropriate requirements of this Appendix. In addition to the above, the Geotechnical Engineer shall provide continuous inspection during the entire fill placement and compaction of fills that will exceed a vertical height or depth of 30 feet (9.1 m) or result in a slope surface steeper than 2 units horizontal to 1 unit vertical (50-percent slope).

J107.9 Testing of fills.

Sufficient tests of the fill soils shall be made to determine the density and to verify compliance of the soil properties with the design requirements. This includes soil types and shear strengths in accordance with Section J111 Referenced Standards.

SECTION 64. Section J108 is hereby amended to read as follows:

SECTION J108 SETBACKS

J108.1 General.

Cut and fill slopes shall be set back from the property lines in accordance with this ~~s~~Section. Setback dimensions shall be measured perpendicular to the property line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks, and reduced setbacks are recommended in a geotechnical engineering and engineering geology report approved by the Building Official.

J108.2 Top of slope.

The setback at the top of a cut slope shall be not less than that shown in Figure J108.1, or than is required to accommodate any required interceptor drains, whichever is greater. For graded slopes, the property line between adjacent lots shall be at the apex of the berm at the top of the slope. Property lines between adjacent lots shall not be located on a graded slope steeper than 5 units horizontal to 1 unit vertical (20-percent slope).

J108.3 Toe of fill s~~S~~lope protection.

The setback from the toe of a fill slope shall not be less than that shown by Figure J108.1. Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the ~~b~~Building ~~o~~Official, shall be included. Examples of such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure J108.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

J108.4 Alternate setbacks.

The Building Official may approve alternate setbacks if he or she determines that no hazard to life or property will be created or increased. The Building Official may require an investigation and recommendation by a qualified engineer or Engineering Geologist to justify any proposed alternate setback.

SECTION 65. Figure J108.1 is hereby amended to read as follows:

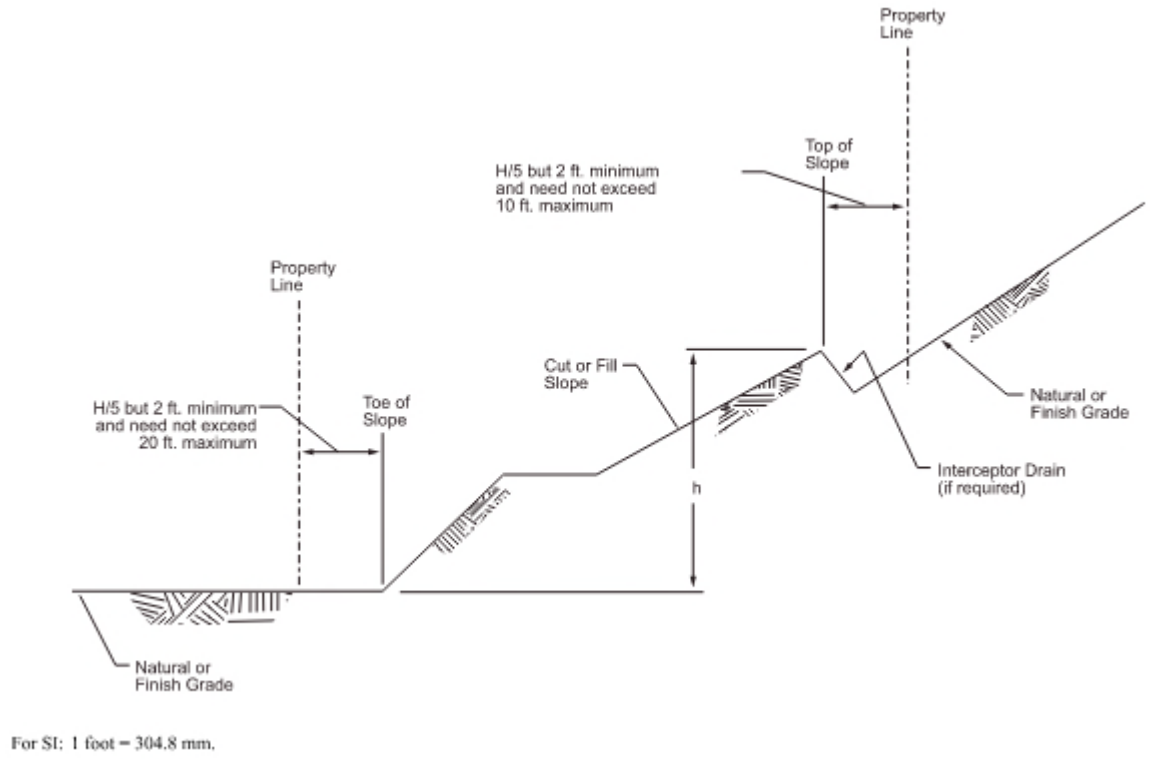


FIGURE J108.1
~~DRAINAGE~~SETBACK DIMENSIONS

SECTION 66. Section J109 is hereby amended to read as follows:

SECTION J109 DRAINAGE AND TERRACING

J109.1 General.

Unless otherwise recommended by a ~~registered design professional~~licensed Civil Engineer and approved by the Building Official, drainage facilities and terracing shall be provided in accordance with the requirements of ~~this s~~Section J109.2 for all cut and fill slopes 3 units horizontal to 1 unit vertical (33-percent slope) and steeper.

~~**EXCEPTION:** Drainage facilities and terracing need not be provided where the ground slope is not steeper than one unit vertical in three units horizontal (33-percent slope).~~

For slopes flatter than 3 units horizontal to 1 unit vertical (33-percent slope) and steeper than 5 units horizontal to 1 unit vertical (20-percent slope), a paved swale or ditch shall be installed at 30-foot (9.1 m) vertical intervals to control surface drainage and debris. Swales shall be sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Swales must be paved with reinforced concrete not less than 3 inches (0.08 m) in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No. 10 by No. 10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an equivalent approved by the Building Official. Swales must have a minimum flow line depth of 1 foot (0.3 m) and a minimum paved width of 18 inches (0.5 m). Swales shall have a minimum gradient of not less than 5 percent. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade.

J109.2 Drainage ~~T~~terraces.

Drainage t~~T~~erraces not less than ~~6 feet (1829 mm)~~8 feet (2.4 m) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris. ~~Suitable access shall be provided to allow for cleaning and maintenance.~~

~~Where more than two terraces are required, one terrace, located at~~

~~approximately mid-height, shall be at least 12 feet (3658 mm) in width.~~

~~Swales or ditches shall be provided on terraces. They shall have a minimum gradient of one unit vertical in 20 units horizontal (5-percent slope) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a depth not less than 12 inches (305 mm) and a width not less than 5 feet (1524 mm).~~

~~A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m2) (projected) without discharging into a down drain~~When only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than 100 feet (30.5 m) and up to 120 feet (36.6 m) in vertical height, one terrace at approximately mid-height shall be 20 feet (6.1 m) in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet (36.6 m) in height shall be designed by the Civil Engineer and approved by the Building Official. Suitable access shall be provided to permit proper cleaning and maintenance.

Drainage swales on terraces shall have a longitudinal grade of not less than 5 percent nor more than 12 percent and a minimum depth of 1 foot (0.3 m) at the flow line. There shall be no reduction in grade along the direction of flow unless the velocity of flow is such that slope debris will remain in suspension on the reduced grade. Drainage swales must be paved with reinforced concrete not less than 3 inches (0.8 m) in thickness, reinforced with 6-inch (0.2 m) by 6-inch (0.2 m) No. 10 by No. 10 welded wire fabric or equivalent reinforcing centered in the concrete slab or an approved equal paving. Drainage swales shall have a minimum depth at the deepest point of 1 foot

(0.3 m) and a minimum paved width of 5 feet (1.5 m). Drainage swales on terraces shall be sized based on contributory area and have adequate capacity to convey intercepted waters to the point of disposal as defined in Section J109.5. Downdrains or drainage outlets shall be provided at approximately 300 foot (91.4 m) intervals along the drainage terrace or at equivalent locations. Down drains and drainage outlets shall be of approved materials and of adequate capacity to convey the intercepted waters to the point of disposal as defined in Section J109.5.

J109.3 Interceptor drains and overflow protection.

Berms, ~~i~~interceptor drains, swales, or other devices shall be installed along the top of cut slopes ~~receiving drainage from a tributary width greater than 40 feet (12 192 mm), measured horizontally~~to prevent surface waters from overflowing onto and damaging the face of a slope. Berms used for slope protection shall not be less than 12 inches (0.3 m) above the level of the pad and shall slope back at least 4 feet (1.2 m) from the top of the slope.

Interceptor drains shall be installed along the top of graded slopes greater than 5 feet in height receiving drainage from a slope with a tributary width greater than 30 feet (9.1 m), measured horizontally. They shall have a minimum depth of 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the ~~b~~Building ~~o~~Official, but shall be not less than one unit vertical in 50 units horizontal (2-percent slope). The drain shall be paved with concrete not less than 3 inches (76mm) in thickness, or by other materials suitable to the application, and reinforced as required

for drainage terraces. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the ~~b~~Building ~~o~~Official.

. . .

J109.5 Disposal.

All drainage facilities shall be designed to convey waters to the nearest-practicable street, storm drain, or natural watercourse or drainage way approved by the Building Official or other appropriate governmental agency, provided that the discharge of such waters at that location will not create or increase a hazard to life or property. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices. Desilting basins, filter barriers, or other methods, as approved by the Building Official, shall be utilized to remove sediments from surface waters before such waters are allowed to enter streets, storm drains, or natural watercourses. If the drainage device discharges onto natural ground, riprap or a similar energy dissipator may be required.

Building pads shall have a minimum drainage gradient of 2 percent toward an approved drainage facility or a public street unless otherwise directed by the Building Official. A lesser slope may be approved by the Building Official for sites graded in relatively flat terrain, or where special drainage provisions are made, when the Building Official finds such modification will not result in a hazard to life or property.

SECTION 67. Section J110 is hereby amended to read as follows:

SECTION J110 SLOPE PLANTING AND EROSION CONTROL

J110.1 General.

The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall ~~be permitted to~~ consist of effective planting, erosion control blankets, soil stabilizers, or other means as approved by the Building Official.

Exception: Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials, as approved by the Project Consultants to the satisfaction of the Building Official.

. . .

J110.3 Planting.

The surface of all cut slopes more than 5 feet (1.5 m) in height and fill slopes more than 3 feet (0.9 m) in height shall be protected against damage from erosion by planting with grass or ground cover plants. Slopes exceeding 15 feet (4.6 m) in vertical height shall also be planted with shrubs, spaced at not to exceed 10 feet (3 m) on center, or trees, spaced at not to exceed 20 feet (6.1 m) on center; or a combination of shrubs and trees at an equivalent spacing, in addition to grass or ground cover plants. The plants selected and planting methods used shall be suitable for the soil and climatic conditions of the site.

Plant material shall be selected that will produce a coverage of permanent planting to effectively control erosion. Consideration shall be given to deep-rooted plant material needing limited watering, maintenance, high root to shoot ratio, wind susceptibility, and fire-retardant characteristics. All plant materials must be approved by the Building Official.

Planting may be modified for the site if specific recommendations are provided by both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, irrigation requirements, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative planting will provide a permanent and effective method of erosion control. Modifications to planting must be approved by the Building Official prior to installation.

J110.4 Irrigation.

Slopes required to be planted by Section J110.3 shall be provided with an approved system of irrigation that is designed to cover all portions of the slope. Irrigation system plans shall be submitted to and approved by the Building Official prior to installation. A functional test of the system may be required.

For slopes less than 20 feet (6.1 m) in vertical height, hose bibs to permit hand watering will be acceptable if such hose bibs are installed at conveniently accessible locations where a hose no longer than 50 feet (15.2 m) is necessary for irrigation.

Irrigation requirements may be modified for the site if specific recommendations are provided by both the Geotechnical Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, plant types, planting methods, fire-retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative irrigation method will sustain the proposed planting and provide a permanent and

effective method of erosion control. Modifications for irrigation systems must be approved by the Building Official prior to installation.

J110.5 Plans and specifications.

Planting and irrigation plans shall be submitted for slopes that are required to be planted and irrigated pursuant to Sections J110.3 and J110.4. Except as otherwise required by the Building Official for minor grading, the plans for slopes 20 feet (6.1 m) or more in vertical height shall be prepared and signed by a Civil Engineer or Landscape Architect. If requested by the Building Official, planting and irrigation details shall be included on the grading plan.

J110.6 Rodent control.

Fill slopes shall be protected from potential slope damage by a preventative program of rodent control.

J110.7 Release of security.

The planting and irrigation systems required by this Section shall be installed as soon as practical after rough grading. Prior to final approval of grading and before the release of the grading security, the planting shall be well established and growing on the slopes, and there shall be evidence of an effective rodent control program.

J110.8 National Pollutant Discharge Elimination System (NPDES) compliance.

J110.8.1 General.

All grading plans and permits and the owner of any property on which such grading is performed shall comply with the provisions of this Section for NPDES compliance.

All best management practices shall be installed before grading begins or as instructed in writing by the Building Official for unpermitted grading as defined by Section J103.3. As grading progresses, all best management practices shall be updated as necessary to prevent erosion and to control construction-related pollutants from discharging from the site. All best management practices shall be maintained in good working order to the satisfaction of the Building Official until final grading approval has been granted by the Building Official and all permanent drainage and erosion control systems, if required, are in place. Failure to comply with this Section is subject to "Noncompliance Penalties" pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.2 Storm Water Pollution Prevention Plan (SWPPP).

The Building Official may require a SWPPP. The SWPPP shall contain details of best management practices, including desilting basins or other temporary drainage or control measures, or both, as may be necessary to control construction-related pollutants that originate from the site as a result of construction-related activities. When the Building Official requires a SWPPP, no grading permit shall be issued until the SWPPP has been submitted to and approved by the Building Official.

For unpermitted grading as defined by Section J103.3, upon written request, a SWPPP in compliance with the provisions of this Section and Section 106.4.3 for NPDES compliance shall be submitted to the Building Official. Failure to comply with this Section is subject to "Noncompliance Penalties" per Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.3 Erosion and Sediment Control Plans (ESCP).

Where a grading permit is issued and the Building Official determines that the grading will not be completed prior to November 1, the owner of the site on which the grading is being performed shall, on or before October 1, file or cause to be filed with the Building Official an ESCP. The ESCP shall include specific best management practices to minimize the transport of sediment and protect public and private property from the effects of erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. The best management practices shown on the ESCP shall be installed on or before October 15. The plans shall be revised annually or as required by the Building Official to reflect the current site conditions.

The ESCP shall be accompanied by an application for plan checking services and plan-checking fees in an amount determined by the Building Official, up to but not exceeding 10 percent of the original grading permit fee.

Failure to comply with this Section is subject to "Noncompliance Penalties" pursuant to Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.4 Storm Water Pollution Prevention Plan (SWPPP), effect of noncompliance.

Should the owner fail to submit the SWPPP or the ESCP as required by Section J110.8, or fail to install the best management practices, it shall be deemed that a default has occurred under the conditions of the grading permit security. The Building Official may thereafter enter the property for the purpose of installing, by County forces or by other means, the drainage, erosion control, and other devices shown on the approved plans, or if there are no approved plans, as the Building Official may deem necessary to protect adjoining property from the effects of erosion, flooding, or the deposition of mud, debris, or constructed-related pollutants.

The Building Official shall also have the authority to impose and collect the penalties imposed by Section J110.8.5. Payment of a penalty shall not relieve any persons from fully complying with the requirements of this Code in the execution of the work.

J110.8.5 Noncompliance penalties.

The amount of the penalties shall be as follows:

1. If a SWPPP or an ESCP is not submitted as prescribed in Sections J110.8.2 and J110.8.3:

Grading Permit Volume	Penalty
1-10,000 cubic yards (1-7645.5 m^3)	$50.00 per day
10,001-100,000 cubic yards (7646.3-76455 m^3)	$250.00 per day
More than 100,000 cubic yards (76455 m^3)	$500.00 per day

2. If the best management practices for storm water pollution prevention and wet weather erosion control, as approved by the Building Official, are not installed as prescribed in this Section J110.8:

Grading Permit Volume	Penalty
1-10,000 cubic yards (1-7645.5 m^3)	$100.00 per day
10,001-100,000 cubic yards (7646.3-76455 m^3)	$250.00 per day
More than 100,000 cubic yards (76455 m^3)	$500.00 per day

NOTE: See Section 108 for inspection request requirements.

SECTION 68. Section J111 is hereby amended to read as follows:

SECTION J111 REFERENCED STANDARDS

~~**J111.1 General.** See Table J111.1 for standards that are referenced in various sections of this appendix. Standards are listed by the standard identification with the effective date, standard title, and the section or sections of this appendix that reference the standard.~~

~~**TABLE J111.1 – REFERENCED STANDARDS**~~

~~ASTM D1557-12E1~~	~~Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort [56,000 ft-lb/ft^3 (2,700kN-m/m^3)].~~	~~J 107.5~~
~~ASCE/SEI 7-22~~	~~Minimum Design Loads and Associated Criteria for Buildings and Other Structures~~	~~J104.4~~

These regulations establish minimum standards and are not intended to prevent the use of alternate materials, methods, or means of conforming to such standards, provided such alternate has been approved by the Building Official.

The Building Official shall approve such an alternate provided they determine that the alternate is, for the purpose intended, at least the equivalent of that prescribed in this Code in quality, strength, effectiveness, durability, and safety.

The Building Official shall require that sufficient evidence or proof be submitted to substantiate any claims regarding the alternate.

The standards listed below are recognized standards. Compliance with these recognized standards shall be prima facie evidence of compliance with the standards set forth in Sections J104 and J107.

ASTM D 1557 – Latest Revision	Laboratory Characteristics Compaction of Soil Using Modified Effort	J107.5
ASTM D 1556 – Latest Revision	Density and Unit Weight of Soils In Place by the Sand Cone Method	J104.2.3, J104.3 and J107.9
ASTM D 2167 – Latest Revision	Density and Unit Weight of Soils In Place by the Rubber Balloon Method	J104.2.3 J104.3 and J107.9
ASTM D 2937 – Latest Revision	Density of Soils in Place by the Drive Cylinder Method	J104.2.3 J104.3 and J107.9
ASTM D 2922 – Latest Revision	Density of Soil and Soil Aggregate In Place by Nuclear Methods	J104.2.3 J104.3 and J107.9
ASTM D 3017 – Latest Revision	Water Content of Soil and Rock in Place by Nuclear Methods	J104.2.3, J104.3 and J107.9

SECTION 69. Section Q101.1 is hereby amended to read as follows:

Q101.1 Scope.

This appendix ~~shall be applicable~~applies to emergency housing and emergency housing facilities, as defined in Section Q102, when and to the extent that the County of Los Angeles Board of Supervisors ("Board") finds, by motion, resolution, or otherwise, that this appendix applies to a specific state of emergency, local emergency, or declaration of shelter crisis.

SECTION 70. Section Q102.1 is hereby amended to read as follows:

Q102.1 General.

. . .

ENFORCING AGENCY. The Building Official as defined in Section 104.3 of this

Code.

. . .

SECTION 71. Section Q103.1 is hereby amended to read as follows:

Q103.1 General.

Emergency sleeping cabins, emergency transportable housing units, membrane structures and tents constructed and/or assembled in accordance with this appendix, shall be occupied only during the duration of the declaration of state of emergency, local emergency, or shelter crisis.

. . .

SECTION 72. Section Q103.4 is hereby amended to read as follows:

Q103.4 Fire and life safety requirements not addressed in this appendix.

If not otherwise addressed in this appendix, fire and life safety measures, including, but not limited to, means of egress, fire separation, fire sprinklers, smoke alarms, and carbon monoxide alarms, shall be determined and enforced by the enforcing agency in consultation with the County Departments of Public Health, Fire, and other pertinent County departments, as applicable.

SECTION 73. Section Q106.1 is hereby amended to read as follows:

Q106.1 General.

. . .

Tents and membrane structures shall be provided with means of ventilation (natural and/or mechanical) allowing for adequate air replacement, as determined by

the enforcing agency.

SECTION 74. Section Q107.1 is hereby amended to read as follows:

Q107.1 General.

Emergency housing shall comply with the applicable requirements in Chapter 11B and/or the US Access Board Final Guidelines for Emergency Transportable Housing as determined by the enforcing agency.

. . .

SECTION 75. Section Q110.1.1 is hereby added to read as follows:

Q110.1.1 Backflow prevention.

Backflow prevention devices shall be provided in accordance with Section 602.3 of the Plumbing Code.

SECTION 76. Section Q110.1.2 is hereby added to read as follows:

Q110.1.2 Drinking fountains.

An adequate number of drinking fountains, bottle fillers, or drinking facilities shall be provided as determined by the enforcing agency.

SECTION 77. Section Q110.3 is hereby amended to read as follows:

Q110.3 Toilet and bathing facilities.

. . .

The maximum travel distance from any sleeping and/or living area to the toilet facility shall not exceed 300 feet (91.4 m) or as determined by the enforcing agency.

SECTION 78. The provisions of this ordinance contain various changes, modifications, and additions to the 2025 California Building Code. Some of those

changes are administrative in nature in that they do not constitute changes or modifications to requirements contained in the building standards published in the California Building Standards Code.

Pursuant to California Health and Safety Code sections 17958.5, 17958.7, and 18941.5, the Board of Supervisors hereby expressly finds that all of the changes and modifications to requirements contained in the building standards published in the California Building Standards Code that are contained in this ordinance are reasonably necessary because of local climatic, geological, or topographical conditions in the County of Los Angeles due to the potential for seismic activity in the region, topographical conditions that contribute to the spread of wild fires, and climatic conditions that impact air quality and increase the risk of wild fires. Without limiting the foregoing, the County makes additional findings herein:

BUILDING CODE AMENDMENTS

Code Section	Condition	Explanation of Amendment
113.5, 113.5.1, 113.5.2	Administrative	This is an administrative amendment to clarify that structures meeting the conditions specified and affected by the 2025 Eaton and Palisades fire are not required under the Alquist-Priolo Act to conduct an active fault study.
701A.1 701A.2	Climatic	Clarifies the application of Chapter 5 of the California Wildland Interface Code to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3 701A.5 701A.6	Climatic	Disallows the use of wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
701A.7	Climatic	Disallows the use of Class B wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
1031.2.1	Geological	The greater Los Angeles/Long Beach region is a densely populated area having buildings constructed over and near a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. The proposed amendment is intended to prevent occupants from being trapped in a building and to allow rescue workers to easily enter after an earthquake.
Table 1507.3.7	Geological	Table amended to require proper anchorage for clay or concrete tiles from sliding or rotating due to the increased risk of significant earthquakes in the County. This amendment incorporates the design provisions developed based on detailed study of the 1994 Northridge and the 1971 Sylmar earthquakes.
1613.8 and 1613.8.1	Geological	Observed damages to one- and two-family dwellings of light frame construction after the Northridge Earthquake may have been partially attributed to vertical

Code Section	Condition	Explanation of Amendment
		irregularities common to this type of occupancy and construction. In an effort to improve quality of construction and incorporate lesson learned from studies after the Northridge Earthquake, the proposed modification to ASCE 7-22, Section 12.2.3.1, Exception 3, by limiting the number of stories and height of the structure to two stories will significantly minimize the impact of vertical irregularities and concentration of inelastic behavior from mixed structural systems. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.8.2	Geological	A joint Structural Engineers Association of Southern California (SEAOSC), Los Angeles County and Los Angeles City Task Force investigated the performance of concrete and masonry construction with flexible wood diaphragm failures after the Northridge earthquake. It was concluded at that time that continuous ties are needed at specified spacing to control cross grain tension in the interior of the diaphragm. Additionally, there was a need to limit subdiaphragm allowable shear loads to control combined orthogonal stresses within the diaphragm. Recognizing the importance and need to continue the recommendation made by the task force while taking into consideration the improved performances and standards for diaphragm construction today, this proposal increases the continuous tie spacing limit to 40 ft in lieu of 25 ft and to use 75% of the allowable code diaphragm shear to determine the depth of the sub-diaphragm in lieu of the 300 plf and is deemed appropriate and acceptable. Due to the frequency of this type of failure during the past significant earthquakes, various jurisdictions within the Los Angeles region have taken this additional step to prevent roof or floor diaphragms from pulling away from concrete or masonry walls. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.8.3	Geological	The inclusion of the importance factor in the referenced

		Section equation has the unintended consequence of reducing the minimum seismic separation distance for important facilities such as hospitals, schools, police, and fire stations from adjoining structures. The proposal to omit the importance factor from the referenced equation in Section 12.8.6 will ensure that a safe seismic separation distance is provided. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.9	Geological Topographical	Section is added to improve seismic safety of buildings constructed on or into hillsides. Due to the local topographical and geological conditions of the sites within the greater Los Angeles/Long Beach region and their probabilities for earthquakes, this technical amendment is required to address and clarify special needs for buildings constructed on hillside locations. A SEAOSC and Los Angeles City Joint Task Force investigated the performance of hillside building failures after the Northridge earthquake. Numerous hillside failures resulted in loss of life and millions of dollars in damage. These criteria were developed to minimize the damage to these structures and have been in use by both the City and County of Los Angeles for several years with much success. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.10	Geological	The greater Los Angeles/Long Beach region is a densely populated area having buildings constructed over and near a vast array of fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. The proposed modification requiring safe design and construction requirements for ceiling suspension systems to resist seismic loads is intended to minimize the amount of damage within a building and therefore needs to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the California Building Code.
1704.6	Geological Administrative	The language in section 1704.6 of the California Building Code permits the owner to employ any registered design professional to perform structural observations with minimum guidelines. However, it is important that the registered design professional

		responsible for the structural design has thorough knowledge of the building he/she designed. By requiring the registered design professional responsible for the structural design, or their designee, who was involved with the design to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will be greatly increased. Additional requirements are provided to help clarify the role and duties of the structural observer and the method of reporting and correcting observed deficiencies to the Building Official. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1704.6.1	Geological	With the higher seismic demand placed on buildings and structures in this region, the language in section 1704.6.1, Item 3, of the California Building Code would permit many low-rise buildings and structures with complex structural elements to be constructed without the benefit of a structural observation. By requiring a registered design professional to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will be greatly increased. An exception is provided to permit simple structures and buildings to be excluded. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1705.3	Geological	Results from studies after the 1994 Northridge Earthquake indicated that a significant portion of the damage was attributable to lack of quality control during construction resulting in poor performance of the building or structure. Therefore, the amendment restricts the exceptions to the requirement for special inspection. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1705.13	Geological	In Southern California, very few detached one- or two-family dwellings not exceeding two stories above grade

		plane are built as "box-type" structures specially for those in hillside areas and near the oceanfront. Many with steel moment frames or braced frames, and/or cantilevered columns, can still be shown as "regular" structures by calculations. With the higher seismic demand placed on buildings and structures in this region, the language in section 1705.13, Item 3, of the California Building Code would permit many detached one- or two-family dwellings not exceeding two stories above grade plane with complex structural elements to be constructed without the benefit of special inspections. By requiring special inspections, the quality of major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will be greatly increased. The exception should only be allowed for detached one- or two-family dwellings not exceeding two stories above grade plane assigned to Seismic Design Categories A, B, and C.
1807.1.4	Climatic Geological	No substantiating data has been provided to show that a wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood retaining walls, when they are not properly treated and protected against deterioration, have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood foundations that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1807.1.6	Geological	With the higher seismic demand placed on buildings and structures in this region, it is necessary to take

		precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions that do not take into consideration the surrounding environment. Plain concrete performs poorly in withstanding the cyclic forces resulting from seismic events. In addition, no substantiating data has been provided to show that under-reinforced foundation walls are effective in resisting seismic loads, and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This amendment is a continuation of an amendment adopted during previous code adoption cycles.

1807.2	Climatic, Geological	No substantiating data has been provided to show that wood foundation systems are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Wood foundation systems not properly treated and protected against deterioration have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result in using wood foundation systems that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1807.3.1	Climatic, Geological	No substantiating data has been provided to show that wood foundation systems are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and

		wood-destroying organisms. Wood foundation systems not properly treated and protected against deterioration have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the precautionary steps to reduce or eliminate potential problems that may result in using wood foundation systems that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1808.7.2	Geological	Slope setbacks required by the code are based upon the assumption that the slope in question is grossly and surficially stable. The intent is to provide vertical and lateral support for the footing without detrimental settlement. Therefore, if Factors of Safety demonstrate that the adjacent descending slope is potentially unstable, the setback must be increased and measured from a hypothetical surface demonstrating Factors of Safety that meet or exceed all County minimum standards for slope stability (grossly and surficially stable). This amendment is intended to clarify that a minimum factor of safety is required and adequate vertical and lateral support must be provided.
1809.3 and Figure 1809.3	Geological	With the higher seismic demand placed on buildings and structures in this region, it is necessary to take precautionary steps to reduce or eliminate potential problems that may result for under-reinforced footings located on sloped surfaces. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1809.7 and Table 1809.7	Geological	No substantiating data has been provided to show that under-reinforced footings are effective in resisting seismic loads, and therefore they may potentially lead

		to a higher risk of failure. This amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. With the higher seismic demand placed on buildings and structures in this region, it is necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions for footings that do not take into consideration the surrounding environment. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these factors into consideration. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force, which investigated the performance deficiencies observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1809.12	Climatic Geological	No substantiating data has been provided to show that timber footings are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems, which may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1810.3.2.4	Climatic	No substantiating data has been provided to show that

	Geological	timber footings are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
1905.1	Geological	This amendment is intended to carry over critical provisions for the design of concrete columns in moment frames from the legacy 1997 Uniform Building Code. Increased confinement is critical to the integrity of such columns and these modifications ensure that it is provided when certain thresholds are exceeded. In addition, this amendment carries over from the legacy 1997 Uniform Building Code a critical provision for the design of concrete shear walls. It essentially limits the use of very highly gravity-loaded walls in being included in the seismic load resisting system, since their failure could have catastrophic effect on the building. Furthermore, this amendment was incorporated in the code based on observations from the 1994 Northridge Earthquake. Rebar placed in very thin concrete topping slabs have been observed in some instances to have popped out of the slab due to insufficient concrete coverage. This modification ensures that critical boundary and collector rebars are placed in sufficiently thick topping slab to prevent buckling of such reinforcements. This proposed amendment is a

		continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1905.6.2	Geological	This amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force, which investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1905.8 through 1905.10	Geological	These amendments are intended to carry over critical provisions for the design of concrete columns in moment frames from the Uniform Building Code (UBC). Increased confinement is critical to the integrity of such columns and these modifications ensure that it is provided when certain thresholds are exceeded. In addition, this amendment carries over from the UBC a critical provision for the design of concrete shear walls. It essentially limits the use of very highly gravity-loaded walls from being included in the seismic load resisting system, since their failure could have a catastrophic effect on the building. Furthermore, this amendment was incorporated into this Code based on observations from the 1994 Northridge Earthquake. Rebar placed in very thin concrete topping slabs has been observed in some instances to have popped out of the slab due to insufficient concrete coverage. This modification ensures that critical boundary and collector rebars are placed in sufficiently thick slabs to prevent buckling of such reinforcements. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.10.2 and Table 2304.10.2	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment limits the use of staple fasteners in resisting or transferring seismic forces. In September 2007, limited cyclic testing data was provided to the ICC, Los Angeles Chapter Structural Code Committee,

		showing that stapled wood structural shear panels do not exhibit the same behavior as nailed wood structural shear panels. The test results of stapled wood structural shear panels demonstrated much lower strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.10.3.1	Geological	The overdriving of nails into the structural wood panels still remains a concern when pneumatic nail guns are used for wood structural panel shear wall nailing. Box nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the 1994 Northridge Earthquake. The use of clipped head nails continues to be restricted from use in wood structural panel shear walls where the minimum nail head size must be maintained in order to minimize nails from pulling through sheathing materials. Clipped or mechanically driven nails used in wood structural panel shear wall construction were found to perform much worse in previous wood structural panel shear wall testing done at the University of California Irvine. The existing test results indicated that, under cyclic loading, the wood structural panel shear walls were less energy absorbent and less ductile. The panels reached ultimate load capacity and failed at substantially less lateral deflection than those using same-size hand-driven nails. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force, which investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.12.2.8	Climatic Geological	No substantiating data has been provided to show that wood used in retaining or crib walls is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the

		soil and wood-destroying organisms. Wood used in retaining or crib walls, when it is not properly treated and protected against deterioration, has performed very poorly. Most contractors are typically accustomed to construction in dry and temperate weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood in retaining or crib walls, which experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the local climate and the increased risk of significant earthquakes in the County.
2305.4	Geological	Many of the hold-down connectors currently in use do not have any acceptance report based on dynamic testing protocols. This amendment continues to limit the allowable capacity to 75% of the acceptance report value to provide an additional factor of safety for statically tested anchorage devices. Cyclic forces imparted on buildings and structures by seismic activity cause more damage than equivalent forces that are applied in a static manner. Steel plate washers will reduce the additional damage that can result when hold-down connectors are fastened to wood framing members. This amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force, which investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2306.2 2306.3 2307.2 2308.10.5.1 2308.10.5.2	Geological	The SEAOSC and the Los Angeles City Joint Task Force that investigated damage to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were

Figure 2308.10.5.1 and Figure 2308.10.5.2		not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and do not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as wood structural panels fastened with common nails. The test result revealed that wood structural panels fastened with staples demonstrated much lower strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Categories D, E, and F unless it can be substantiated by cyclic testing. Furthermore, the cities and unincorporated areas within the greater Los Angeles/Long Beach region have taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. This amendment continues the previous amendment adopted during the 2007 code adoption cycle.
2308.10.8.1	Geological	With the higher seismic demand placed on buildings and structures in this region, interior walls can easily be called upon to resist over half of the seismic loading imposed on simple buildings or structures. Without a continuous foundation to support the braced wall line, seismic loads would be transferred through other

		elements such as non-structural concrete slab floors, wood floors, etc. The purpose of this amendment is to limit the use of the exception to structures assigned to Seismic Design Category A, B, or C where lower seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
Table 2308.10.1	Geological	This amendment specifies minimum sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structure in this region. This proposed amendment reflects the recommendations by the SEAOSC and the Los Angeles City Joint Task Force, which investigated the performance deficiencies observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2308.10.9	Geological	Due to the high geologic activities in the Southern California area and the required higher level of performance of buildings and structures, this amendment limits the use of staple fasteners in resisting or transferring seismic forces. In September 2007, limited cyclic testing data was provided to the ICC, Los Angeles Chapter Structural Code Committee, showing that stapled wood structural shear panels do not exhibit the same behavior as nailed wood structural shear panels. The test results of stapled wood structural shear panels demonstrated much lower strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous code adoption cycles.

3114; Table 3114.8.5.3	Climatic, Geologic	The greater Los Angeles/Long Beach region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the recent 1994 Northridge Earthquake. The region is further impacted by construction of buildings and structures utilizing traditional construction materials that impact the amount of energy, air quality, greenhouse gas emission and construction waste in the area. The proposed amendment addresses structural design requirements specific to intermodal shipping containers, reduce environmental impact of unused and unrecycled intermodal shipping containers, and increase sustainability by reducing consumption of traditional construction materials. The proposed modification needs to be incorporated into the code to assure that new buildings and additions to existing buildings utilizing intermodal shipping containers are designed and constructed in accordance with the scope and objectives of the California Building Code and California Green Building Standards Code
Appendix C	Climatic, Geologic, Voluntary appendix	Los Angeles County is a diverse region with both densely populated urban areas and rural areas with various agricultural and animal husbandry establishments. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation, particularly the rural areas, which are often used for agricultural purposes. Furthermore, the greater Los Angeles/Long Beach region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. Due to the need for agricultural buildings to perform appropriately in the County due to its geology and climate, adoption of building standards for such structures is required.
Appendix H	Climatic, Geologic, Voluntary appendix	Los Angeles County is a diverse region with both densely populated urban areas and rural areas with various signs used in the County. The Los Angeles region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. In addition, weather events occur seasonally with high winds such as the Santa Ana

		Winds. Due to the need for signs to perform well in the County due to its climate and geology, adoption of building standards for signs is required.
H103.1	Geologic, Administrative, Voluntary appendix	Los Angeles County is a diverse region with both densely populated urban areas and rural areas with various signs used in the County. The greater Los Angeles/Long Beach region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. This provision is amended to cross-reference to applicable legal provisions and also to ensure that signs are located in such a way as to avoid damage to adjacent structures and people given the potential for earthquakes in the County.
H103.2	Geologic, Administrative, Voluntary appendix	Los Angeles County is a diverse region with both densely populated urban areas and rural areas with various signs used in the County. The greater Los Angeles/Long Beach region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. This provision is amended to cross-reference to applicable legal provisions and also to ensure that sign projections and clearances are located in such a way as to avoid damage to adjacent structures and people given the potential for earthquakes in the County.
H104.1	Geologic, Voluntary appendix	The greater Los Angeles/Long Beach region is situated over a vast array of earthquake fault systems capable of producing major earthquakes, including, but not limited to, the 1994 Northridge Earthquake. Due to the risk of geologic activities in the Southern California area, buildings and structures require a high level of performance, which is directly proportional to the weight of a structure. By adding the weight of a sign to the identification placard, it will improve the ability to provide structural verification in the event of damage or future modifications.
H105.1	Administrative, Voluntary appendix	The amendment provides a cross reference to Chapter 24 for user convenience.
H106.1, H106.2	Administrative, Voluntary	This change corrects a call out from the model electrical code to the relevant local electrical code and clarifies

	appendix	that a separate electrical permit is required for user convenience.
H110.1	Climatic, Voluntary appendix	Due to the potential for severe local weather conditions with torrential rain, it is necessary to clarify that no portions of the roof sign and supporting members may interfere with proper roof drainage to prevent the potential for roof collapse due to water accumulation.
H116	Climatic, Voluntary appendix	Due to the potential for severe local weather with high speed winds and hot, dry conditions, it is necessary that the most recent test standards as specified in Chapter 35 are adopted in lieu of the older test standards specified in Section H116. This ensures that the risk from fires is minimized.
J101.1 to J101.9	Geological Topographical Climatic	Sections revised to include erosion and sediment control measures to address the complex and diverse set of soil types and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J101.10	Geological Topographical Climatic	Section revised to maintain safety and integrity of public or private property adjacent to grading sites due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J103.1 – J103.2 and Figure J103.2	Geological Topographical Climatic	Sections revised to provide adequate control of grading operations typical to the greater Los Angeles County/Long Beach region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J104.2.1 – J104.4	Geological Topographical Climatic	Sections revised or added to provide adequate control of grading operations typical to the greater Los Angeles County/Long Beach region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J105.1-J105.14	Geological Topographical Climatic	Sections revised or added to provide adequate control of grading operations typical to the greater Los Angeles County/Long Beach region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J106.1	Geological Topographical Climatic	Section revised to require more stringent cut slope ratios to address the complex and diverse set of soil types and geologic conditions that exist in the greater

		Los Angeles County/Long Beach region.
J107.1- J107.7	Geological Topographical Climatic	Sections revised to provide more stringent fill requirements for slope stability and settlement due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J107.8 – J107.9	Geological Topographical Climatic	Sections revised to provide more stringent inspection and testing requirements for fill slope stability due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J108.1 – J108.4	Geological Topographical Climatic	Sections revised to provide more stringent slope setback requirements to address the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J109.1 – J109.3	Geological Topographical Climatic	Sections revised to provide more stringent drainage and terracing requirements to address the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J109.5	Geological Topographical Climatic	Subsection added to provide for adequate outlet of drainage flows due to the diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J110.1 - J110.8.5	Geological Topographical Climatic	Sections revised or added to provide for State requirements of storm water pollution prevention and more stringent slope planting, and slope stability requirements to control erosion due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
J111	Geological Topographical Climatic	Section revised to reference additional standards for soils testing due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the greater Los Angeles County/Long Beach region.
Appendix Q Q101.1, Q102.1, Q103.1, Q103.4, Q107.1	Administrative, Voluntary appendix Climatic Geologic Topographical	Adoption of this appendix is necessary because strict compliance with State and local standards and laws would prevent, hinder, or delay the mitigation of the effects of a declared shelter crisis, local emergency or state of emergency. The modifications to this appendix are administrative in nature, to provide clarification of various provisions of the language of this voluntary

		Appendix.
Q106.1	Climatic	Los Angeles County is subject to extreme temperatures, and many of these membrane structures will be erected and occupied during severe weather events. It is necessary to include this amendment to ensure the safety, health, and comfort of the occupants is maintained during extreme heat and cold.
Q110.1.1, Q110.1.2	Administrative	These sections are a cross reference to the State Plumbing Code requirement for user convenience and is not adding a new building standard nor enacting a more restrictive requirement. To the extent findings are requested, see prefatory language in this Section.
Q110.3	Climatic, Voluntary appendix	The County may utilize mobile restroom facilities that are physically separate from the living facilities. Due to the potential for severe local weather conditions, with extreme temperatures or torrential rain, the distance to the restroom facilities required for the comfort, safety, and health of displaced people should be reduced to 300 feet or as determined by the Building Official.

SECTION 79. This ordinance shall become operative on January 1, 2026.

[TITLE26BUILDINGCODE2025CSCC]