GENERAL PROVISIONS

§ 15.02.005 VIOLATIONS AND PENALTIES.

A. 1. No person shall erect, construct, enlarge, alter, repair, move, improve remove, convert, demolish, install, replace, equip, use, occupy, maintain or relocate any building or structure or fixture or equipment or property, or cause or permit the same to be done, in violation of any California Code herein adopted, or in violation of any provisions of this Chapter, and no person shall fail to comply with any lawful order made there under.

2. Any such violation or failure to comply shall be a misdemeanor, which shall be punishable in accordance with §1.01.040 of this Code.

B. Any violation of, or failure to comply with this Chapter shall constitute a separate offense for each and every day, during any portion of which any such violation or failure is committed, continued or permitted, and shall be punishable accordingly.

C. At the discretion of the City Attorney, any violation of this Chapter may be prosecuted as a misdemeanor or as an infraction.

(Ord. No. 2003-015 § 1 (part))

§ 15.02.010 PURPOSES OF CALIFORNIA CODES AND THIS CHAPTER.

It is the purpose of the provisions of Chapters15.02 and 15.03 of this Code and theCalifornia Code to provide minimum standards and requirements for the protection of the public health, safety, property and public welfare by regulating and controlling the design, operation, construction, installation, replacement, quality of materials, use, occupancy, location and maintenance of buildings and structures, signs and sign structures, heating, ventilating, cooling, refrigeration systems, incinerators and other heat-producing appliances, plumbing systems, and solar systems and rainwater drainage systems within the City.

(Ord. No. 2003-015 § 1 (part))

§ 15.02.015 ADMINISTRATIVE AUTHORITY.

The Building Official shall be the administrative authority for each of the Codes.

(Ord. No. 2003-015 § 1 (part))

§ 15.02.020 TAX CERTIFICATE REQUIRED.

No permit required by this Chapter or Chapter15.03 shall be issued to an applicant who is required by Chapter11.01 of this Code to have a business tax certificate, unless the applicant has a valid, current tax certificate.

(Ord. No. 2003-015 § 1 (part))

ADOPTION OF STATE CODES

§ 15.02.100 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE ADOPTED BY REFERENCE.

A. The 2019 Edition of the California Building Standards Administrative Code, published by the International Code Council, and all appendices, amendments, supplements and errata thereto, is hereby adopted by reference and shall be applicable to the City of Culver City, and referred to as the "Building Standards Administrative Code of the City of Culver City."

B. One copy of the Building Standards Administrative Code of the City of Culver City shall be kept on file in the Building Official's office for public inspection.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 3)

§ 15.02.105 CALIFORNIA BUILDING CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Building Code, 2019 Edition.

1. Pursuant to California Government Code § 50022.2, the California Building Code, 2019 Edition, published at Title 24, Part 2, of the California Code of Regulations, including Appendices D, F, G, H, I, J, N and O (“CBC”) is adopted by reference, subject to the amendments, additions and deletions set forth below.

2. One true copy of the CBC is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the 2019 California Building Code.

SECTION 105.1 of Chapter 1 of the CBC is amended to read as follows:

105.1 Permit Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert, or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit. Parking lots shall not be paved, improved, striped, or restriped unless a separate permit for each parking lot has first been obtained from the building official.

Exception: A separate permit shall not be required to pave, improve, stripe, or restripe a parking lot when such work is included in the scope of another project for which a building permit has been issued and when the design of such parking lot was included in the plan check review of such project.

Subsection 14 is added to § 105.2 of Chapter 1 of the CBC as follows:

105.2 Work exempt from permit.

Building:

14. Block wall and concrete wall not over 3 feet 6 inches high.

Subsection 105.3.1.1 is added to Section 105.3.1 of Chapter 1 of the CBC as follows:

105.3.1.1 Electric Vehicle Charging Stations Permitting.

105.3.1.1.1 Purpose and Intent. The purpose of this Chapter is to promote and encourage the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health, safety and welfare and preventing specific adverse impacts in the installation and use of such charging stations. This Chapter is also adopted to comply with Cal. Government Code § 65850.7.

105.3.1.1.2 Definitions. For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ELECTRIC VEHICLE CHARGING STATION or ***CHARGING STATION.*** Any level of electric vehicle supply equipment station that is designed and built in compliance with Article 625 of the Cal. Electrical Code, as it reads on the effective date of this chapter; and delivers electricity from a source outside an electric vehicle into a plug-in electric vehicle.

ELECTRONIC SUBMITTAL. The utilization of one or more of the following:

1. Electronic mail or email.

2. The internet.

3. Facsimile.

SPECIFIC, ADVERSE IMPACT. A significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

105.3.1.1.3 Expedited Permitting Process. Consistent with Cal. Government Code § 65850.7, the Building Official shall implement an expedited, streamlined permitting process for electric vehicle charging stations, and adopt a checklist of all requirements with which electric vehicle charging stations shall comply with to be eligible for expedited review. The expedited, streamlined permitting process and checklist may refer to the recommendations contained in the most current version of the "Plug-In Electric Vehicle Infrastructure Permitting Checklist" of the "Zero-Emission Vehicles in California: Community Readiness Guidebook" as published by the Governor's Office of Planning and Research. The City's adopted checklist shall be published on the City's website.

105.3.1.1.4 Permit Application Processing.

A. Prior to submitting an application for processing, the applicant shall verify that the installation of an electric vehicle charging station will not have specific, adverse impact to public health and safety and building occupants. Verification by the applicant includes but is not limited to: electrical system capacity and loads; electrical system wiring, bonding and overcurrent protection; building infrastructure affected by charging station equipment and associated conduits; areas of charging station equipment and vehicle parking.

B. A permit application that satisfies the information requirements in the city's adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the permit application and supporting documents meets the requirements of the city adopted checklist; and is consistent with all applicable laws and health and safety standards, the Building Official shall, consistent with Cal. Government Code § 65850.7, approve the application and issue all necessary permits. Such approval does not authorize an applicant to energize or utilize the electric vehicle charging station until approval is granted by the city. If the Building Official determines that the permit application is incomplete, he or she shall issue a written correction notice to the applicant, detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

C. Consistent with Cal. Government Code § 65850.7, the Building Official shall allow for electronic submittal of permit applications covered by this chapter and associated supporting documentation. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in lieu of a wet signature by any applicant.

D. No fee shall be imposed on the applicant for the filing and processing of a permit application for installation of an electric vehicle charging station.

105.3.1.1.5 Technical Review.

A. It is the intent of this chapter to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority life-safety situations. If the Building Official makes a finding based on substantial evidence that the electric vehicle charging station could have a specific adverse impact upon the public health or safety, as defined in this chapter, the city may require the applicant to apply for a use permit.

B. In the technical review of a charging station, consistent with Government Code § 65850.7, the Building Official shall not condition the approval for any electric vehicle charging station permit on the approval of such a system by an association, as that term is defined by Cal. Civil Code § 4080.

105.3.1.1.6 Electric Vehicle Charging Stations Installation Requirements

A. Electric vehicle charging station equipment shall meet the requirements of the California Electrical Code, the Society of Automotive Engineers, the National Electrical Manufacturers Association, and accredited testing laboratories such as Underwriters Laboratories, and rules of the Public Utilities Commission or a Municipal Electric Utility Company regarding safety and reliability.

B. Installation of electric vehicle charging stations and associated wiring, bonding, disconnecting means and overcurrent protective devices shall meet the requirements of Article 625 and all applicable provisions of the California Electrical Code.

C. Installation of electric vehicle charging stations shall be incorporated into the load calculations of all new or existing electrical services and shall meet the requirements of the California Electrical Code. Electric vehicle charging equipment shall be considered a continuous load.

D. Anchorage of either floor-mounted or wall-mounted electric vehicle charging stations shall meet the requirements of the California Building or Residential Code as applicable per occupancy, and the provisions of the manufacturer's installation instructions. Mounting of charging stations shall not adversely affect building elements.

Section 105.3.2 of Chapter 1 of the CBC is amended to read as follows:

105.3.2 Expiration of Plan Check. An application for a permit for any proposed work is deemed abandoned 12 months after the application date. Unless otherwise provided, after expiration of the application, the City will not issue a permit until the plans are rechecked and approved and a new fee is paid.

Exception: The Building Official may grant extensions of time for additional periods not exceeding 90 days each if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded the securing of the permit within the allocated time.

Section 105.5 of Chapter 1 of the CBC is amended to read as follows:

105.5 Expiration of Permits. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Work shall be considered suspended or abandoned if the building official determines that substantial work has not been performed within the time specified above. Substantial work shal! be construed to mean:

1. Measurable work such as, but not limited to, the addition of footings, structural members, flooring, wall covering, etc.

2. The work mentioned in subsection 1 of this Section 105.5 above must constitute 20% of the value of the work for which the permit was issued in any 180-day period for Group R, Division 3 occupancies and 10% for all other occupancies.

Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefore shall be one half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new permit fee and may be required to comply with all applicable new regulations at the time of issuance. The Building Official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated. Except as otherwise provided, every permit issued by the City is valid for a period of three (3) years.

Exception: The Building Official may grant extensions of time if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded from the work being completed. An extension of time may require conditions of approval and additional fees.

Section 105.8 Chapter 1 of the CBC is added to read as follows:

105.8 Responsibility of permittee. Building permits shall be presumed by the City to incorporate all of the work that the applicant, the applicant's agent, employees and/or contractors shall carry out. Said proposed work shall be in accordance with the approved plans and with all requirements of this code and any other laws or regulations applicable thereto. No city approval shall relieve or exonerate any person from the responsibility of complying with the provisions of this code nor shall any vested rights be created for any work performed in violation of this code.

Section 109.4 of Chapter 1 of the CBC is amended to read as follows:

109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee in addition to the normally established permit fee, equal to 100% of such normally established permit fee, or as otherwise determined by the building official.

Section 109.6.1 of Chapter 1 of the CBC is added to read as follows:

109.6.1 Plan check fees refund. No portion of the plan check fee shall be refunded unless plan review has not been performed, in which case 80 percent of the plan check fee shall be refunded upon written application for refund submitted by the person who made original payment of such fee and with the written consent of the owner of the real property on which the work was proposed to be done. The Building Official shall determine, in such official's discretion, whether an applicant is qualified to receive a refund. After 180 days have elapsed from the date of the submittal for plan check, no plan check fees shall be refunded, in the event subsequent application for plan check is made by a person who has received a refund, the full amount of all required fees shall be paid as elsewhere provided in this chapter.

Section 109.6.2 of Chapter 1 of the CBC is added to read as follows:

109.6.2 Permit fees refund. In the event any person shall have obtained a building permit and no portion of the work or construction covered by such permit shall have commenced, nor any inspection performed by any City employee, and notice of abandonment has been received from the owner of the real property on which such work would have been performed, the permittee, upon presentation to the Building Official of a written request for refund, shall be entitled to a refund in an amount equal to 80% of the building permit fee actually paid for such permit. The Building Official shall determine, in such official's discretion, whether an applicant is qualified to receive a refund. After 180 days have elapsed from the date of the issuance of the permit, no permit fees shall be refunded. In the event subsequent application for a permit is made by a person who has received a refund, the full amount of all required fees shall be paid as elsewhere provided in this chapter.

Exception:

1. If a permit has been issued for a project located in an area outside the jurisdiction of the city, 100% of the permit and plan checking fee may be refunded.

2. If a duplicate permit has been erroneously issued, 100% of the duplicated permit and plan checking fee may be refunded.

Section 109.7 of Chapter 1 of the CBC is added to read as follows:

109.7 Re-inspections. A re-inspection fee in the amount set by City Council resolution may be assessed for each inspection or re-inspection when such portion of work for which inspection is called is incomplete or when required corrections are not made. This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or re-inspection. Re-inspection fees may be assessed when the inspection record card is not posted or otherwise available on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the Building Official. In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until required fees have been paid.

Section 110.1.1 of Chapter 1 of the CBC is added to read as follows:

110.1.1 Setback Certification required. A California State licensed surveyor is required to certify the location of the new construction when it is within 3 feet of a setback line or property line prior to the first foundation inspection. A copy of the certification shall be available to the Building Safety Division inspector for the job file prior to the first inspection.

Exception; Wherever there are practical difficulties involved in carrying out the provisions of this section, the Building Official shall have the authority to grant modifications for individual cases.

Section 113.4 of Chapter 1 of the CBC is added to read as follows:

113.4 Access Board of Appeals.

A. There shall be a Disability Access Board of Appeals ("Access Board of Appeals") to consist of five members. Each member shall be appointed and hold office in accordance with procedures established by resolution of the City Council. Three of the five members shall be members of the Building Board of Appeals and shall be co-appointed by the City Council to be a member of the Building Board of Appeals and the Access Board of Appeals. Two of the five members shall be "physically handicapped persons" (as defined by California Health and Safety Code § 19957.5).

B. The Access Board of Appeals shall be considered a "standing committee" with a continuing subject matter jurisdiction. Thus, the Access Board of Appeals shall be subject to the requirements of the Brown Act (California Government Code §§ 54950 et seq.); however, the Access Board of Appeals shall have no regular meetings, and all meetings shall be special meetings noticed pursuant to California Government Code § 54956. The Access Board of Appeals shall conduct its meetings in accordance with procedures established by resolution of the City Council. The Access Board of Appeals may establish its own rules of procedure or by-laws consistent with City Council resolutions and ordinances.

C. Any person aggrieved by a determination made by the Building Official or Fire Code Official in administering or enforcing the portions of this chapter related to access to "public accommodations or facilities" (pursuant to California Health and Safety Code §§ 19955, et seq.) may appeal the determination to the Access Board of Appeals. The appeal shall be filed with the Building Official no later than 10 days after receipt of written notice of the determination and the appeal provisions of this section. Upon receipt of an appeal by the Building Official, a hearing shall be scheduled before the Access Board of Appeals. The Access Board of Appeals shall consider relevant evidence presented at the hearing and shall render a final written decision within a reasonably prompt time after conducting the hearing. The authority of the Access Board of Appeals to render a written decision shall be limited to the scope of authority of the Building Official, and the Access Board of Appeals shall have no authority to waive a requirement of this chapter.

D. Any person aggrieved by a decision of the Access Board of Appeals may request an administrative hearing within 10 days of the issuance of the final written decision. Any such request shall be made and heard in the same manner as an administrative hearing related to an administrative citation, in accordance with City of Culver City Municipal Code.

E. Failure to timely request an appeal to the Access Board of Appeals (pursuant to subsection C), or to an administrative hearing officer (pursuant to subsection D) constitutes a waiver of the hearing and a failure to exhaust administrative remedies.

F. Unless otherwise designated by the City Manager, the Building Official shall be the principal city staff liaison to the Access Board of Appeals, and the Building Official shall appoint a secretary to the Access Board of Appeals to comply with all procedural requirements related to the Brown Act.

G. The Building Official may request a special meeting of the Access Board of Appeals in order to request advisory comments from the Access Board of Appeals regarding issues related to this chapter, such as the potential adoption of new codes, proposed code changes, or alternate methods and materials.

Section 117 of Chapter 1 of the CBC is added to read as follows:

117 Solar Photovoltaic Systems.

117.1 Definitions. Terms defined herein shall have the following meanings when used in this Section:

BUILDING OFFICIAL. The Building Official of the City of Culver City or his or her designee.

CALIFORNIA ENERGY EFFICIENCY STANDARDS. The California Energy Efficiency Standards set forth in Title 24, Part 6, of the California Code of Regulations.

CITY. The City of Culver City.

DIRECTOR. The Community Development Director of the City of Culver City or his or her designee.

SOLAR PHOTOVOLTAIC SYSTEM. A system that generates electricity from the sun.

117.1 Requirements. All new buildings of 10,000 square feet or more of gross floor area, additions equal to 10,000 square feet or more of gross floor area, and major renovations to existing buildings of 10,000 square feet or more of gross floor area, where such renovation is equal to at least 50% of the valuation of the existing building, shall be equipped with a one kilowatt (1 kw) solar photovoltaic system per each 10,000 square feet of gross floor area, or fraction thereof.

A. Except as otherwise expressly provided, this Section shall not apply to one- and two-family residences, parking structures, garages, and renovations or additions to existing buildings.

B. For qualifying projects, the number of panels required for any given system shall be the total required energy production of the project, divided by the energy production capability of a single panel as specified on the project.

C. When calculating the number of panels required, fractional panels equal to or greater than one half shall be rounded up to the nearest whole number; fractional panels less than one half shall be rounded down to the nearest whole number.

117.2 Exceptions. Upon the written approval of the Director, an applicant who is unable to install the required solar photovoltaic system, due to the configuration of the proposed construction project, shall comply with one of the following options in order to satisfy the requirements set forth in § 117.1:

A. In-lieu fee.

1. An applicant shall pay an in-lieu fee in an amount equal to the cost of a solar photovoltaic system installed in a comparable project.

2. Fees generated from in lieu payments pursuant to this Subsection shall be appropriated and disbursed only for solar photovoltaic designs and installations on City buildings or facilities.

3. The amount and process for the collection, utilization and return of fees contemplated by this Section shall be established by resolution of the City Council.

B. Alternate location. An applicant shall install a solar photovoltaic system equivalent to a system installed in a comparable project on another building owned by the applicant and located in Culver City.

117.3 Building Permit Fees and Inspections.

A. Plan check and permit fees in an amount not to exceed Five Thousand Dollars ($5,000) shall be waived for solar photovoltaic installations. This subsection, 117.3.A, shall remain in effect until May 23, 2028, and as of that date is repealed, unless a later enacted statute, enacted before May 23, 2028, deletes or extends that date.

B. The value of the required solar photovoltaic system shall not be required to be included in the overall construction valuation of the project for the purposes of determining building permit fees.

C. No final inspection shall be approved for a construction project subject to the requirements of this Subchapter, nor shall a temporary or final certificate of occupancy be issued for such project, prior to the installation of the solar photovoltaic system being completed, inspected and fully operational, unless otherwise excepted pursuant to §117.2.

Section 118 of Chapter 1 of the CBC is added to read as follows.

118 Sandblasting. The purpose of this Section is to prevent the dust and debris that occurs in sandblasting operations from spreading throughout the neighborhood creating a public health hazard.

118.1 Permit Required; Compliance with Regulations.

A. No person shall sandblast or cause to be sandblasted the outside or inside of any building or structure within the City without first paying the fee and obtaining a permit from the Division of Building and Safety and without complying with regulations adopted by the City Council which are reasonable and necessary to protect the public health and safety and property from damage which may result from sandblasting.

B. No permit for dry sandblasting shall be issued unless the Building Official determines that extraordinary reasons exist for the use of such a process and that adequate measures will be taken to protect the public health and safety from the effect of such dry sandblasting.

118.2 Enforcement.

A. The Building Official shall have the power to revoke without prior notice any sandblasting permit for failure to comply with any such regulations.

B. No person shall do any sandblasting after a permit therefore has been revoked.

Section 1507.3.1 of the 2019 CBC is amended to read as follows:

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

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

Sections 1613.5 and 1613.5.1 are added to Chapter 16 of the 2019 CBC to read as follows:

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

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

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

Section 1613.5.2 is added to Chapter 16 of the 2019 CBC to read as follows:

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

12.11.2.2.3 Wood Diaphragms. In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails 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 sub-diaphragms to transmit the anchorage forces to the main continuous crossties.

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

Section 1613.5.3 is added to Chapter 16 of the 2019 CBC to read as follows:

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

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

Section 1613.6 is added to Chapter 16 of the 2019 CBC to read as follows:

1613.6 Seismic design provisions for hillside buildings.

1613.6.1 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%). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.6.2 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 division.

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

1613.6.3 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 which 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%). 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 1613.6.5 and 1613.6.7.3 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 1613.6.6 and 1613.6.7.4.

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.

1613.6.4 Analysis and design.

1613.6.4.1 General. Every hillside building within the scope of this section shall be analyzed, designed, and constructed in accordance with the provisions of this division. When the code-prescribed wind design produces greater effects, the wind design shall govern, but detailing requirements and limitations prescribed in this and referenced sections shall be followed.

1613.6.4.2 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.

1613.6.4.2.1 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.

1613.6.4.2.2 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.

1613.6.5 Base shear resistance-primary anchors.

1613.6.5.1 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.

1613.6.5.2 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 (9144 mm).

1613.6.5.3 Design of primary anchors and diaphragm struts. Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.6.8.

1613.6.5.4 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 2205.2.1.2 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.

1613.6.6 Base shear resistance-secondary anchors.

1613.6.6.1 General. In addition to the primary anchors required by Section 1613.6.5, 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 (9144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70% of the diaphragm depth.

1613.6.6.2 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) based on Allowable Stress Design (ASD) levels. The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of 4 feet (1,219 mm) on center.

1613.6.6.3 Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.6.8.

1613.6.7 Diaphragms below the base level-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.

1613.6.7.1 Diaphragm defined. Every floor level below the base level diaphragm shall be designed as a diaphragm.

1613.6.7.2 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.

1613.6.7.3 Design force resistance-primary anchors. The design force described in Section 1613.6.7.2 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 1613.6.5.

1613.6.7.4 Design force resistance-secondary anchors.

1613.6.7.4.1 General. In addition to the primary anchors required in Section 1613.6.7.3, 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 (9144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70% of the diaphragm depth.

1613.6.7.4.2 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) based on Allowable Stress Design (ASD) levels. The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of 4 feet (1,219 mm) on center.

1613.6.7.4.3 Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.6.8.

1613.6.8 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 3 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% of the tributary force.

5. Allowable Stress Increase. The one-third allowable stress increase permitted under Section 1605.3.2 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.

1613.6.9 Lateral-force-resisting elements normal to the downhill direction.

1613.6.9.1 General. In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this section.

1613.6.9.2 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.

1613.6.9.3 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.

1613.6.9.4 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.

1613.6.9.5 Distribution of lateral forces.

1613.6.9.5.1 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.

1613.6.9.5.2 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).

1613.6.9.5.3 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.

1613.6.9.6 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 2205.2.1.2 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.

1613.6.10 Specific design provisions.

1613.6.10.1 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.

1613.6.10.2 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.

1613.6.10.3 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.

1613.6.10.4 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) based on Allowable Stress Design (ASD) levels or more 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 2 galvanized nuts above the base plate.

1613.6.10.5 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 1613.8 is added to Chapter 16 of the 2019 CBC to read as follows:

1613.8 Suspended Ceilings. Minimum design and installation standards for suspended ceilings shall be determined in accordance with the requirements of Section 2506.2.1 of this Code and this section.

1613.8.1 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.

1613.8.2 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.

1613.8.3 Sprinkler Heads. All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ceiling assemblies, shall be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile. Sprinkler heads and other penetrations shall have a 2-inch (50mm) oversize ring, sleeve, or adapter through the ceiling tile to allow for free movement of at least 1 inch (25mm) in all horizontal directions. Alternatively, a swing joint that can accommodate 1 inch (25 mm) of ceiling movement in all horizontal directions is permitted to be provided at the top of the sprinkler head extension.

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

1613.8.4 Special Requirements for Means of Egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more shall comply with the following provisions.

1613.8.4.1 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.

1613.8.4.2 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.

1613.8.4.3 Emergency Systems. Independent supports and braces shall be provided for light fixtures required for exit illumination. Power supply for exit illumination shall comply with the requirements of Section 1008.3 of this Code.

1613.8.4.4 Supports for Appendage. Separate support from the structural deck shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

Section 1704.6 of the 2019 CBC is amended to read as follows:

1704.6 Structural observations. Where required by the provisions of Section 1704.6.1, 1704.6.2 or 1704.6.3, the owner or the owner's authorized agent shall employ a structural observer to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other sections of this code. The structural observer shall be one of the following individuals:

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

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

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

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

Section 1704.6.2 of the 2019 CBC is amended to read as follows:

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

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

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

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

Section 1705.3 of the 2019 CBC is amended to read as follows:

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

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

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

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

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

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

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

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

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

Exception 3 of Section 1705.12 of the 2019 CBC is amended to read as follows:

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

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

1. The structure consists of light-frame construction; the design spectral response acceleration at short periods, SDS, as determined in Section 1613.3.4, does not exceed 0.5; and the building height of the structure does not exceed 35 feet (10 668 mm).

2. The seismic force-resisting system of the structure consists of reinforced masonry or reinforced concrete; the design spectral response acceleration at short periods, SDS, as determined in Section 1613.3.4, does not exceed 0.5; and the building height of the structure does not exceed 25 feet (7620 mm).

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

3.1 Torsional or extreme torsional irregularity.

3.2 Nonparallel systems irregularity.

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

3.4 Discontinuity in lateral strength-weak story irregularity.

Section 1807.1.4 of the 2019 CBC is amended to read as follows:

1807.1.4 Permanent wood foundation systems. Permanent wood foundation systems shall be designed and installed in accordance with AWC PWF. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with Section 2303.1.9.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E or F.

Section 1807.1.6 of the 2019 CBC is amended to read as follows:

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

Section 1807.2 of the 2019 Edition of the California Building Code is amended to read as follows:

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

Section 1807.3.1 of the 2019 Edition of the California Building Code is amended to read as follows:

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

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

Exception: Wood poles and posts embedded in direct contact with soil may be used to support non-habitable, non-occupiable structures such as fences when approved by the Building Official.

Section 1809.3 of the 2019 CBC is amended to read as follows:

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

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

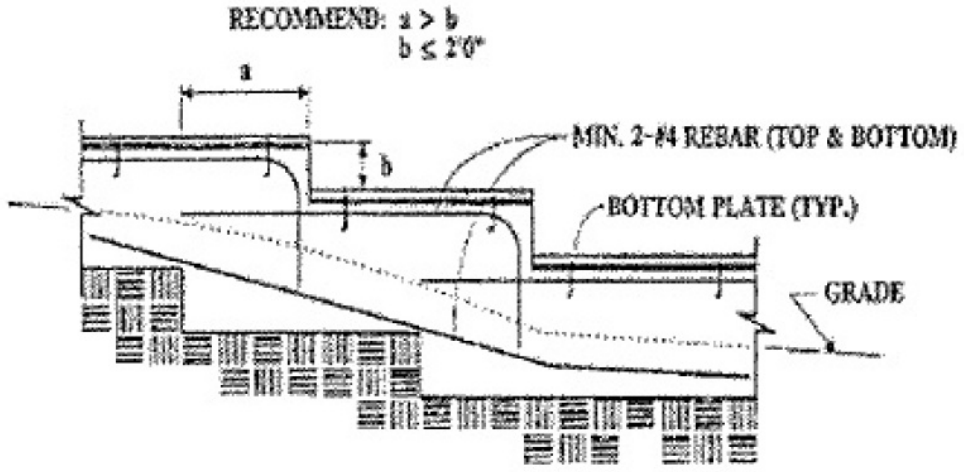


FIGURE 1809.3 - STEPPED FOOTING

Section 1809.7 and Table 1809.7 of the 2019 CBC are amended to read as follows:

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

TABLE 1809.7

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

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

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

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

c. Not Adopted.

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

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

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

Section 1809.12 of the 2019 CBC is amended to read as follows:

1809.12 Timber footings. Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the Building Official. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footing supported upon treated piles shall not exceed 70% of the allowable stresses for the species and

grade of timber as specified in the ANSI/AWC NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E or F.

Section 1810.3.2.4 of the 2019 CBC is amended to read as follows:

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

Section 1905.1.7 of the 2019 CBC is amended to read as follows:

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

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

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

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

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

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

Exceptions: 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 with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.

Section 1905.1 is amended and Sections 1905.1.9 thru 1905.1.11 are added to Chapter 19 of the 2019 CBC to read as follows:

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

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

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

18.7.5.8 At any section where the design strength, P_n, of the column is less than the sum of the shears Ve computed in accordance with ACI 318 Sections 18.7.6.1 and 18.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 18.7.5.1 through 18.7.5.3 shall be provided. For beams framing into opposite sides of the column, the moment components are permitted to be assumed to be of opposite sign. For the determination of the design strength, Pn, of the column, these moments are permitted to be assumed to result from the deformation of the frame in any one principal axis.

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

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

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

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

Section 2304.10.1 of the 2019 CBC is amended to read as follows:

2304.10.1 Fastener requirements. Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2301.2. The number and size of fasteners connecting wood members shall not be less than that set forth in Table 2304.10.1. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

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

Section 2304.10.2.1 is added to Chapter 23 of the 2019 CBC to read as follows:

2304.10.2.1 Quality of Nails. In Seismic Design Category D, E or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

Section 2304.12.5 of the 2019 CBC is amended to read as follows:

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

Section 2305.4 is added to Chapter 23 of the 2019 CBC to read as follows:

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

Section 2306.2 of the 2019 CBC is amended to read as follows:

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

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

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

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

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

Section 2306.3 of the 2019 CBC is amended to read as follows:

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

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

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

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

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

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

For structures assigned to Seismic Design Category D, application of Table 4.3C of AWC SDPWS shall not be used below the top level in a multilevel 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% for wind design. Panels complying with ANSI/APA PRP-210 shall be permitted to use design values for Plywood Siding in the AWC SDPWS.

Section 2307.2 is added to the 2019 CBC to read as follows:

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

TABLE 2308.6.1[a]
WALL BRACING REQUIREMENTS

SEISMIC DESIGN CATEGORY	STORY CONDITION (SEE SECTION 2308.2)	MAXIMUM SPACING OF BRACED WALL LINES	BRACED PANEL LOCATION, SPACING (O.C.) AND MINIMUM PERCENTAGE (X)			MAXIMUM DISTANCE OF BRACED WALL PANELS FROM EACH END OF BRACED WALL LINE
			Bracing method[b]			
			LIB	DWB, WSP	SFB, PBS, PCP, HPS, GB[c,d]	
A and B		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
C		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c.	Each end and ≤ 25′- 0″ o.c.	12′- 6″
		35′- 0″	NP	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	Each end and ≤ 25′- 0″ o.c. (minimum 25% of wall length)[e]	12′- 6″
D and E[f,g,h]		25′- 0″	NP	S_{DS} < 0.50: Each end and ≤ 25′- 0″ o.c. (minimum 21% of wall length)[e]	S_{DS} < 0.50: Each end and ≤ 25′- 0″ o.c. (minimum 43% of wall length)[e]	8′- 0″
				0.5 ≤ 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 S1: 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.

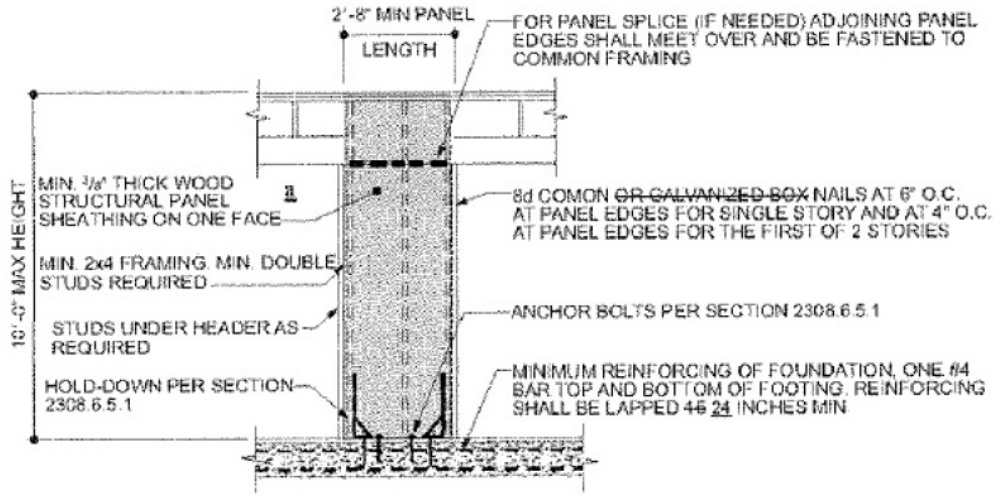
e. Percentage shown represents the minimum amount of bracing required along the building length (or wall length if the structure has an irregular shape).

f. DWB, SFB, PBS, and HPS wall braces are not permitted in Seismic Design Categories 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 factual 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 2308.6.5, 2308.6.5.1, and 2308,6.5.2 and Figures 2308.6.5.1 and 2308.6.5.1 of the 2019 CBC are 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 2308.6.5.1
ALTERNATE BRACED WALL PANEL (ABW)

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

2308.6.5.1 Alternate braced wall (ABW). An ABW shall be constructed in accordance with this section and Figure 2308.6.5.1. In one-story buildings, each panel shall have a length of not less than 2 feet 8 inches (813 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with 3/8-inch (3.2 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table 2304.10.1 and blocked at wood structural panel edges. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports. Two anchor bolts installed in accordance with Section 2308.3.1 shall be provided in each panel. Anchor bolts shall be placed at each panel outside quarter points. Each panel end stud shall have a hold-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (8006 N). The hold-down device shall be installed in accordance with the manufacturer's recommendations. The ABW shall be supported directly on a foundation or on floor framing supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing is permitted at door openings in the braced wall line. This continuous footing shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 24 inches (610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

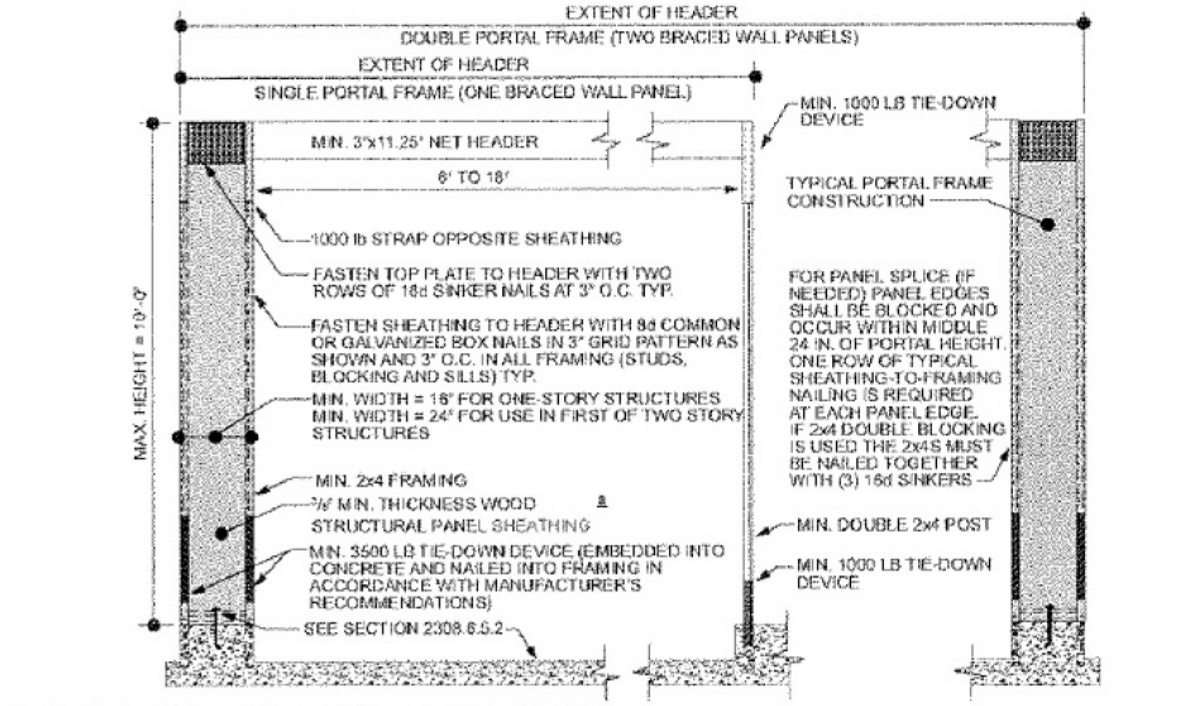
Where the ABW is installed at the first story of two-story buildings, the wood structural panel sheathing shall be provided on both faces, three anchor bolts shall be placed at one-quarter points and tie-down device uplift capacity shall be not less than 3,000 pounds (13 344 N).

2308.6.5.2 Portal frame with hold-downs (PFH). A PFH shall be constructed in accordance with this section and Figure 2308.6.5.2. The adjacent door or window opening shall have a full-length header. In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8-inch (9.5 mm) minimum-thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.6.5.2. For structures assigned to Seismic Design Category D or E, each panel shall be sheathed on one face with 15/32-inch-minimum-thickness (11.9 mm) wood structural panel sheathing nailed with 8d common nails spaced 3 inches on panel edges, 3 inches at intermediate supports and in accordance with Figure 2308.6.5.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.6.5.2. A built-up header consisting of at least two 2-inch by 12-inch (51 mm by 305 mm) boards, fastened in accordance with Item 24 of Table 2304.10.1 shall be permitted to be used. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1,000 pounds (4,400 N) shall fasten the header to the inner studs opposite the sheathing. One anchor bolt not less than 5/8-inch (15.9 mm) diameter and installed in accordance with Section 2308.3.1 shall be provided in the center of each sill plate. The studs at each end of the panel shall have a hold-down device fastened to the foundation with an uplift capacity of not less than 3,500 pounds (15 570 N).

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

under the braced wall line.

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



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

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

FIGURE 2308.6.5.2
PORTAL FRAME WITH HOLD-DOWNS (PFH)

Section 2308.6.8.1 of Chapter 23 of the 2019 CBC is amended to read as follows:

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

Exception: For structures with a maximum plan dimension not more than 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures assigned to Seismic Design Category A, B, or C. For structures in Seismic Design Categories D and E, exterior braced wall panels shall be in the same plane vertically with the foundation or the portion of the structure containing the offset shall be designed in accordance with accepted engineering practice and Section 2308.1.1.

Section 2308.6.9 of the 2019 CBC is amended to read as follows:

2308.6.9 Attachment of sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Tables 2308.6.1 or 2304.10.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.10.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

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

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

Section 3114 is added to and Section 202, Section 3101.1 and Chapter 35 of the 2019 Edition of the California Building Code is amended to read as follows:

SECTION 202

DEFINITIONS

INTERMODAL SHIPPING CONTAINER. A six-sided steel unit originally constructed as a general cargo container used for the transport of goods and materials.

SECTION 3101

GENERAL

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

SECTION 3114

INTERMODAL SHIPPING CONTAINERS

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

Exceptions:

1. Stationary storage battery arrays located in intermodal shipping containers complying with Chapter 12 of the California Fire Code.
2. Intermodal shipping containers that are listed as equipment complying with the standard for equipment, such as air chillers, engine generators, modular

datacenters, and other similar equipment.

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

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

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

3.3. In hurricane-prone regions and flood hazard areas, single-unit standalone intermodal shipping containers are designed in accordance with the applicable provisions of Chapter 16.

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

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

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

3114.3 Intermodal shipping container information. Intermodal shipping containers shall bear the manufacturer's existing data plate containing the following information as required by ISO 6346 and verified by an approved agency. A report of the verification process and findings shall be provided to the building owner.

1. Manufacturer's name or identification number.
2. Date manufactured.
3. Safety approval number.
4. Identification number.
5. Maximum operating gross mass or weight (kg) (lbs).
6. Allowable stacking load for 1.8G (kg) (lbs).
7. Transverse racking test force (Newtons).
8. Valid maintenance examination date.

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

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

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

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

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

3114.7 Joints and voids. Joints and voids that create concealed spaces between intermodal shipping containers, that are connected or stacked, at fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system in accordance with Section 715.

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

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

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

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

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

1. The openings shall be framed with steel elements that are designed in accordance with Chapter 16 and Chapter 22.
2. The cross section and material grade of any new steel element shall be equal to or greater than the steel element removed.

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

Exception: Intermodal shipping containers that meet the limitation of Section 3114.8.5.1 and designed in accordance with the simplified procedure in Section 3114.8.5.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2. Response modification coefficient, R = 2,

3. Over strength factor, 0 = 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 value. The allowable shear values for the intermodal shipping container side walls (longitudinal) and end walls (transverse) for wind design and seismic design using the coefficients of Section 3114.8.5.2 shall be in accordance with Table 3114.8.5.3, provided that all of the following conditions are met:

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

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

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

4. A maximum of one penetration not greater than a 6-inch (152 mm) diameter hole for conduits, pipes, tubes or vents, or not greater than 16 square inches (10 322mm2) for electrical boxes, is permitted for each individual 8 feet length (2438 mm) lateral force resisting wall. Penetrations located in walls that are not part of the wall lateral force resisting system shall not be limited in size or quantity. Existing intermodal shipping container's vents shall not be considered a penetration, as shown in Figure 3114.8.5.3(4).

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

TABLE 3114.8.5.3

ALLOWABLE SHEAR VALUES FOR INTERMODAL SHIPPING CONTAINER

SIDE WALLS AND END WALLS FOR WIND OR SEISMIC LOADING

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

1. The allowable strength for the side walls and end walls of the intermodal shipping containers are derived from ISO 1496-1 and reduced by a factor of safety of 5.

2. Container designation type is derived from ISO 668.

3. Limitations of Sections 3114.8.5.1 and 3114.8.5.3 shall apply.

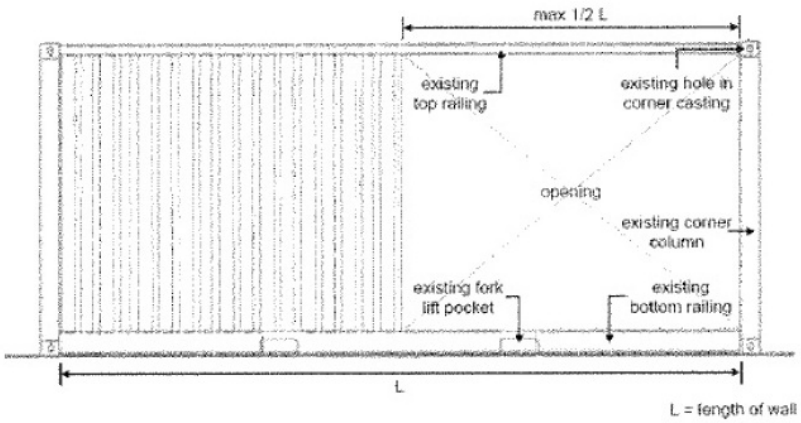


FIGURE 3114.8.5.3(1) - Bracing Unit Distribution – Maximum Linear Length

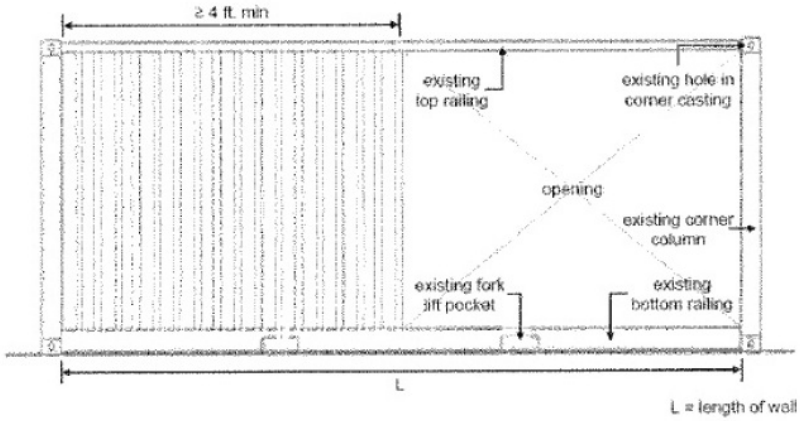


FIGURE 3114.8.5.3(2) - Bracing Unit Distribution – Minimum Linear Length

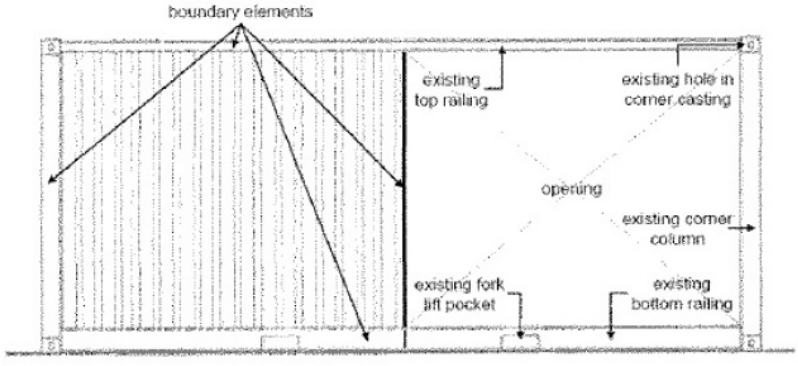


FIGURE 3114.8.5.3(3) - Bracing Unit Distribution – Boundary Elements

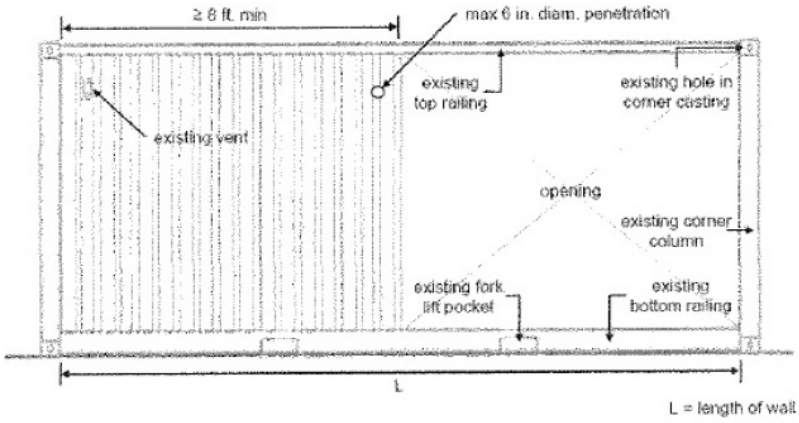


FIGURE 3114.8.5.3(4) - Bracing Unit Distribution – Penetrating Limitations

CHAPTER 35

REFERENCED STANDARDS

ISO	***International Organization for Standardization ISO Central Secretariat 1 ch, de la Voie-Creuse, Casa Postale 566 CH-1211 Geneva 20, Switzerland***	
Standard Reference Number	***Title***	***Referenced in code section number***
ISO 1496-1:2013	Series 1 Freight Containers - Specification and Testing - Part 1: General Cargo Containers for General Purposes	3114.8, Table 3114.8.5.3
ISO 6346: 1995, with Amendment 3: 2012	Freight Containers - Coding, Identification and marking	3114.3
ISO 668:2013	Series 1 Freight Containers - Classificaitons, dimensions and ratings.	Table 3114.8.5.3

Section 3307 of the California Building Code is amended to read as follows:

SECTION 3307 - Protection of Adjoining and Nearby Property and Persons.

3307.1 Adjoining and nearby public and private property and persons making lawful use of such property shall be protected from damage during construction, remodeling and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. At the outset of new construction activities or major remodeling projects, or at the otherwise earliest time it is feasible in the opinion of the Building Official, and notwithstanding the provisions of Title 17 of the Culver City Municipal Code (the "Zoning Code"), a protective screen or fence no less than six (6) feet in height shall be erected to the satisfaction of the Building Official between the construction site and immediately adjoining properties, unless the Building Official determines that erection of a screen is not feasible or would serve no practical purpose.

3307.2 The Building Official shall have the authority to stop the construction work at any time that in his or her opinion said construction work has caused, is causing, or is about to cause, damage to adjacent or nearby properties. Said work shall not recommence until the time that the necessary corrections have been made so that no further damage will occur to the affected property (unless the Building Official determines that the damage will be corrected as provided in Section 3307.3) and written approval is obtained from the Building Official that said work may recommence.

3307.3

A. If construction work causes damage to adjacent or nearby properties, the Building Division shall withhold inspections of said work and stop work until (i) the damage to the affected property is repaired (or repair work has commenced and is continued to be performed with due diligence until completed), or (ii) the affected property owner is compensated the cost of repair, or (iii) a documented agreement satisfactory to the Building Official is executed to assure repair of the damage at a more appropriate phase of the construction.

B. If there is a bona fide dispute between the owner of the damaged property and the party alleged to have caused said damage, as to the cause of the damage, the method or scope of repair or the cost of the repair, work may resume and inspections provided only if the party performing the construction work posts a bond or cash deposit with the City in an amount that the Building Official reasonably determines is sufficient to cover the cost of repair. Where there exists a bona fide dispute, the issues in contention are a civil matter beyond the authority of the City to resolve.

3307.4 The bond called for in Section 3307.3 shall be approved as to form by the City Attorney. The bond or the cash deposit will be held by the City until the dispute is resolved between the parties or by a court of competent jurisdiction. In the event that the aggrieved party does not submit proof to the City that an action has in fact been filed within one (1) year after the issuance of the Certificate of Occupancy, then the City shall, unless good cause is shown, release the bond or deposit. The City shall provide thirty (30) days' written notice to the aggrieved party of its intent to release the bond or deposit.

A. Prior to the commencement of new construction or major remodeling projects, including, but not limited to, demolition of exterior walls or roofs, excavation that requires shoring, sandblasting or other exterior construction activities that require a building permit, the owner or contractor shall mail written notice to the property owners and occupants located within one hundred (100) feet of the construction site that construction will occur, along with a copy of this Section 3307. Said notice shall be mailed to the affected property owners and occupants at least ten (10) days prior to any construction taking place. The notice shall contain the following information:

1. Address where construction will occur;
2. Date(s) and approximate times construction will occur;

3. Name, address, telephone number and state license number of contractor;

4. Name, address and telephone number of the owner of the property on which construction is to occur.

If the owner or the contractor fails to provide the required notice, the Building Official shall have the authority to stop the work until the notice is provided, in addition to any other remedies provided by this Code.

B. In addition to the Notice provided for above, the contractor or building shall post a Notice at the construction site, which shall include as a minimum the date(s) and approximate times construction will occur, the name and contact information of the contractor, and the contact information for the City's Building Safety Division.

3307.6 Prior to approval of temporary shoring a geotechnical report shall be provided certifying that the temporary shoring has been installed according the shoring plan and specifying the time period for the integrity of the temporary shoring.

3307.7 The Building Official shall promulgate policies and procedures to effectuate the provisions of this Section.

Section J101.3 is added to the 2019 CBC to read as follows:

J101.3 Hazards.

1. Whenever the Building Official determines that any land or any existing excavation or fill has, from any cause, become a menace to life or limb, or endangers public or private property, or adversely affects the safety, use or stability of public or private property, the owner or other person in legal control of the property concerned shall, upon receipt of a written notice thereof from the Building Official, correct such condition in accordance with the provisions of this appendix and the requirements and conditions set forth in the notice so as to eliminate such condition. The owner or other person in legal control of the property shall immediately comply with the provisions set forth in the notice and shall complete the work within 180 days from the date of the notice unless a shorter period of time for completion has been specified in the notice in which case the owner shall comply with the shorter period of time. Upon written application and good cause shown, the Building Official may approve the request for an extension of time to complete the work required by the notice.

2. If the above condition is not eliminated within the specified time period, the Building Official may file with the Office of the Los Angeles County Recorder a certificate stating that the property is deemed substandard and that the owner thereof has been so notified to correct the substandard condition. Said certificate shall specify the conditions creating the substandard classification.

3. When the above conditions have been corrected to the satisfaction of the Building Official, upon receiving a fee from the owner or his or her agent, the Building Official shall file with the Office of the Los Angeles County Recorder, within a reasonable period of time, a certificate specifying that the conditions creating the substandard classification have been corrected and that the property is no longer considered substandard.

Section J101.4 is added to the 2019 CBC to read as follows:

J101.4 Safety Precautions.

1. General.

a) If at any stage of work on an excavation or fill, the Building Official determines that the work has become or is likely to become dangerous to any person, or is likely to endanger any property, public or private, the Building Official must be authorized to require safety precautions to be immediately taken by the property owner as a condition to continuing such permitted work or to require cessation thereof forthwith unless and until it is made safe and to amend the plans for such work.

b) Safety precautions may include, without limitation, specifying a flatter exposed slope or construction of additional drainage facilities, berms, terracing, compaction, cribbing, retaining walls or buttress fills, slough walls, desilting basins, check dams, benching, wire mesh and guniting, rock fences, revetments or diversion walls.

c) Upon the determination of the Building Official that such safety precautions during grading are necessary, the Building Official must provide a notice and order to the permittee to implement same. After receiving such notice, oral or written, it is unlawful for the permittee or any person to proceed with such work contrary to such order.

2. Removal of Ground Cover.

a) The existing vegetative ground cover of any watershed in any hillside area cannot be destroyed, removed or damaged except for routine maintenance pursuant to lawful grading, use or occupancy of the property or to clear hazardous vegetation near structures and roads.

b) Whenever ground cover is removed or damaged pursuant to a validly issued grading permit, the permittee must restore and maintain the affected area with an approved ground cover, or must accomplish such other erosion control protection measures as may be approved by the Building Official. Such erosion control must be completed within 30 days after cessation of the grading work or other work pursuant to a validly issued building permit.

3. Maintenance of Protective Devices. All devices used to protect hillside areas from erosion or landslide damage including, without limitation, retaining walls, cribbing, terracing, surface and subsurface drainage structures, interceptor drains, check dams, and riprap must be maintained in good condition and repair as approved by the Building Official at the time of completion of construction thereof.

Section J101.5 is added to the 2019 CBC to read as follows:

J101.5 Protection of Utilities. The owner and permittee of any property on which grading has been performed and that requires a grading permit must be responsible for the prevention of damage to any public utilities or services.

Section J101.6 is added to the 2019 CBC to read as follows:

J101.6 Protection of Adjacent Properties. The owner and permittee of any property on which grading has been performed and that requires a grading permit is responsible for the prevention of damage to adjacent property and no person must excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, alley, or other public or private property without supporting and protecting such property from settling, cracking or other damage that might result. Special precautions approved by the building official must be made to prevent imported or exported materials from being deposited on the adjacent public way and/or drainage courses. A 30-day excavation notice must be provided as required by California Civil Code § 829-834 when the excavation is of sufficient depth and proximity to adjacent lot structures.

Section J101.7 is added to the 2019 CBC to read as follows:

J101.7 Storm water control measures. The owner and permittee of any property on which grading has been performed and that requires a grading permit under Section J103 shall put into effect and maintain all precautionary measures necessary to protect adjacent water courses and public private property from damage by erosion, flooding, and deposition of mud, debris and construction-related pollutants originating from the site during, and after, grading and related construction activities. Furthermore, the owner and permittee shall be responsible for putting into effect and maintaining appropriate measures necessary to prevent any change in cross-lot surface drainage that may adversely affect any adjoining property as a result of grading and/or construction-related activities. Such measures to prevent any adverse cross-lot surface drainage effects on adjoining property shall be required whether shown on approved grading plans or not.

Section J101.8 is added to the 2019 CBC to read as follows:

J101.8 Conditions of approval. In granting any permit under this code, the Building Official may include 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:

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

2. Requirements for fencing of excavations or fills which would otherwise be hazardous.

Section J101.9 is added to the 2019 CBC to read as follows:

J101.9 Rules and regulations.

J101.9.1 Rules. The permissive provisions of this chapter shall not be presumed to waive any regulations imposed by other statutes or other ordinances of the State of California or the City of Culver City.

J101.9.2 Regulations. If two or more pertinent regulations are not identical, those regulations shall prevail which are more restrictive, or which afford greater safety to life, limb, health, property or welfare. For the purposes of these regulations, grading permits shall be considered as building permits and shall be subject to the administrative provisions of this code, unless otherwise specifically provided for in this chapter.

Section J103.2 is amended to the 2019 CBC to read as follows:

J103.2 Exemptions. A grading permit shall not be required for the following:

1. When approved by the Building Official, grading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties.

2. Excavation for construction of a structure permitted under this code where the excavation is limited to within the volume of the proposed structure.

3. Cemetery graves.

4. Refuse disposal sites controlled by other regulations.

5. Excavations for wells, or trenches for utilities.

6. Mining, quarrying, excavating, processing or stockpiling rock, sand, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil and adjoining properties.

7. Exploratory excavations performed under the direction of a registered soils 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. Exploratory excavations must be restored to existing conditions, unless approved by the Building Official.

8. An excavation that does not exceed 100 cubic yards (38.3 mA) and complies with one of the following conditions:

(1) Is less than 3 feet (0.6 m) in depth.

(2) 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 4 units horizontal to 1 unit vertical (25% 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:

(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% 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 100 cubic yards, and creates a fill slope no steeper than 4 units horizontal to 1 unit vertical (25% 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 4 units horizontal to 1 unit vertical (25% slope).

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

1. The issuance of a grading permit shall constitute an authorization to do only that work which is described or illustrated on the application for the permit or on the grading plans and specifications approved by the Building Official at the time of issuance.

2. Jurisdiction of other agencies. Permits issued under the requirements of this chapter shall not relieve the owner of responsibility for securing required permits for work to be accomplished which is regulated by any other code, department or division of the governing agency.

3. Conditions of permit. The Building Official, upon recommendation of the city traffic and transportation administrator, may impose such regulations with respect to access routes to and from grading sites in hillside areas as the Building Official shall determine are required in the interest of safety precautions involving pedestrian or vehicular traffic.

4. Consent of adjacent property owner. Whenever any excavation or fill requires entry onto adjacent property for any reason, the permit applicant shall obtain the written consent or legal easements or other property rights of the adjacent property owner or their authorized representative, and shall file a signed and duly notarized copy of such consent with the Building Official, and no permit for such grading work may be issued unless and until all necessary consent documents are so filed. The consent shall be in a form acceptable to the Building Official.

Section J103.4 is added to the 2019 CBC to read as follows:

J103.4 Grading fees.

1. Fees for grading plan check and for grading permits shall be established or modified by resolution of the city council. The schedule of such fees shall remain on file and be available in the office of the Building Official. The Building Official shall, with the approval of the city manager, recommend changes to the council when the costs to provide grading plan check and grading inspection services make it appropriate.

2. The applicant shall pay a plan check fee prior to acceptance of grading plans and specifications for checking by the city.

3. Whenever the applicant submits a grading plan for plan check that is substantially different in design of the earthwork as compared to previously submitted grading plans, the submittal shall be considered an original and a new grading plan check fee shall be determined and paid to the city as provided in this section.

4. The applicant shall pay a grading permit fee prior to the issuance of a grading permit by the city. The fee shall be based on the total volume of excavation and fill, on the site. If, during grading operations, the plans and specifications for the grading project are revised increasing the volume of excavation, fill, or a combination thereof above the volume that was used to determine the grading permit fee, the applicant shall pay to the city the difference between the original grading permit fee and the recalculated fee before work may resume under the grading permit.

5. Whenever grading operations are commenced without an approved grading permit, a penalty shall be added to all unpaid fees for grading plan check and grading permits. The penalty shall be 300% of all fees due the city.

Section J104.2.1 is added to the 2019 CBC to read as follows:

J104.2.1 Grading Designation. Grading in hilly terrain in Hillside "H" designated area and all grading in excess of 2,000 cubic yards shall be performed in accordance with the approved grading plan prepared by a registered civil engineer, and shall be designated as "engineered grading." Grading involving less than 2,000 cubic yards and not located in an area of hilly terrain shall be designated as "regular grading" unless the permittee chooses to have the grading performed as engineered grading, or the Building Official determines that special conditions or unusual hazards exist, in which case grading shall conform to

the requirements for engineered grading.

Section J104.2.2 is added to the 2019 CBC to read as follows:

J104.2.2 Regular grading requirements. In addition to the provisions of Section 106, and Section 104.2, Chapter 1, Division II, an application for a regular grading permit shall be accompanied by plans in 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. If the slope of the grade exceeds 3 units horizontal to 1 unit vertical or as required by the Building Official, the plans and specifications shall be prepared and signed by an individual licensed by the state to prepare such plans or specifications. 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 which define existing and proposed drainage patterns.
5. Stormwater provisions in accordance with the requirements of Appendix J and Title 5 Chapter 5.04 of the City of Culver City Municipal Code.
6. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements and use restricted use areas.
7. Location of all Special Flood Hazard Areas as designated and defined in Title 44, Code of Federal Regulations.

Section J104.2.3 is added to the 2019 CBC to read as follows:

J104.2.3 Engineered grading requirements. In addition to the provisions of Chapter 1 Division II, Section 107 and Appendix J Section J104.2, an application for an engineered grading permit shall be accompanied by plans and specifications, and supporting data consisting of a soils engineering report and engineering geology report. The plans and specifications shall be prepared and signed by an individual licensed by the state to prepare such plans or specifications when required by the Building Official. Specifications shall contain information covering structures and material requirements. Plans shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and all relevant laws, ordinances, rules, and regulations. The first sheet of each set of plans shall give location of the work, the name and address of the owner, and the person by whom they were prepared. The plans shall include, but shall not be limited to, 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 structures.
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. A map showing the drainage area and the estimated runoff of the area served by any drains shall also be provided.
5. Location of any existing or proposed buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners 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 engineering 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 geotechnical engineering report and the engineering geology report, that are applicable to grading, may be included by reference.
7. The dates of the geotechnical engineering and engineering geology reports together with the names, addresses, and telephone numbers of the firms or individuals who prepared the reports.
8. A statement of the earthwork quantities of materials to be excavated and/or filled. Earthwork quantities shall include quantities for geotechnical and geological remediation. In addition, a statement of material to be imported or exported from the site.
9. A statement of the estimated starting and completion dates for work covered by the permit.
10. A statement signed by the owner acknowledging that a field engineer, geotechnical engineer and engineering geologist, when appropriate, will be employed to perform the services required by this code, whenever approval of the plans and issuance of the permit are to be based on the condition that such professional persons be so employed. These acknowledgments shall be on a form furnished by the Building Official.
11. Storm water provisions are required to be shown on the grading plan in accordance with Appendix J Section J and Title 5 Chapter 5.04 of the CCMC.
12. A drainage plan for that portion of a lot or parcel to be utilized as a building site (building pad), including elevation of floors with respect to finish site grade and locations of existing and proposed stoops, slabs, fences or other features that may affect drainage.
13. Location and type of any existing or proposed private sewage disposal system.
14. Location of existing and proposed utilities, drainage facilities, and recorded public and private easements.
15. Location of all recorded floodways.
16. Location of all Special Flood Hazard Areas as designated and defined in Title 44, Code of Federal Regulations.

Section J109.5 is added to the 2019 CBC to read as follows:

J109.5 Disposal. All drainage facilities shall be designed to carry waters to the nearest practicable street, storm drain, or natural watercourse drainage way approved by the Building Official or other appropriate governmental agency jurisdiction provided it is a safe place to deposit such waters. Erosion of 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 dissipater may be required. Building pads shall have a minimum drainage gradient of 2% toward approved drainage facilities, a public street or drainage structure approved to receive storm waters unless waived 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 unfavorable drainage conditions.

Section J112 is added to the 2019 CBC to read as follows:

J112 HILLSIDE GRADING REQUIREMENTS AND PERMITTING

J112.1 ***DEFINITIONS.*** For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

EROSION AND SEDIMENT CONTROL PLANS. A component of a grading plan submittal which indicates the methods for mitigating erosion and surficial movement of soils during rainy seasons.

FINAL GRADING APPROVAL. Building Official approval that the proposed grading conforms to the project plans.

HILLSIDE "H" GRADING DESIGNATION. Refers to a lot where the existing slope on any portion of the lot is equal to or steeper than 15% and may be

subject to the requirement for a grading permit.

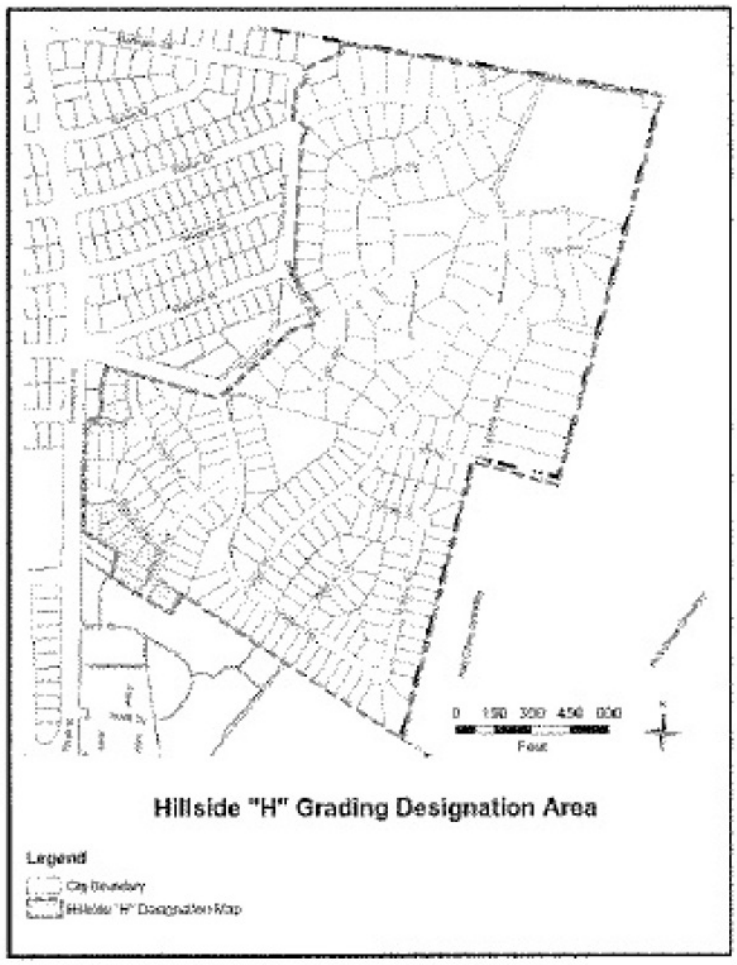
SIGNIFICANT TREE. Trees that are well established with a minimum caliper size of ten (10) inches or more and/or a tree height and canopy spread of twenty (20) feet or greater, and are required to be noted in the Slope Protection and Fire Prevention Landscape Plan.

SLOPE PROTECTION AND FIRE PREVENTION LANDSCAPE PLAN. A landscape plan prepared by a licensed landscape architect with all significant trees noted on the project site, designed to minimize erosion and surficial sliding and maximize fire prevention, and includes proposed ground cover, shrub, tree planting, and proposed water conserving irrigation, including fire resistant planting.

SPECIAL REPORT 152. The report prepared in 1982 by the California Department of Conservation Division of Mines and Geology titled Special Report 152, Slope Stability and Geology of the Baldwin Hills, Los Angeles County, California.

J112.2 HILLSIDE "H" GRADING DESIGNATION.

A. All properties shown on the Hillside "H" Grading Designation Area map (below) and other hillside properties that are subject to the requirements of this Subchapter shall have the Hillside "H" Grading Designation.



B. The Hillside "H" Grading Designation requires that hillside properties are designed and constructed in accordance with appropriate grading and drainage standards. The Hillside "H" Grading Designation:

1. Applies to a hillside lot where the existing slope on any portion of the lot is equal to or steeper than 15%;
2. Is recorded on city building records;
3. Requires a topographic survey with project plan submittal;
4. Requires a geotechnical and geological report with grading plan submittal; and allows a property owner to appeal the Hillside "H" Grading Designation to the Planning Commission where it can be shown, with a detailed topographic survey prepared by a licensed civil engineer or land surveyor, that said lot does not contain any slope equal to or in excess of 15%.

J712.3 GRADING REQUIREMENTS.

Notwithstanding any other provisions of this code, total grading (cut and fill) on a lot shall be limited as outlined in § 15.02.1320 herein. No grading permit shall be issued until a building permit is approved. All grading plans shall be subject to third party review, with commensurate plan review fees applied consistent with the City's fee schedule.

J712.4 THRESHOLDS FOR A GRADING PERMIT.

A. A hillside grading plan and a grading permit issued by the Building Official is required when the grading exceeds one hundred (100) cubic yards cut or fill and involves either:

1. A cut or fill of more than three (3) feet in vertical height below or above natural ground;
2. Cumulative cut and fill which amounts to more than five (5) feet; or
3. An area where the natural gradient of the project site is more than 4:1 (horizontal to vertical) or 25% slope.

B. Grading plans that do not exceed the thresholds set forth in § 15.02.1315.A are subject to a building permit only, and do not require a grading permit. The building permit application shall include earth work calculations with cross sections.

J712.4 MAXIMUM GRADING QUANTITIES.

A. Grading for all projects on properties with a Hillside "H" Grading Designation shall be limited to a maximum amount of cut and fill. The cumulative quantity of grading or the total combined value of both cut and fill or incremental cut and fill for a project shall be limited to a base maximum of five hundred (500) cubic yards plus the numeric value equal to 5% of the total lot size in cubic yards.

Example: A 5,000 square-foot lot would have a maximum grading amount of 750 cubic yards (500 cubic yards for the base amount + 250 cubic yards for the 5% lot size).

B. For projects where there is a maximum slope of 50% (2:1) or greater and/or where there is an excavation or fill that exceeds a 50% (2:1) or greater slope, no grading permit shall be issued without Building Official review and approval.

C. The maximum grading quantities, grading percentage for cut of fill or maximum allowable slope for grading may be appealed to the Planning Commission, where specific findings can be made. Such findings shall be established by resolution of the City Council.

J712.5 SLOPE STABILIZATION.

A. When a grading permit is required and the project exceeds 50% of the replacement value for the structure, as determined by the Building Official, the owner shall also be required to increase standards of care and safety for grading, excavations, fills, soil placement and foundations by implementing slope stabilization measures for the entire lot. A geotechnical engineer or engineering geologist shall establish prescriptive measures for slope stabilization, which shall be subject to third party review, with commensurate plan review fees applied consistent with the city's fee schedule.

B. Notwithstanding the above, the Building Official, in his or her sole discretion, may require slope stabilization measures for any project, if such measures are determined to be necessary in the interest of public health, safety or welfare.

J712.6 PUBLIC WORKS DEPARTMENT REVIEW.

All grading projects of one (1) acre or greater are subject to Public Works Department approvals for National Pollutant Discharge Elimination System (NPDES), Storm Water Pollution Protection Plan (SWPPP) and Low Impact Development (LID) requirements.

All projects involving properties with a Hillside "H" Grading Designation and subject to a grading permit shall be required to prepare and submit a geotechnical report and a geology report as follows:

A. Geotechnical report. A geotechnical report shall be prepared by a licensed geotechnical engineer and demonstrate to the satisfaction of the Building Official (based upon third party review by a city approved civil engineer, geotechnical engineer and/or engineering geologist) that the project is properly located and designed to address site specific geotechnical conditions. Every geotechnical report shall:

1. Include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, design criteria and corrective measures, the impact of proposed grading as affected by soils, engineering factors and the design stability of slopes;

2. Include data from test borings for subsurface explorations of appropriate number and depth to allow for the evaluation of earth materials related to: (a) impacts to the project; (b) impacts to adjacent properties within 15 feet of the project site, or properties which may be impacted by proposed grading operations; (c) impacts to designated routes of ingress and egress for hauling and staging; and (d) impacts created by the immediately previous rainy season;

3. Require professional inspection of grading operations by the civil engineer, geotechnical engineer and engineering geologist retained for the project; and

4. Include review of Special Report 152 and related records on existing hazards in the Hillside "H" Grading Designation Area.

B. Geology report. A geology report shall be prepared by a licensed engineering geologist and demonstrate to the satisfaction of the Building Official (based upon third party review by a city approved civil engineer, soils engineer and/or engineering geologist) that the project is properly located and designed to address site specific soil conditions. Every geology report shall:

1. Make findings that the project and grading will not adversely affect the stability of the adjacent properties;

2. Include a description of the geology of the project site, and conclusions and recommendations regarding the effect of geologic conditions and geologic factors on the project and the proposed grading;

3. Include data from test borings for subsurface explorations of appropriate number and depth to allow for the evaluation of earth materials related to: (a) impacts to the project; (b) impacts to adjacent properties within fifteen (15) feet of the project site, or properties which may be impacted by proposed grading operations; (c) impacts to designated routes of ingress and egress for hauling and staging; and (d) impacts created by the immediately previous rainy season; and

4. Include review of Special Report 152 and related records on existing hazards in the Hillside "H" Grading Designation Area.

J112.8 DRAINAGE PLAN REQUIREMENTS.

All projects shall be designed to include appropriate drainage control devices such as interceptor terraces, diverter terraces, berms, vee channels, inlet structures, down drains, outlet structures, drainage dispersal walls, sub-drains, gutters, site drainage, drainage around buildings; and shall include a plan for maintenance of drainage devices to ensure proper site drainage. An Erosion and Sediment Control Plan shall be prepared to address site drainage conditions during project construction. The Erosion and Sediment Control Plan must be updated each year, prior to October 15, to reflect the conditions of the site during the immediately previous rainy season.

J112.9 POST CONSTRUCTION DRAINAGE REPORTS AND MAINTENANCE COVENANT.

Annually, or when required by plan check, a drainage report shall be submitted to the Building Official indicating the condition of all drainage structures, acceptance of water from off-site properties and drainage to adjacent properties. A maintenance covenant, approved as to form by the City Attorney, shall be prepared to address required maintenance for all drainage structures. The drainage report shall include:

A. Hydrology map showing the drainage basin(s), the site of proposed grading, and any proposed drainage structures;

B. Summary of the hydrology and any proposed drainage structure conditions checked; and

C. Hydrology calculations for storm intensity requirements (up to twenty-five (25) year storm) for all drainage facilities.

J112.10 LANDSCAPE PLAN.

All projects located on properties with a Hillside "H" Grading Designation or other property subject to the requirements of this subchapter shall provide a Slope Protection and Fire Prevention Landscape Plan prepared by a licensed landscape architect that minimizes erosion and surficial sliding and maximizes fire prevention. This plan shall be prepared pursuant to § J112.13 of this subchapter and indicate proposed ground cover, shrub, tree planting, proposed water conserving irrigation, including automatic shut off valves, and fire-resistant planting.

J112.11 SIGNIFICANT TREE REMOVAL.

A. All significant trees as defined in § J112.1 of this subchapter shall be identified by a licensed landscape architect and shown on the grading plan and Slope Protection and Fire Prevention Landscape Plan with a note of intent to either remove or protect such trees.

B. Before any significant tree is removed, an application to remove significant trees must be filed with the current Planning Division for approval, which shall indicate the reason for such removal and alternative planting to substitute for the significant tree(s) removed. The grading plan and Slope Protection and

Fire Prevention Landscape Plan shall be reviewed by the current Planning Division to verify that the significant trees marked for removal are in conformance with the approved application.

C. The application to remove significant trees must be approved prior to approval of the grading plan.

J112.12 GRADING PROCEDURES.

A. Bonds. Security will be required for all hillside grading and shall be provided in the form of a surety bond, letter of credit or cash deposit. The grading bond will be based on 50% of the cost of moving the largest amount of either cut or fill and include the cost of landscaping the slopes per the approved Slope Protection and Fire Prevention Landscape Plan. To obtain release of the bond, the landscape architect must submit a letter of certification that the soils, additives and amendments, weed control, planting of the slopes and the installation of the irrigation system comply with all approved plans and applicable requirements of this code. The bond will be released one (1) year after receipt of this certification if an inspection of the site determines that the landscaping has become permanently established.

B. Agreements. Agreements with adjacent property owners will be required for all of the following activities occurring outside the property boundaries of a project: grading, drainage, ingress and egress, community driveways, or encroachment outside the property boundaries. All agreements must be in a form acceptable to the City Attorney, shall be recorded, and a conformed copy of the recorded document shall be submitted prior to approval of the grading plan.

J112.13 SUBMITTAL REQUIREMENTS.

Additional project plan submittal requirements, including requirements for a grading plan, Erosion Sediment and Control Plan and/or Slope Protection and Fire Prevention Landscape Plan, may be established by resolution of the City Council.

J113. HILLSIDE DRAINAGE

J113.1 Drainage System Required in Hillside Area.

A. It is hereby declared a public nuisance for any person owning or occupying any lot or parcel of property within the area designated "Hillside Area" on either Diagram "A" or "B," set forth in the Appendix following this Chapter, to fail to have installed and maintain:

1. In good working condition a system, consisting of either roof gutters, downspouts and connecting pipes or structures, or a combination thereof, which is capable of carrying rainwater falling on any roof on the property to the gutter of a street abutting the property; or

2. A system on the lot or parcel of property for draining the entire building pad to an abutting street.

B. The drainage system shall consist of a continuous one percent (1%) grade, or more, on all parts of the pad sloping down to the nearest street, or drainage structures, or a combination of such structures and grading, designed to drain water falling on the pad to an abutting street.

C. This section shall apply to all property shown on the diagrams, whether or not previously improved; provided that this section shall not apply to a particular lot or parcel of property, when the City Engineer has determined that the lack of all such systems on the property does not create any hazard to adjacent property.

APPENDIX: HILLSIDE DRAINAGE; DIAGRAMS

DIAGRAM "A"

DIAGRAM "B"

J114.1 General. All gradin g plans and permits shall comply with the provis ions of this section for NPDES compliance including the owner of any property on which grading has been performed and which requires a grading permit under Appendix J Section J103. Sites which have been graded and which require a grading permit under Appendix J Section J103 are subject to penalties and fines. 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 J 103.3. As grading progresses, all best management practices shall be updated as necessary to prevent erosion and control structures 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 unless final grading approval has been granted by the Building Official and all permanent drainage and erosion control systems, if required, are in place.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 4)

§ 15.02.110 RESERVED.

§ 15.02.115 CALIFORNIA RESIDENTIAL BUILDING CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Residential Code, 2019 Edition. Pursuant to California Government Code § 50022.2, the California Residential Code (CRC), 2019 Edition, published at Title 24, Part 2.5, of the California Code of Regulations, and Appendices H, J, K, O, Q, T, V, and X of the California Residential Code, 2019 Edition, published at Title 24, Part 2.5, of the California Code of Regulations are adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CRC is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the California Residential Code.

CRC Section R105.1.1 Sandblasting is hereby added as follows:

R105.1.1 Sandblasting. The purpose of this section is to prevent the dust and debris that occurs in sandblasting operations from spreading throughout the neighborhood creating a public health hazard.

R105.1.1.1 Permit Required; Compliance with Regulations.

A. No person shall sandblast or cause to be sandblasted the outside or inside of any building or structure within the city without first paying the fee and obtaining a permit from the Division of Building and Safety and without complying with regulations adopted by the City Council which are reasonable necessary to protect the public health and safety and property from damage which may result from sandblasting.

B. No permit for dry sandblasting shall be issued unless the Building Official determines that extraordinary reasons exist for the use of such a process and that adequate measures will be taken to protect the public health and safety from the effect of such dry sandblasting.

R105.1.1.2 Enforcement.

A. The Building Official shall have the power to revoke without prior notice any sandblasting permit for failure to comply with any such regulations.

B. No person shall do any sandblasting after a permit therefore has been revoked.

Subsection 11 is added to § R105.2 of the CRC as follows:

R105.2 Work exempt from permit.

Building

11. Block wall and concrete fences not over 3 feet 6 inches high.

Section R105.3.1.1 Expedited Streamlined Permitting Process for Small Residential Rooftop Solar Energy Systems is added to the CRC as follows:

R105.3.1.1 Expedited Review Process. Consistent with Cal. Government Code § 65850.5, the Building Official shall implement an expedited administrative permit review process for small rooftop solar energy systems and adopt a checklist of all requirements with which small rooftop solar energy systems shall comply with in order to be eligible for expedited review. The expedited administrative permit review process and checklist shall substantially conform to the recommended process and checklist prescribed by the California Solar Permitting Guidebook as adopted by the Governor's Office of Planning and Research. The city's adopted checklist shall be published on the city's website.

R105.3.1.1.1 Electronic Submittals. Consistent with Cal. Government Code § 65850.5, the Building Official shall allow for electronic submittal of permit applications covered by this chapter and associated supporting documentations. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in lieu of a wet signature by any applicant.

R105.3.1.1.2 Association Approval. Consistent with Cal. Government Code § 65850.5, the Building Official shall not condition the approval for any solar energy system permit on the approval of such a system by an association, as that term is defined by Civil Code § 4080.

R105.3.1.1.3 Permit Application Process. A permit application that satisfies the information requirements in the city's adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the permit application and supporting documents meets the requirements of the city's adopted checklist, and is consistent with all applicable laws, the Building Official shall, consistent with Cal. Government Code § 65850.5, approve

the application and issue all necessary permits. Such approval does not authorize an applicant to connect the small residential rooftop energy system to the local utility provider's electricity grid. The applicant is responsible for obtaining such approval or permission from the local utility provider, if the Building Official determines that the permit application is incomplete, he or she shall issue a written correction notice to the applicant, detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

R105.3.1.1.4 Inspection Requirements. The Building Official shall require only one inspection for small residential rooftop solar energy systems eligible for expedited review as provided by this chapter. Such inspection shall be performed in a timely manner. If the small rooftop solar energy system fails the single inspection, subsequent inspections shall be authorized.

Section R105.3.1.2 Electric Vehicle Charging Stations Permitting is added to the CRC as follows:

R105.3.1.2 Electric Vehicle Charging Stations Permitting

R105.3.1.2.1 Purpose and Intent. The purpose of this chapter is to promote and encourage the use of electric vehicles by creating an expedited, streamlined permitting process for electric vehicle charging stations while promoting public health, safety and welfare and preventing specific adverse impacts in the installation and use of such charging stations. This chapter is also adopted to comply with Cal. Government Code § 65850.7.

R105.3.1.2.2 Definitions. For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ELECTRIC VEHICLE CHARGING STATION or ***CHARGING STATION.*** Any level of electric vehicle supply equipment station that is designed and built in compliance with Article 625 of the California Electrical Code, as it reads on the effective date of this chapter, and delivers electricity from a source outside an electric vehicle into a plug-in electric vehicle.

ELECTRONIC SUBMITTAL. The utilization of one or more of the following:

1. Electronic mail or email.
2. The internet.
3. Facsimile.

SPECIFIC, ADVERSE IMPACT. A significant, quantifiable, direct, and unavoidable impact, based on objective, identified, and written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.

R105.3.1.2.3 Expedited Permitting Process. Consistent with Cal. Government Code § 65850.7, the Building Official shall implement an expedited, streamlined permitting process for electric vehicle charging stations, and adopt a checklist of all requirements with which electric vehicle charging stations shall comply with to be eligible for expedited review. The expedited, streamlined permitting process and checklist may refer to the recommendations contained in the most current version of the "Plug-In Electric Vehicle Infrastructure Permitting Checklist" of the "Zero-Emission Vehicles in California: Community Readiness Guidebook" as published by the Governor's Office of Planning and Research. The city's adopted checklist shall be published on the city's website.

R105.3.1.2.4 Permit Application Processing.

A. Prior to submitting an application for processing, the applicant shall verify that the installation of an electric vehicle charging station will not have specific, adverse impact to public health and safety and building occupants. Verification by the applicant includes but is not limited to: electrical system capacity and loads; electrical system wiring, bonding and overcurrent protection; building infrastructure affected by charging station equipment and associated conduits; areas of charging station equipment and vehicle parking.

B. A permit application that satisfies the information requirements in the city's adopted checklist shall be deemed complete and be promptly processed. Upon confirmation by the Building Official that the permit application and supporting documents meets the requirements of the city adopted checklist, and is consistent with all applicable laws and health and safety standards, the Building Official shall, consistent with Cal. Government Code § 65850.7, approve the application and issue all necessary permits. Such approval does not authorize an applicant to energize or utilize the electric vehicle charging station until approval is granted by the city. If the Building Official determines that the permit application is incomplete, he or she shall issue a written correction notice to the applicant, detailing all deficiencies in the application and any additional information required to be eligible for expedited permit issuance.

C. Consistent with Cal. Government Code § 65850.7, the Building Official shall allow for electronic submittal of permit applications covered by this chapter and associated supporting documentation. In accepting such permit applications, the Building Official shall also accept electronic signatures on all forms, applications, and other documentation in lieu of a wet signature by any applicant.

D. No fee shall be imposed on the applicant for the filing and processing of a permit application for installation of an electric vehicle charging station.

R105.3.1.2.5 Technical Review.

A. It is the intent of this chapter to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority life-safety situations. If the Building Official makes a finding based on substantial evidence that the electric vehicle charging station could have a specific adverse impact upon the public health or safety, as defined in this chapter, the city may require the applicant to apply for a use permit.

B. In the technical review of a charging station, consistent with Cal. Government Code § 65850.7, the Building Official shall not condition the approval for any electric vehicle charging station permit on the approval of such a system by an association, as that term is defined by Cal. Civil Code § 4080.

R105.3.1.2.6 Electric Vehicle Charging Stations Installation Requirements.

A. Electric vehicle charging station equipment shall meet the requirements of the California Electrical Code, the Society of Automotive Engineers, the National Electrical Manufacturers Association, and accredited testing laboratories such as Underwriters Laboratories, and rules of the Public Utilities Commission or a Municipal Electric Utility Company regarding safety and reliability.

B. Installation of electric vehicle charging stations and associated wiring, bonding, disconnecting means and overcurrent protective devices shall meet the requirements of Article 625 and all applicable provisions of the California Electrical Code.

C. Installation of electric vehicle charging stations shall be incorporated into the load calculations of all new or existing electrical services and shall meet the requirements of the California Electrical Code. Electric vehicle charging equipment shall be considered a continuous load.

D. Anchorage of either floor-mounted or wall-mounted electric vehicle charging stations shall meet the requirements of the California Building or Residential Code as applicable per occupancy, and the provisions of the manufacturer's installation instructions. Mounting of charging stations shall not adversely affect building elements.

Section R105.3.2 of the CRC is hereby amended to read as follows:

R105.3.2 Expiration of Plan Check. An application for a permit for any proposed work is deemed to have been abandoned 12 months after the application date. Unless otherwise provided, after expiration of the application, the city will not issue a permit until the plans are rechecked and approved and a new fee is paid.

Exception: The Building Official may grant extensions of time for additional periods not exceeding 90 days each if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded the securing of the permit within the allocated time.

Section R105.5 of Chapter 1 of the CRC is hereby amended to read as follows:

R105.5 Expiration of Permits. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Work shall be considered suspended or abandoned if the Building Official determines that substantial work has not been performed within the time specified above. Substantial work shall be constructed to mean:

1. Measurable work such as, but not limited to, the addition of footings, structural members, flooring, wall covering, etc.

2. The work mentioned in subsection 1 of this Section [A] 105.5 above must constitute 20% of the value of the work for which the permit was issued in any 180 day period for Group R, Division 3 occupancies and 10% for all other occupancies.

Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefore shall be one half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new permit fee and may be required to comply with all applicable new regulations at the time of issuance. The Building Official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated. Except as otherwise provided, every permit issued by the city is valid for a period of three (3) years.

Exception: The Building Official may grant extensions of time if a permit applicant submits in writing sufficient evidence that unusual conditions or circumstances precluded from the work being completed. An extension of time may require conditions of approval and additional fees.

Section R105.8 of Chapter 1 of the CRC is added to read as follows:

R105.8 Responsibility of permittee. Building permits shall be presumed by the city to incorporate all of the work that the applicant, the applicant's agent, employees and/or contractors shall carry out. Said proposed work shall be in accordance with the approved plans and with all requirements of this code and any other laws or regulations applicable thereto. No city approval shall relieve or exonerate any person from the responsibility of complying with the provisions of this code nor shall any vested rights be created for any work performed in violation of this code.

Section R109.5.1 of Chapter 1 of the CRC is added to read as follows:

R108.5.1 Plan check fees refund. No portion of the plan check fee shall be refunded unless plan review has not been performed, in which case 80% of the plan check fee shall be refunded upon written application for refund submitted by the person who made original payment of such fee and with the written consent of the owner of the real property on which the work was proposed to be done. The Building Official shall determine, in such Official's discretion, whether an applicant is qualified to receive a refund. After 180 days have elapsed from the date of the submittal for plan check, no plan check fees shall be refunded. In the event subsequent application for plan check is made by a person who has received a refund, the full amount of all required fees shall be paid as elsewhere provided in this chapter.

Section R105.5.2 of Chapter 1 of the CRC is added to read as follows:

R108.5.2 Permit fees refund. In the event any person shall have obtained a building permit and no portion of the work or construction covered by such permit shall have commenced, nor any inspection performed by any city employee, and notice of abandonment has been received from the owner of the real property on which such work would have been performed, the permittee, upon presentation to the Building Official of a written request for refund, shall be entitled to a refund in an amount equal to 80% of the building permit fee actually paid for such permit. The Building Official shall determine, in such Official's discretion, whether an applicant is qualified to receive a refund. After 180 days have elapsed from the date of the issuance of the permit, no permit fees shall be refunded. In the event subsequent application for a permit is made by a person who has received a refund, the full amount of all required fees shall be paid as elsewhere provided in this chapter.

Exception:

1. If a permit has been issued for a project located in an area outside the jurisdiction of the city, 100% of the permit and plan checking fee may be refunded.

2. If a duplicate permit has been erroneously issued, 100% of the duplicated permit and plan checking fee may be refunded.

Section 108.6 of Chapter 1 of the CRC is amended to read as follows:

R108.6 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee in addition to the normally established permit fee, equal to 100% of such normally established permit fee, or as otherwise determined by the Building Official.

Section 110.1.1 of Chapter 1 of the CRC is added to read as follows:

R109.1.7 Setback Certification required. A California State licensed surveyor is required to certify the location of the new construction when it is within three (3) feet of a setback line or property line prior to the first foundation inspection. A copy of the certification shall be available to the Building Division inspector for the job file prior to the first inspection.

Exception: Wherever there are practical difficulties involved in carrying out the provisions of this section, the Building Official shall have the authority to grant modifications for individual cases.

Section R109.5 of Chapter 1 of the CRC is hereby added to read as follows:

R109.5 Re-inspections. A re-inspection fee in the amount set by the City Council resolution may be assessed for each inspection or re-inspection when such portion of work for which inspection is called is incomplete or when required corrections called are not made. This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or re-inspection. Re-inspection fees may be assessed when the inspection record card is not posted or otherwise available on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the Building Official. In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until required fees have been paid.

Section R301.1.3.2 of Chapter 3 of the 2019 CRC is amended to read as follows:

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

Section R301.1.4 is added to Chapters of the CRC to read as follows:

R301.1.4 Seismic design provisions for buildings constructed on or into slopes steeper than one unit vertical in three units horizontal (33.3% slope). The design and construction of new buildings and additions to existing buildings when constructed on or into slopes steeper than one unit vertical in three units horizontal (33.3% slope) shall comply with Section 1613.6 of the California Building Code.

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

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

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

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

Section R301.2.2.11 is added to Chapter 3 of the CRC to read as follows.

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

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

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

Section R401.1 of the CRC is amended to read as follows:

R401.1 Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for buildings. In addition to the provisions of this chapter, the design and construction of foundations in flood hazard areas as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AWC PWF.

Exception: The provisions of this chapter shall be permitted to be used for wood foundations only in the following situations:

1. In buildings that have no more than two floors and a roof.

2. When interior basement and foundation walls are constructed at intervals not exceeding 50 feet (15 240 mm).

Wood foundations in Seismic Design Category D_0, D_1, or D_3 shall not be permitted.

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

Section R401.5 of the 2019 CRC, is hereby added to read as follows:

R401.5 Grading. Grading requirements shall be in compliance with Appendix J of the Amended CBC of this code.

Sections R403.1.2, R403.1.3.6 and R403.1.5 of the CRC are amended to read as follows:

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

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

R403.1.5 Slope. The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in 10 units horizontal (10% slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in ten (10) units horizontal (10% slope).

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

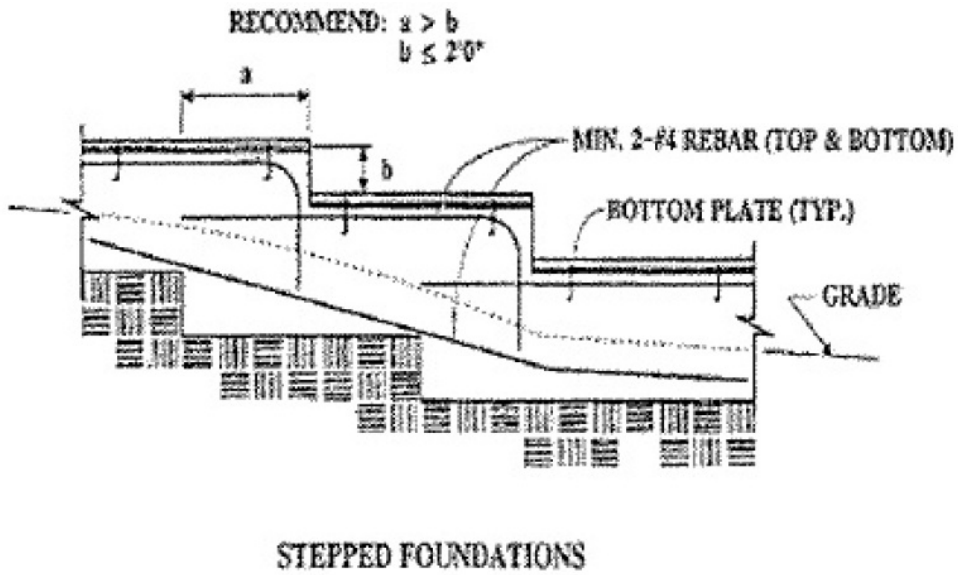


FIGURE R403.1.5 - STEPPED FOOTING

Section R404.2 of the CRC is amended to read as follows.

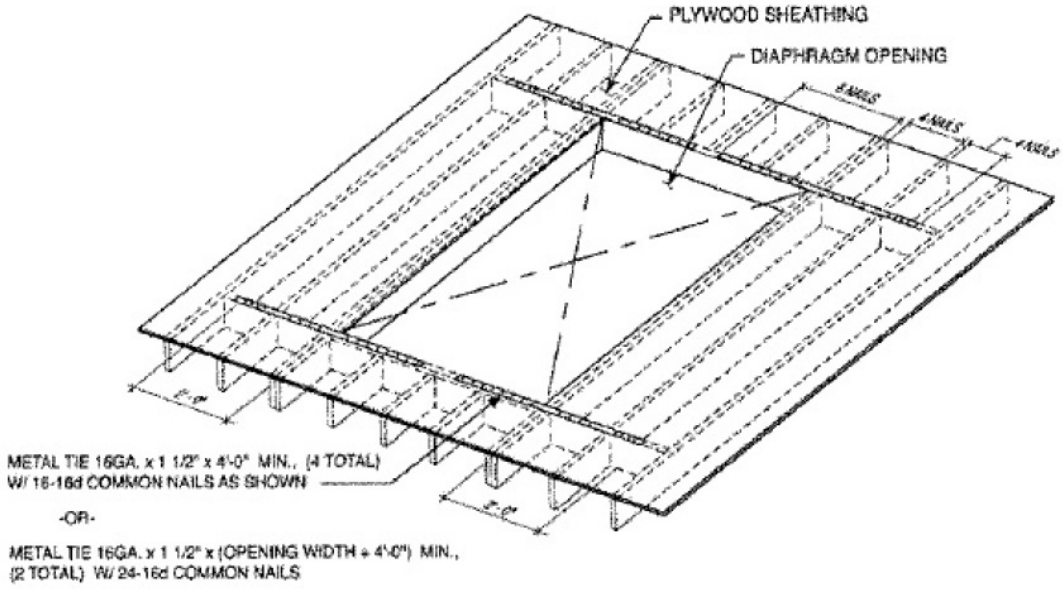
R404.2 Wood foundation walls. Wood foundation walls shall be constructed in accordance with the provisions of Sections R404.2.1 through R404.2.6 and with the details shown in Figures R403.1(2) and R403.1(3). Wood foundation walls shall not be used for structures located in Seismic Design Category D_0,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

Section R501.1 of the CRC is amended to read as follows:

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

Section R503.2.4 is added to Chapter 5 of the CRC to read as follows:

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



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

a. Blockings shall be provided beyond headers.
b. Metal ties not less than 0.058 inch [1.47 mm (16 galvanized gage)] by 1.5 inches (38 mm) wide with eight 16d common nails on each side of the header-joist intersection. The metal ties shall have a minimum yield of 33,000 psi (227 MPa).
c. Openings in diaphragms shall be further limited in accordance with Section R301.2.2.2.6.

FIGURE R503.2.4 - OPENINGS IN HORIZONTAL DIAPHRAGMS

Lines 19, 20, 23, and 33 - 36 of Table R602.3(1) of the 2019 CRC are amended to read as follows:

TABLE R602.3(1) - continued FASTENING SCHEDULE

ITEM	*DESCRIPTION OF BUILDING ELEMENTS*	NUMBER AND TYPE OF FASTENER[a, b, c]	*SPACING AND LOCATION*	
ITEM	*DESCRIPTION OF BUILDING ELEMENTS*	NUMBER AND TYPE OF FASTENER[a, b, c]	*SPACING AND LOCATION*	
19[k]	1" x 6" sheathing to each bearing	3-8d box (2½" x 0.113"); or 2- 8d common (2½" x 0.131"); or 2-10d box (3" x 0.128"; or 2 staples, 1" crown, 16 ga., 1¾" long	Face nail	
20[k]	1" x 8" and wider sheathing to each bearing	3-8d box (2½" x 0.113"); or 3- 8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"; or 3 staples, 1" crown, 16 ga., 1¾" long	Face nail	
		Wider than 1" x 8" 4-8d box (2½" x 0.131"); or 3- 10d box (3" x 0.128"); or 4 staples, 1" crown, 16 ga., 1¾" long		
Floor				
23[k]	1" x 6" subfloor or less to each joist	3-8d box (2½" x 0.113"); or 2- 8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"; or 2 staples, 1" crown, 16 ga., 1¾" long	Face nail	
Other wall sheathing				
33[k]	½" structural cellulosic fiberboard sheathing	1½" galvanized roofing nail, 7/16" head diameter, or 1¼" long 16 ga. staple with 7/16" or 1" crown	3	6
34[k]	25/32" structural cellulosic fiberboard sheathing	1¾" galvanized roofing nail, 7/16" head diameter, or 1½" long 16 ga. staple with 7/16" or 1" crown	3	6

35[k]	½" gypsum sheathing[d]	1½" galvanized roofing nail; staple galvanize, 1½" long; 1¼" screws, Type W or S	7	7
36[k]	" gypsum sheathing[d]	1¾" galvanized roofing nail; staple galvanize, 1" long; 1" screws, Type W or S	7	7

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

TABLE R602.3(1)- FASTENING SCHEDULE

a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 8O ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or greater but less than 140 mph.

g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.

h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

j. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

k. Use of staples in braced wall panels shall be prohibited in Seismic Design Category D $_0$, D_1, or D_2.

Exception of Section R602.3.2 and Table R602.3.2 of the 2019 Edition of the CRC is amended to read as follows:

Table R602.3.2

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

1. The single top plate shall be tied at corners, intersecting walls, and at in-line splices in straight wall lines in accordance with Table R602.3.2.
2. The rafters or joists shall be centered over the studs with a tolerance of not more than 1 inch (25 mm).
3. Omission of the top plate is permitted over headers where the headers are adequately tied to adjacent wall sections in accordance with Table R602.3.2.

TABLE R602.3.2
SINGLE TOP-PLATE SPLICE CONNECTION DETAILS

CONDITION	TOP-PLATE SPLICE LOCATION			
	Corners and intersecting walls		Butt joints in straight walls	
	Splice plate size	Minimum nails each side of joint	Splice plate size	Minimum nails each side of joint
Structures in SDC A-C: ~~and in SDC D_0, D_1 and D_2 with braced wall line spacing less than 25 feet~~	3" × 6" × 0.036" galvanized steel plate or equivalent	(6) 8d box ($2\frac{1}{2}$" × 0.113") nails	3" × 12" × 0.036" galvanized steel plate or equivalent	(12) 8d box ($2\frac{1}{2}$" × 0.113") nails
~~Structures in SDC D_0, D_1 and D_2, with braced wall line spacing greater than or equal to 25 feet~~	~~3" × 8" by 0.036" galvanized steel plate or equivalent~~	~~(9) 8d box ($2\frac{1}{2}$" × 0.113") nails~~	~~3" × 16" × 0.036" galvanized steel plate or equivalent~~	~~(18) 8d box ($2\frac{1}{2}$" × 0.113") nails~~

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

Footnote "b" of Table R602.3(2) of the CRC is amended to read as follows:

Table R602.3(2)

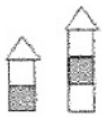
b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted. Use of staples in roof, floor, subfloor, and braced wall panels shall be prohibited in Seismic Design Category D_0, D_1, or D_2.

Section R602.10.2.3 of the 2019 CRC is amended to read as follows:

R602.10.2.3 Minimum number of braced wall panels. Braced wall lines with a length of 16 feet (4877 mm) or less shall have a minimum of two braced wall panels of any length or one braced wall panel equal to 48 inches (1219 mm) or more. Braced wall lines greater than 16 feet (4877 mm) shall have a minimum of two braced wall panels. No braced wall panel shall be less than 48 inches in length in Seismic Design Category D_0, D_1, or D_2.

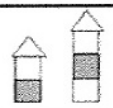
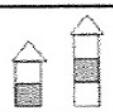
Table R602.10.3(3) of the CRC is amended to read as follows:

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

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

(continued)

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

• SOIL CLASS D[a] • WALL HEIGHT = 10 FEET • 10 PSF FLOOR DEAD LOAD • 15 PSF ROOF/CEILING DEAD LOAD • BRACED WALL LINE SPACING ≤ 25 FEET			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE[b,c]				
Seismic Design Category	Story Location	Braced Wall Line Length (feet)[a]	Method LIB[d]	Method GB[g]	Methods DWB, SFB, PBS, PCP, HPS, CS-SFB[e,g]	Method WSP	Methods CS-WSP, CS-G, CS-PF
D_0		10	NP	~~3.0~~ 6.0	~~3.0~~ 6.0	2.0	1.7
		20	NP	~~6.0~~ 12.0	~~6.0~~ 12.0	4.0	3.4
		30	NP	~~9.0~~ 18.0	~~9.0~~ 18.0	6.0	5.1
		40	NP	~~12.0~~ 24.0	~~12.0~~ 24.0	8.0	6.8
		50	NP	~~15.0~~ 30.0	~~15.0~~ 30.0	10.0	8.5
		10	NP	~~6.0~~ NP	~~6.0~~ NP	4.5	3.8
		20	NP	~~12.0~~ NP	~~12.0~~ NP	9.0	7.7
		30	NP	~~18.0~~ NP	~~18.0~~ NP	13.5	11.5
		40	NP	~~24.0~~ NP	~~24.0~~ NP	18.0	15.3
		50	NP	~~30.0~~ NP	~~30.0~~ NP	22.5	19.1
		10	NP	~~8.5~~ NP	~~8.5~~ NP	6.0	5.1
		20	NP	~~17.0~~ NP	~~17.0~~ NP	12.0	10.2
		30	NP	~~25.5~~ NP	~~25.5~~ NP	18.0	15.3
		40	NP	~~34.0~~ NP	~~34.0~~ NP	24.0	20.4
		50	NP	~~42.5~~ NP	~~42.5~~ NP	30.0	25.5
D_1		10	NP	~~4.0~~ 8.0	~~4.0~~ 8.0	2.5	2.1
		20	NP	~~8.0~~ 16.0	~~8.0~~ 16.0	5.0	4.3
		30	NP	~~12.0~~ 24.0	~~12.0~~ 24.0	7.5	6.4
		40	NP	~~16.0~~ 32.0	~~16.0~~ 32.0	10.0	8.5
		50	NP	~~20.0~~ 40.0	~~20.0~~ 40.0	12.5	10.6
		10	NP	~~7.5~~ NP	~~7.5~~ NP	5.5	4.7
		20	NP	~~15.0~~ NP	~~15.0~~ NP	11.0	9.4
		30	NP	~~22.5~~ NP	~~22.5~~ NP	16.5	14.0
		40	NP	~~30.0~~ NP	~~30.0~~ NP	22.0	18.7
		50	NP	~~37.5~~ NP	~~37.5~~ NP	27.5	23.4
		10	NP	NP	NP	NP	NP
		20	NP	NP	NP	NP	NP
		30	NP	NP	NP	NP	NP
		40	NP	NP	NP	NP	NP
		50	NP	NP	NP	NP	NP
	Cripple wall below one- or two-story dwelling	10	NP	NP	NP	7.5	6.4
		20	NP	NP	NP	15.0	12.8
		30	NP	NP	NP	22.5	19.1
		40	NP	NP	NP	30.0	25.5
		50	NP	NP	NP	37.5	31.9

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

a. Linear interpolation shall be permitted.
b. Wall bracing lengths are based on a soil site class "D." Interpolation of bracing length between the S_{DS} values associated with the seismic design categories shall be permitted when a site-specific S_{DS} value is determined in accordance with Section 1613.2 of the *California Building Code*.
c. Where the braced wall line length is greater than 50 feet, braced wall lines shall be permitted to be divided into shorter segments having lengths of 50 feet or less, and the amount of bracing within each segment shall be in accordance with this table.
d. Method LIB shall have gypsum board fastened to not less than one side with nails or screws in accordance with Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches.
e. Methods PFG and CS-SFB do not apply in Seismic Design Categories D_0, D_1 and D_2.
f. Where more than one bracing method is used, mixing methods shall be in accordance with Section R602.10.4.1.
g. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D_0, D_1 and D_2. Methods DWB, SFB, PBS, and HPS are not permitted in D_0, D_1 and D_2.

Table R602.10.4 of the CRC is amended to read as follows:

TABLE R602.10.4
BRACING METHODS [1]

METHODS, MATERIAL		MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA[a]	
				Fasteners	Spacing
Intermittent Bracing Methods	**LIB** Let-in-bracing	1 × 4 wood or approved metal straps at 45° to 60° angles for maximum 16" stud spacing		Wood: 2-8d common nails or 3-8d (2½" long x 0.113" dia.) nails	Wood: per stud and top and bottom plates
				Metal strap: per manufacturer	Metal: per manufacturer
	DWB Diagonal wood boards	¾" (1" nominal) for maximum 24" stud spacing		2-8d (2½" long × 0.113" dia.) nails or 2 - 1¾" long staples	Per stud
	WSP Wood structural panel (See Section R604)	~~7/16"~~ 15/32"	8d common (2 1/2" x0.131) nails 3/8" edge distance to panel edge	~~Exterior sheathing per Table R602.3(3)~~	6" edges 12" field
			8d common (2 1/2"x0.131) nails 3/8" edge distance to panel edge	~~Interior sheathing per Table R602.3(1) or R602.3(2)~~	~~Varies by fastener~~ 6" edges 12" field
	BV-WSP[c] Wood structural panels with stone or masonry veneer (See Section R602.10.6.5)	7/16"	See Figure R602.10.6.5	8d common (2½" × 0.131) nails	4" at panel edges 12" at intermediate supports 4" at braced wall panel end posts
	SFB Structural fiberboard sheathing	½" or 25/32" for maximum 16" stud spacing		1½" long × 0.12" dia. (for ½" thick sheathing) 1¾" long × 0.12" dia. (for 25/32" thick sheathing) galvanized roofing nails	3" edges 6" field
	GB Gypsum board	½"		Nails or screws per Table R602.3(1) for exterior locations	For all braced wall panel locations: 7" edges (including top and bottom plates) 7" field
				Nails or screws per Table R702.3.5 for interior locations	
	PBS Particleboard sheathing (See Section R605)	⅜" or ½" for maximum 16" stud spacing		For ⅜", 6d common (2" long × 0.113" dia.) nails For ½", 8d common (2½" long × 0.131" dia.) nails	3" edges 6" field
	PCP Portland cement plaster	See Section R703.7 for maximum 16" stud spacing		1½" long, 11 gage, ⅞" dia. head nails or ⅞" long, 16 gage staples[g]	6" o.c. on all framing members
	HPS Hardboard panel siding	7/16" for maximum 16" stud spacing		0.092" dia., 0.225" dia. head nails with length to accommodate 1½" penetration into studs	4" edges 8" field
	ABW Alternate braced wall	¾"		See Section R602.10.6.1	See Section R602.10.6.1

(continued)

TABLE R602.10.4—continued
BRACING METHODS [f]

	METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA[a]	
				Fasteners	Spacing
Intermittent Bracing Methods	**PFH** Portal frame with hold-downs	7/16"		See Section R602.10.6.2	See Section R602.10.6.2
	PFG Portal frame at garage	7/16"		See Section R602.10.6.3	See Section R602.10.6.3
Continuous Sheathing Methods	**CS-WSP** Continuously sheathed wood structural panel	7/16" 15/32"	8d common (2 1/2"x0.131) nails 3/8" edge distance to panel edge	~~Exterior sheathing per Table R602.3(3)~~	6" edges 12" field
			8d common (2 1/2"x0.131) nails 3/8" edge distance to panel edge	~~Interior sheathing per Table R602.3(1) or R602.3(2)~~	~~Varies by fastener~~ 6" edges 12" field
	CS-G[b,c] Continuously sheathed wood structural panel adjacent to garage openings	7/16" 15/32"		See Method CS-WSP	See Method CS-WSP
	CS-PF Continuously sheathed portal frame	7/16" 15/32"		See Section R602.10.6.4	See Section R602.10.6.4
	CS-SFB[d, f] Continuously sheathed structural fiberboard	1/2" or 15/32" for maximum 16" stud spacing		1 3/4" long x 0.12" dia. (for 1/2" thick sheathing) 1 3/4" long x 0.12" dia. (for 25/32" thick sheathing) galvanized roofing nails	3" edges 6" field

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.0175 rad, 1 pound per square foot = 47.8 N/m^2, 1 mile per hour = 0.447 m/s.

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

Table R602.10.5 of the CRC is amended to read as follows:

Table R602.10.5 - MINIMUM LENGTH OF BRACED WALL PANELS

METHOD (See Table R602.10.4)		MINIMUM LENGTH[a] (inches) Wall Height 8 feet	9 feet	10 feet	11 feet	12 feet	CONTRIBUTING LENGTH (inches)
DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP		48	48	48	53	58	Actual[b]
GB		48	48	48	53	58	Double sided = Actual Single sided = 0.5 × Actual
LIB		55	62	69	NP	NP	Actual[b]
ABW	SDC A, B and C, ultimate design wind speed < 140 mph	28	32	34	38	42	48
	SDC D_0, D_1 and D_2, ultimate design wind speed < 140 mph	32	32	34	NP	NP	
CS-G		24	27	30	33	36	Actual[b]
CS-WSP, CS-SFB	Adjacent clear opening height (inches)						
	≤ 64	24	27	30	33	36	Actual[b]
	68	26	27	30	33	36	
	72	27	27	30	33	36	
	76	30	29	30	33	36	
	80	32	30	30	33	36	
	84	35	32	32	33	36	
	88	38	35	33	33	36	
	92	43	37	35	35	36	
	96	48	41	38	36	36	
	100	—	44	40	38	38	
	104	—	49	43	40	39	
	108	—	54	46	43	41	
	112	—	—	50	45	43	
	116	—	—	55	48	45	
	120	—	—	60	52	48	
	124	—	—	—	56	51	
	128	—	—	—	61	54	
	132	—	—	—	66	58	
	136	—	—	—	—	62	
	140	—	—	—	—	66	
	144	—	—	—	—	72	
METHOD (See Table R602.10.4)		Portal header height 8 feet	9 feet	10 feet	11 feet	12 feet	
PFH	Supporting roof only	~~16~~ 24	~~16~~ 24	~~16~~ 24	Note c	Note c	48
	Supporting one story and roof	24	24	24	Note c	Note c	
PFG		24	27	30	Note d	Note d	1.5 × Actual[b]
CS-PF	SDC A, B and C	16	18	20	Note e	Note e	1.5 × Actual[b]
	SDC D_0, D_1 and D_2	~~16~~ 24	~~18~~ 24	~~20~~ 24	Note e	Note e	Actual[b]

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

NP = Not Permitted.

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

Figure R602.10.6.1 of the CRC is amended to read as follows:

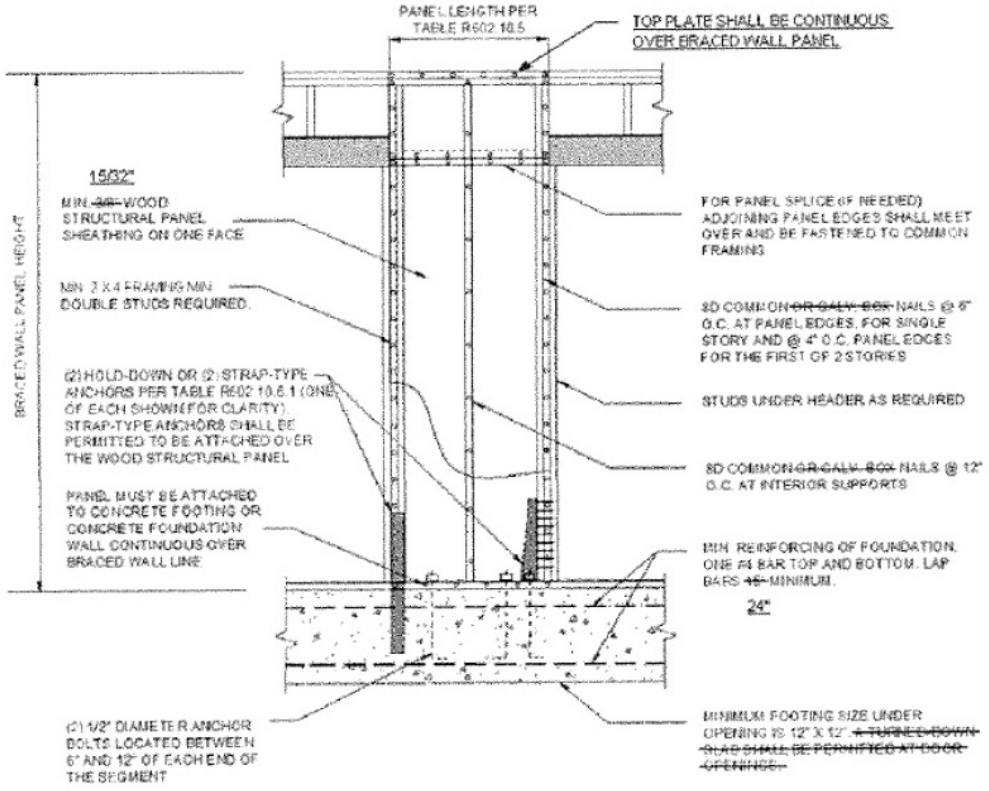
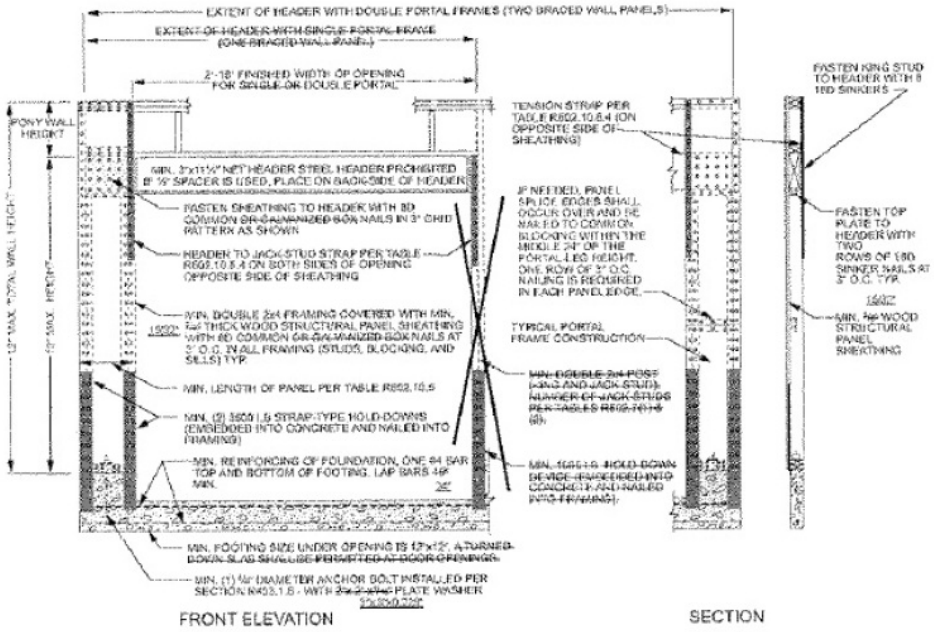


FIGURE R602.10.6.1
METHOD ABW—ALTERNATE BRACED WALL PANEL

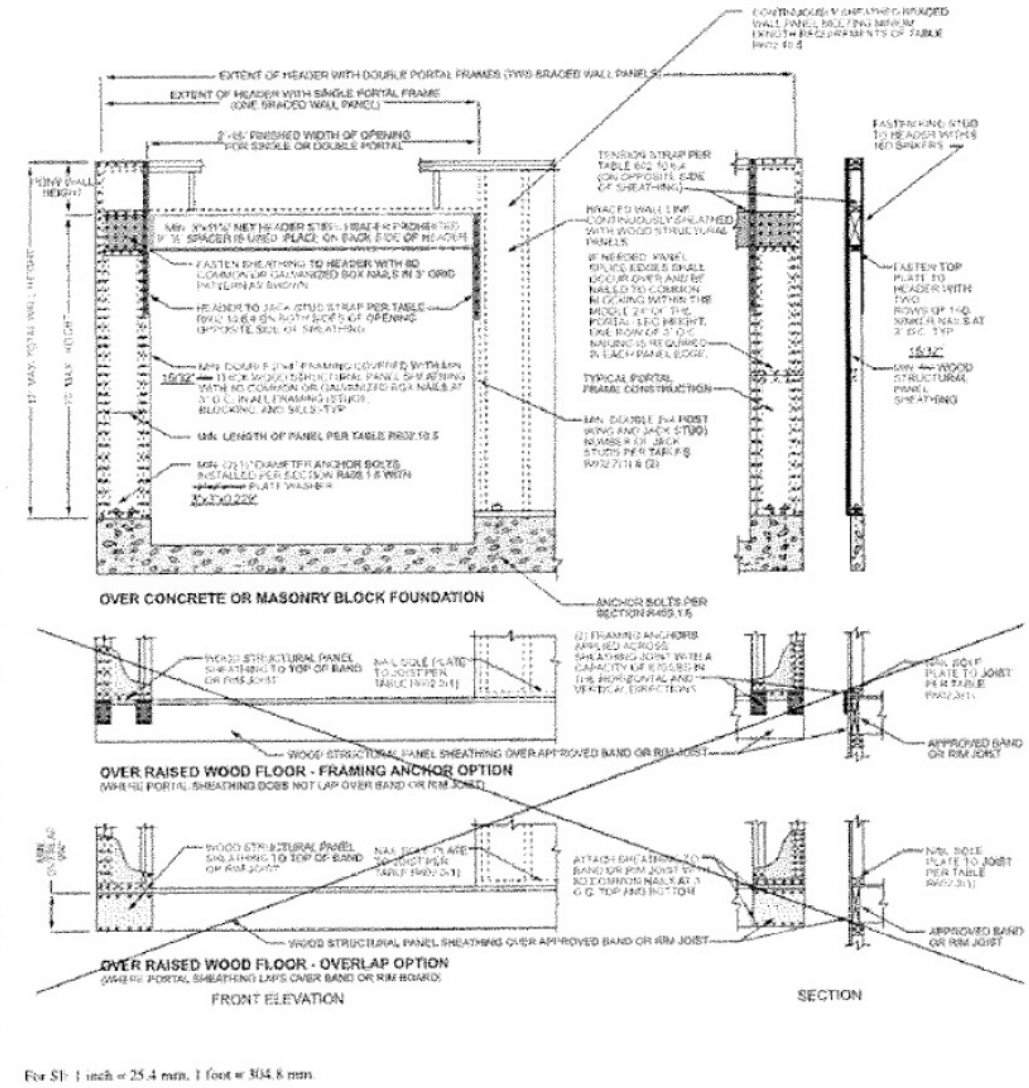
Figure R602.10.6.2 of the CRC is amended to read as follows:



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

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

Figure R602.10.6.4 of the CRC is amended to read as follows:



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

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

Section R606.4.4 of the CRC is amended to read as follows:

R606.4.4 Parapet walls. Unreinforced solid masonry parapet walls shall not be less than eight (8) inches (203 mm) thick and their height shall not exceed four times their thickness. Unreinforced hollow unit masonry parapet walls shall be not less than eight (8) inches (203 mm) thick, and their height shall not exceed three times their thickness. Masonry parapet walls in areas subject to wind loads of 30 pounds per square foot (1.44 kPa) or located in Seismic Design Category D_0, D_1 or D_2, or on townhouses in Seismic Design Category C shall be reinforced in accordance with Section R606.12.

Section R606.12.2.2.3 of the CRC is amended to read as follows:

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

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

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

Section R803.2.4 is added to Chapter 8 of the CRC to read as follows:

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

Section R905.3.1 of the 2019 Edition of the CRC is amended to read as follows:

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

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

Section R1001.3.1 of the CRC is amended to read as follows:

R1001.3.1 Vertical reinforcing. For chimneys up to 40 inches (1016 mm) wide, four No. 4 continuous vertical bars adequately anchored into the concrete foundation shall be placed between wythes of solid masonry or within the cells of hollow unit masonry and grouted in accordance with Section R606. Grout shall be prevented from bonding with the flue liner so that the flue liner is free to move with thermal expansion. For chimneys more than 40 inches (1016 mm) wide, two additional No. 4 vertical bars adequately anchored into the concrete foundation shall be provided for each additional flue incorporated into the chimney or for each additional 40 inches (1016 mm) in width or fraction thereof,

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 5)

§ 15.02.120 CALIFORNIA ELECTRICAL CODE ADOPTED BY REFERENCE.

Pursuant to Cal. Goverment Code §§ 50022.1 to 50022.8, the California Electrical Code, 2019 Edition, published at Title 24, Part 3, of the California Code of Regulations, including Annexes A thru J ("CEC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CEC is on file in the office of the Building Official and is available for public inspection as required by law.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 6)

§ 15.02.125 CALIFORNIA MECHANICAL CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Mechanical Code, 2019 Edition. Pursuant to Cal. Government Code §§ 50022.1 to 50022.8, the California Mechanical Code, 2019 Edition, published at Title 24, Part 4, of the California Code of Regulations, including Appendices A through G ("CMC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CMC, is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the Code.

Section 104.0 of the CMC is hereby amended as follows:

CMC Section 104.0 Permits is deleted in its entirety. The 2019 California Building Code, as incorporated into the Culver City Municipal Code, will govern the administration of the CMC.

Section 104.5 of the CMC is hereby amended as follows:

CMC Section 104.5 Fees is deleted in its entirety. The 2019 California Building Code, as incorporated into the Culver City Municipal Code, will govern the administration of the CMC.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 7)

§ 15.02.130 CALIFORNIA PLUMBING CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Plumbing Code, 2019 Edition.

Pursuant to California Government Code §§ 50022.1 to 50022.8, the California Plumbing Code, 2019 Edition, published at Title 24, Part 5, of the California Code of Regulations, including Appendices A, B, D, I, and L ("CPC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CPC is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the Code.

CPC Section 104.4.3 (Expiration) and Section 104.4.4 (Extensions) are deleted in its entirety. The 2019 California Building Code, as incorporated into the Culver City Municipal Code, will govern the administration of the CPC.

CPC Section 1208.13.1 Seismic Gas Shutoff Valves is added to the 2019 CPC to read as follows:

1208.13.1 Seismic Gas Shutoff Valves.

1208.13.1.1 Scope. A seismic gas shutoff valve shall be installed in compliance with the requirements of this section on each gas fuel line in the following:

1208.13.1.1.1 Any building or structure for which a building permit was first issued on or after January 9, 2020.

1208.13.1.1.2 Any building or structure which is altered or expanded under a building permit first issued on or after January 9, 2020, when such alteration or addition is valued at more than $10,000.

1208.13.1.1.3 Any building or structure sold on or after January 9, 2020. However, when an individual condominium unit is sold in a building that has multiple gas lines, then the requirements of this section shall apply only to the line or lines serving the condominium unit that has been sold.

1208.13.1.2 Maintenance. Where the installation of a seismic gas shutoff valve is required by this section in any building or structure, that seismic gas shutoff valve shall be maintained for the life of that building or structure or shall be replaced with a valve complying with the requirements of this section.

1208.13.1.2 General Requirements. Where the installation of a seismic gas shutoff valve on a fuel line is required by this section, that valve must:

1208.13.1.3.1 Be mounted rigidly to the exterior of the building or structure containing the fuel line unless the Building Official determines that the seismic gas shutoff valve has been tested and listed for an alternate method of installation.

1208.13.1.3.2 Be installed downstream of the gas utility meter, except that a valve may be installed upstream of the gas utility meter at the discretion of the gas utility if the valve would otherwise meet the requirements of this section.

1208.13.1.3.3 Be listed by an approved testing laboratory and certified by the Office of the State Architect.

1208.13.1.3.4 Have a thirty-year warranty which warrants that the valve is free from defects and will continue to properly operate for thirty (30) years from the date of operation.

1208.13.1.4 Critical Facilities. The requirements of this section shall not apply to any building that is used by any public agency for the provision of emergency services, including fire, police, and similar public safety services.

1208.13.1.5 Definitions. For purposes of this section, certain terms shall be defined as follows:

1208.13.1.5.1 ***DOWNSTREAM OF THE GAS UTILITY METER.*** Shall refer to all customer owned gas piping.

1208.13.1.5.2 ***SEISMIC GAS SHUTOFF VALVE.*** A system consisting of a seismic sensing means and actuating means designed to automatically actuate a companion gas shutoff means installed in a gas piping system in order to shut off the gas downstream of the location of the gas shutoff means in the event of a severe seismic disturbance. The system may consist of separable components or may incorporate all functions in a single body. The terms "seismically activated gas shutoff valves" and "earthquake sensitive gas shutoff valves," are synonymous.

1208.13.1.5.3 ***UPSTREAM OF THE GAS UTILITY METER.*** Shall refer to all gas piping installed by the utility up to and including the meter and the utility's bypass toe at the connection to the customer owned piping.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 8)

§ 15.02.135 CALIFORNIA ENERGY CODE ADOPTED BY REFERENCE.

Pursuant to Cal. Government Code §§ 50022.1 to 50022.8, the California Energy Code ("CEC"), 2019 Edition, published at Title 24, Part 6, of the California Code of Regulations. One true copy of the CEC, is on file in the office of the Building Official and is available for public inspection as required by law.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 9)

§ 15.02.140 CALIFORNIA HISTORICAL BUILDING CODE ADOPTED BY REFERENCE.

Pursuant to Cal. Government Code §§ 50022.1 to 50022.8, the California Historical Building Code ("CHBC"), 2019 Edition, published at Title 24, Part 8, of the California Code of Regulations. One true copy of the HBC, is on file in the office of the Building Official and is available for public inspection as required by law.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 10)

§ 15.02.145 CALIFORNIA EXISTING BUILDING CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Existing Building Code, 2019 Edition.

Pursuant to California Government Code §§ 50022.1 to 50022.8, the California Existing Building Code ("CEBC"), 2019 Edition, published at Title 24, Part 10, of the California Code of Regulations, is adopted by reference, subject to the amendments, additions and deletions set forth below.

Appendix A (Guidelines for Seismic Retrofit of Existing Buildings) with Chapters A1, A2, A3, A4 is also adopted as Voluntary Earthquake Hazard Reduction Measures in Existing Buildings (Voluntary Seismic Retrofit). One true copy of the CEBC, is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the Code.

RESERVED for Mandatory Reduction in Wood frame Residential Buildings with Soft, Weak or Open Front Walls (SWOF).

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 11)

§ 15.02.150 CALIFORNIA GREEN BUILDING STANDARDS CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of California Green Building Standards Code, 2019 Edition.

Pursuant to Cal. Government Code §§ 50022.1 to 50022.8, the California Green Building Standards Code, 2019 Edition, published at Title 24, Part 11, of the California Code of Regulations ("CGBSC") is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the CGBSC, is on file in the office of the Building Official and is available for public inspection as required by law.

Section 4.106.4.2 of the 2019 Edition of the California Green Building Standards Code is amended to read as follows:

4.106.4.2 New multifamily dwellings. If residential parking is available, 25% of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE and five% of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging stations (EVCS). Calculations for the required number of EV spaces and EVCS shall be rounded up to the nearest whole number.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

Section 4.106.4.3, Section 4.106.4.3.1 and Table 4.106.4.3.1 of the 2019 Edition of the California Green Building Standards Code are amended to read as follows:

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE and EVCS. The construction documents shall identify the location of the EV spaces and EVCS.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

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

TABLE 4.106.4.3.1

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

Section 5,106.5.3.3 and Table 5.106.5.3.3 of the 2019 Edition of the California Green Building Standards Code are amended to read as follows:

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

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

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

TABLE 5.106.5.3.3

TOTAL NUMBER OF ACTUAL PARKING SPACES	***NUMBER OF REQUIRED EV CHARGING SPACES***	***NUMBER OF REQUIRED EVCS***

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

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 12)

The 2019 Edition of the California Reference Standards Code, published by the International Code Council, and all appendices, amendments, supplements and errata thereto, is hereby adopted by reference and shall be applicable to the City of Culver City, and referred to as the "Reference Standards Code of the City of Culver City." One copy of the Reference Standards Code of the City of Culver City shall be kept on file in the Building Official's office for public inspection.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 13)

§ 15.02.155 CALIFORNIA REFERENCE STANDARDS CODE ADOPTED BY REFERENCE.

The 2019 Edition of the California Reference Standards Code, published by the International Code Council, and all appendices, amendments, supplements and errata thereto, is hereby adopted by reference and shall be applicable to the City of Culver City, and referred to as the "Reference Standards Code of the City of Culver City." One copy of the Reference Standards Code of the City of Culver City shall be kept on file in the Building Official's office for public inspection.

(Ord. No. 2016-012 § 2 (part); Ord. No. 2019-015 § 13)

§ 15.02.160 INTERNATIONAL PROPERTY MAINTENANCE CODE ADOPTED BY REFERENCE WITH LOCAL AMENDMENTS.

A. Adoption of International Property Maintenance Code, 2018 Edition.

Pursuant to California Government Code §§ 50022.1 to 50022.8, the International Property Maintenance Code ("IPMC"), 2018 Edition, promulgated and published by the International Code Council, including Appendix A, is adopted by reference, subject to the amendments, additions and deletions set forth below. One true copy of the IPMC, is on file in the office of the Building Official and is available for public inspection as required by law.

B. Amendments to the Code.

Section [A] 111.2 of the IPMC is hereby amended as follows:

IPMC Section [A] 111.2 Membership of board, is deleted in its entirety. The 2019 California Building Code, as incorporated into the Culver City Municipal Code, will govern the administration of the IPMC.

Sections [AJ111.2.1 through [A]111.8 of the IPMC are hereby deleted.

(Ord. No. 2019-015 § 14)

LOCAL AMENDMENTS TO THE GREEN BUILDING STANDARDS CODE,

BUILDING CODE AND RESIDENTIAL BUILDING CODE, TO ESTABLISH REACH CODES STANDARDS

§ 15.02.1100 ESTABLISHMENT AND PURPOSE OF REACH CODE STANDARDS.

The city has established Reach Code standards, which shall be administered by the Building Safety Division pursuant to the provisions of this subchapter. The purpose of the Reach Code is to reduce the use of natural resources, create healthier living environments, and minimize the negative impacts of development on local, regional and global ecosystems. The city's Reach Code standards shall be in addition to all current State of California Title 24 Energy Code requirements.

(Ord. No. 2009-004 § 1 (part); Ord. No. 2019-015 § 15 (part))

§ 15.02.1105 DEFINITIONS.

Terms defined herein shall have the following meanings when used in this Subchapter:

APPLICANT. Any individual, firm, limited liability company, association, partnership, political subdivision, government agency, municipality, industry or public or private corporation, or any other entity whatsoever that applies to the City for the applicable permits to undertake a qualifying project.

BUILDING OFFICIAL. The Building Official of the City of Culver City or his or her designee.

BUILDING SAFETY DIVISION. The City's Building Safety Division and its staff.

CALGREEN. The California Green Building Standards Code (Title 24, Part 11, California Code of Regulations).

CATEGORY 1 QUALIFYING PROJECT. The construction of a new low-rise residential building.

CATEGORY 2 QUALIFYING PROJECT. The addition to, or alteration of, an existing low-rise residential building wherein the construction valuation of the proposed work exceeds 50% of the replacement value of the existing building, as determined by the Building Official.

CATEGORY 3 QUALIFYING PROJECT. The construction of a new non-residential building or a new high-rise building.

CATEGORY 4 QUALIFYING PROJECT. The addition to, or alteration of, an existing non- residential building or an existing high-rise building wherein either of the following conditions applies:

(1) The construction valuation of the proposed work exceeds 50% of the replacement value of the existing building, as determined by the Building Official; or

(2) The combined area of all alterations to the existing building exceeds 50,000 square feet.

CCMC. The Culver City Municipal Code.

CITY. The City of Culver City.

DIRECTOR. The Community Development Director of the City of Culver City or his or her designee.

PROJECT. The qualifying project that is the subject of the permit application.

Construction projects that meet the definition of a Category 1 Qualifying Project, Category 2 Qualifying Project, Category 3 Qualifying Project or Category 4 Qualifying Project, shall comply with the provisions of Section 15.02.1120 through Section 15.02.1180, as applicable, and the provisions of the California Energy Code and CALGreen.

(Ord. No. 2009-004 § 1 (part); Ord. No. 2019-015 § 15 (part))

§ 15.02.1110 REQUIREMENTS.

A. *Category 1 qualifying projects.* All new buildings of forty-nine thousand nine hundred ninety-nine (49,999) square feet or less of gross floor area, and major renovations to existing buildings of forty-nine thousand nine hundred ninety-nine (49,999) square feet or less of gross floor area, shall comply with eighty percent (80%) of all items applicable to the specific project. Items applicable to the specific project shall be selected from the list of twenty-five (25) items set forth below. Applicability of items shall be determined by the Building Official. Items numbered 5 and 7, below, cannot both be used on the same project for purposes of satisfying the requirements of this Section.

1. Heating, ventilating and air conditioning (HVAC) units shall have a minimum seasonal energy efficiency rating (SEER) of 17;

2. Gas heating units shall be a minimum of ninety-three percent (93%) energy efficient;

3. All heating and cooling ducts shall be located within the space to be heated and cooled;

4. Roof and floor structures abutting an exterior space shall be a minimum value of R-38 (thermal resistance value); and all exterior walls shall be a minimum value of R-28;

5. Radiant barriers shall be installed under all new roof sheathing;

6. All new exterior glass shall be a minimum value of U.35 (measure of heat conducting properties) and a minimum value of .30 SHGC (solar heat gain coefficient);

7. Low slope roofs shall be a minimum value of seventy-five percent (75%) SRI (solar reflectance index);

8. Exterior shading shall be provided over all west, south and east facing exterior glass. Where exterior shading is infeasible, all new exterior glass shall be a minimum value of U.32 and a minimum value of .27 SHGC;

9. All new interior and exterior lighting shall be fluorescent, LED or other type of high efficiency lighting;

10. All new lighting installed in restroom or bathroom areas shall be fluorescent, LED or other type of high efficiency lighting, and shall be motion-sensor controlled. All new exhaust fans installed in restroom or bathroom areas shall be motion-sensor controlled;

11. All new lighting installed in any corridor, entryway or other typically unoccupied space shall be fluorescent, LED or other type of high efficiency lighting, and shall be motion-sensor controlled. Minimum base level lighting shall be permitted;

12. All new lighting installed in a garage or parking structure shall be motion-sensor controlled. Minimum base level fighting shall be permitted;

13. Water closets shall be dual flush models;

14. Urinals shall be waterless models;

15. Water heaters installed for the heating of water in residential units shall be tankless models;

16. Two (2) two-inch (2") electrical conduits shall be installed from the roof to the electrical panels for future solar photovoltaic installation for each unit in residential and commercial buildings. (Qualifying projects that are subject to the provisions of CCMC § 15.02.1005 may not use this item toward satisfying the requirements of this Section.);

17. A twenty (20) square feet area to house recyclable material containers shall be provided. This requirement shall be in addition to any other CCMC requirements related to solid waste and recyclable material containers;

18. Multistory buildings shall provide separate trash chutes for recyclable and non-recyclable materials and waste. Such chutes shall discharge directly into separate recyclable and non-recyclable materials and waste containers. This requirement shall be in addition to any other CCMC requirements related to trash chutes;

19. One (1) duplex, weatherproof (WP) ground fault circuit interrupter (GFCI) outlet shall be installed for every eight (8) parking spaces to be utilized for future electric “plug-in” vehicles.

20. All doors leading from heated or cooled spaces to non-heated and non-cooled spaces shall be insulated doors and shall include weather-stripping and adequate closers.

21. Any new on-site, ground-level paving, which is open to the sky, shall be permeable.

22. All on-site landscaping shall be low-water, drought-tolerant. All irrigation shall be bubbler systems.

23. All wood floor and roof structures shall be constructed with ninety percent (90%) engineered lumber.

24. A minimum of fifty percent (50%) of the overall building insulation shall be formaldehyde-free and recycled content. A minimum aggregate of sixty percent (60%) of the wall, ceiling, and floor insulation shall be cellulose, cotton ball, or bio-based foam.

25. One kilowatt (1 kw) of solar photovoltaic power shall be installed. (Qualifying projects that are subject to the provisions of CCMC §15.02.1005 may not use this item toward satisfying the requirements of this Section.).

B. *Category 2 qualifying projects.* All new buildings of fifty thousand (50,000) square feet or more of gross floor area, and major renovations to existing buildings of fifty thousand (50,000) square feet or more of gross floor area, shall comply with the following requirements:

1. Prior to the issuance of a building permit, applicant shall submit the following:

   a. Evidence that a LEED®-AP is one of the members of the project team.

   b. Evidence that the project has been registered with USGBC's LEED® program.

   c. A LEED® checklist, including points allocated to the “Innovation and Design” category, which demonstrates that the project meets the selected LEED® Rating System at the “Certified” level or higher.

   d. A signed declaration from the LEED®-AP member of the project team, stating that the plans and plan details have been reviewed and the project meets the intent of the criteria for certification of the selected LEED® Rating System at the “Certified” level or higher.

2. The project shall comply with USGBC's “3 point margin of error” for LEED® certification.

3. Applicant shall submit to the Building Official copies of all correspondence between the applicant and USGBC regarding the project.

C. *Green building checklist.* A green building checklist, on a form approved by the Building Official, shall be completed and submitted prior to construction of a Category 1 qualifying project.

D. *Exceptions.* This Section shall not apply to one- and two-family residences.

(Ord. No. 2009-004 § 1 (part))

§ 15.02.1115 RESERVED.

§ 15.02.1120 WATER PERMEABLE SURFACES.

Notwithstanding the provisions of this chapter, Section 4.106.3.1 and Section 5.106.3 of the California Green Building Standards Code are hereby added to read as follows:

4.106.3.1 Water permeable surfaces for low-rise residential building. Not less than 20% of new parking, walking or patio surfaces shall be permeable.

Exceptions:

1. The primary driveway, primary entry walkway and entry porch or landing shall not be included when calculating the area required to be a permeable surface.

2. Required accessible routes for persons with disabilities as required by California Code of Regulations, Title 24, Part 2, Chapter 11A and/or Chapter 11B as applicable.

5.106.3 Water permeable surfaces for other than low-rise residential building. Not less than 20% of new parking, walking or patio surfaces shall be permeable.

Exceptions:

1. The primary driveway, primary entry walkway and entry porch or landing shall not be included when calculating the area required to be a permeable surface.

2. Required accessible routes for persons with disabilities as required by California Code of Regulations, Title 24, Part 2, Chapter 11A and/or Chapter 11B as applicable.

(Ord. No. 2009-004 § 1 (part); Ord. No. 2019-015 § 15 (part))

§ 15.02.1125 GRAY WATER.

Notwithstanding the provisions of this chapter, § 4.305.2 of the California Green Building Standards Code is hereby added as follows:

4.305.2 Gray water for low-rise residential building. When a low-rise residential building includes one or more dwelling units that contain a laundry connection within the dwelling unit, all of the dwelling units containing a laundry connection shall have a minimum of one (1) plumbing fixture constructed to divert gray water onto the subject property in full compliance with Chapter 15 of the California Plumbing Code. The plumbing fixture(s) connected to the gray water discharge system may be any fixture(s) allowed to discharge gray water under the California Plumbing Code. The gray water may be utilized for landscape irrigation or for percolation into the soil.

(Ord. No. 2009-004 § 1 (part); Ord. No. 2019-015 § 15 (part))

§ 15.02.1130 LANDSCAPE IRRIGATION CONTROLS.

Notwithstanding the provisions of this chapter, § 4.304.2 and § 5.304.2 of the California Green Building Standards Code are hereby added to read as follows:

4.304.2 Landscape irrigation controls for low-rise residential building. All new landscape irrigation shall utilize automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data for irrigation scheduling.

5.304.2 Landscape irrigation controls for other than low-rise residential building. All new landscape irrigation shall utilize automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data for irrigation scheduling.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1135 LIGHT POLLUTION REDUCTION.

Notwithstanding the provisions of this chapter, § 4.509 of the California Green Building Standards Code is hereby added to read as follows:

4.509 Light pollution reduction for low-rise residential building. All new outdoor lighting fixtures shall comply with the maximum allowable Backlight, Uplight and Glare (BUG) ratings listed in Table A4.106.10 of CALGreen.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1140 ENHANCED CONSTRUCTION WASTE REDUCTION.

Notwithstanding the provisions of this chapter, § 4.408.1 and § 5.408.1 of the California Green Building Standards Code are hereby modified to read as follows:

4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 75% of the nonhazardous construction and demolition waste in accordance with either §§ 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. The reuse of any construction materials for the project may be considered in determining compliance with the 75% waste reduction target. Third-party verification shall be required.

Exceptions:

1. Excavated soil and land-clearing debris.

2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.

3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 75% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent. The reuse of any construction materials for the project may be considered in determining compliance with the 75% waste reduction target. Third-party verification shall be required.

(Ord. No. 2019-15 § 15 (part))

§ 15.02.1145 DEFENSIBLE SPACE IN WILDLAND-URBAN INTERFACE (WUI) AREAS.

Notwithstanding the provisions of this chapter, § 701A.5.1 of the Cal. Building Code and § R337.1.5.1 of the Cal. Residential Code are hereby added to read as follows:

701A.5.1 Vegetation management plan. For all projects located in an area designated as a High Fire Hazard Severity Zone, a plan shall be submitted to the Building Official that identifies all areas of the property for which vegetation management compliance is required by Chapter 7A of the California Building Code. Compliance with Chapter 7A must be completed prior to requesting a final inspection.

R337.1.5.1 Vegetation management plan. For all projects located in an area designated as a High Fire Hazard Severity Zone, a plan shall be submitted to the Building Official that identifies all areas of the property for which vegetation management compliance is required by § R337 of the Cal. Residential Code. Compliance with § R337 must be completed prior to requesting a final inspection.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1150 FIRE-RESISTANT ROOF ASSEMBLIES IN WILDLAND-URBAN INTERFACE (WUI) AREAS.

Notwithstanding the provisions of this chapter, § 705A.1.1 of the Cal. Building Code and § R337.5.1.1 of the Cal. Residential Code are hereby added to read as follows:

705A.1.1 Class-A fire resistant roof assemblies. Roof coverings for new buildings located in an area designated as a High Fire Hazard Severity Zone shall be listed as Class-A by a recognized listing agency. Wood shake and wood shingle roof coverings shall be prohibited in areas designated as a High Fire Hazard Severity Zone.

R337.5.1.1 Class-A fire resistant roof assemblies. Roof coverings for new buildings located in an area designated as a High Fire Hazard Severity Zone shall be listed as Class-A by a recognized listing agency. Wood shake and wood shingle roof coverings shall be prohibited in areas designated as a High Fire Hazard Severity Zone.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1155 RESERVED.

§ 15.02.1160 SHOWER FACILITIES FOR BICYCLE PARKING.

When bicycle parking is required by other provisions in the Culver City Municipal Code, shower facilities shall be required to be installed in a quantity and location as established by guidelines promulgated by the Building Official and/or the Director. When installed, shower facilities shall comply with the provisions of Chapter 11A or 11B of the California Building Code.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1165 RESERVED.

§ 15.02.1170 RESERVED.

§ 15.02.1175 RESERVED.

§ 15.02.1180 INSPECTIONS AND ENFORCEMENT.

A. No final inspection shall be approved for a project subject to the requirements of this Subchapter, nor shall a temporary or final certificate of occupancy be issued for such project, until such time as the requirements of this Subchapter have been satisfied, as determined by final inspection of the Building Safety Division.

B. The Building Safety Division may issue field correction notices and/or stop work orders on a project for non-compliance with the requirements of this Subchapter.

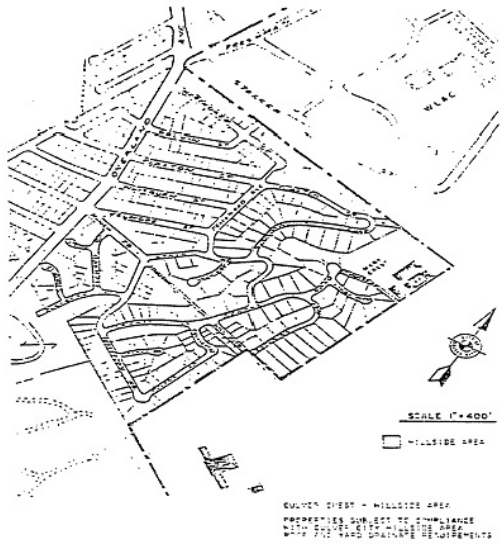
C. The provisions of this subchapter may be enforced through any or all available remedies provided in the CCMC.

(Ord. No. 2019-015 § 15 (part))

§ 15.02.1200 RESERVED.

APPENDIX: HILLSIDE DRAINAGE; DIAGRAMS

DIAGRAM "A"



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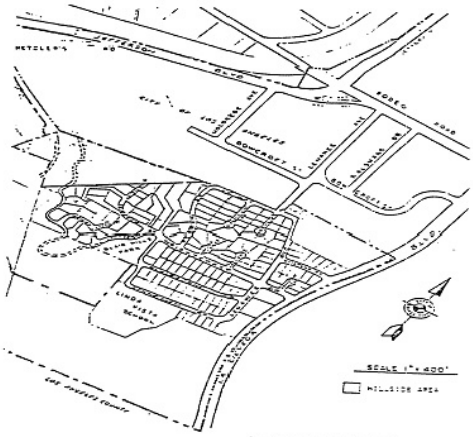

BLUFF HILLS - HILLSIDE AREA

PROPERTIES SUBJECT TO COMPLIANCE WITH SILVER CITY'S HILLSIDE DEVELOPMENT AND SAND DRAINAGE REGULATIONS