ORDINANCE NO. _____

An ordinance amending Articles 1 and 8 of Chapter IX of the Los Angeles Municipal Code, to make local administrative changes and incorporate by reference certain portions of the 2012 International Building Code and the 2013 Edition of the California Building Code (C.B.C.).

THE PEOPLE OF THE CITY OF LOS ANGELES DO ORDAIN AS FOLLOWS:

Section 1. The first and second unnumbered paragraphs of Section 91.101 of the Los Angeles Municipal Code are amended to read as follows:

SEC. 91.101. TITLE, PURPOSE, AND SCOPE.

91.101.1. Title. This article shall be known as the Los Angeles Building Code or Building Code or L.A.B.C., a portion of the Los Angeles Municipal Code (L.A.M.C.), and wherever the word Code is used in this article it shall mean the Los Angeles Building Code. Sections of Article 1.5 of Chapter 9 of L.A.M.C. shall collectively be known as the Los Angeles Residential Code or L.A.R.C. The provisions of the L.A.R.C. for one- and two-family Dwellings shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures. In addition to the L.A.R.C., appropriate Sections of Chapters 1, 11A, 11B, 17, 31, 31B, 33, 34, 63, 67, 70, 71, 72, 81, 89, 92, 93 and 96 of the L.A.B.C. shall also be applicable to one- and two-family dwellings and townhouses unless stated otherwise.

The Los Angeles Building Code and the Los Angeles Residential Code adopt by reference portions of the 2013 California Building Code (C.B.C.) or the 2013 California Residential Code (C.R.C.).

Sec. 2. Paragraphs 1 and 13 of Section 91.101.5 of the Los Angeles Municipal Code are amended to read as follows:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area is not greater than 120 square feet, not located in Fire District 1 and does not contain any hearing, plumbing or electrical installation, and is located as permitted by the Los Angeles Zoning Code.

13. The depositing of rubbish or other material at any dump operated by the City of Los Angeles, or by any person pursuant to the provisions of Section 66.25 of the Municipal Code.

Sec. 3. Section 91.106.3.2.1 of the Los Angeles Municipal Code is amended to read as follows:

91.106.3.2.1. Site Plan. A plot of the site shall be filed with each application for a permit.

EXCEPTION: The Superintendent of Building may grant the omission of a site plot when the proposed work is of such a nature that no information is needed to determine compliance with all laws relating to the location of buildings or occupancies.

With respect to the site, the plot shall show the boundaries, lot lines, existing and proposed buildings and structures, neighboring public ways, and sufficient dimensions and other data to enable the Department to determine compliance with all laws relating to the location of buildings or occupancies.

Sec. 4. Section 91.106.3.3.3 of the Los Angeles Municipal Code is amended to read as follows:

91.106.3.3.3. Reserved.

Sec. 5. Section 91.106.3.3.4 of the Los Angeles Municipal Code is amended to read as follows:

91.106.3.3.4. Yard Restriction. The increase in area permitted by C.B.C. Section 506.2 and Section 507 shall not be allowed unless or until the owner of the required yard and open space files with the Department an agreement binding the owner, heirs and assignees, to set aside the required yard as an unobstructed space having no improvements. This agreement shall be recorded in the Los Angeles County Recorder's Office.

Sec. 6. Subparagraphs B, C and D of Paragraph 5 of Section 91.106.4.1 of the Los Angeles Municipal Code are amended to read as follows:

B. This (Exception 5) shall not apply if the building is to be demolished and is:

(i) Constructed of unreinforced masonry construction and built pursuant to a building permit issued prior to October I, 1933, or

(ii) To be demolished pursuant to a demolition order issued by the Department under authority set forth in Division 89 of Article I of Chapter IX of the Los Angeles Municipal Code.

C. This (Exception 5) shall not apply if the applicant demonstrates to the satisfaction of the Department that the site will be developed with housing for low

to moderate-income households, which housing is to be developed, constructed or acquired with federal, state or local government financial assistance.

D. This (Exception 5) shall not apply to two family dwellings or to apartment houses and apartment hotels containing three dwelling units, provided that at least one dwelling unit in each such building is occupied by a record owner of the property.

Sec. 7. The second unnumbered paragraph of Section 91.107.7 of the Los Angeles Municipal Code is amended to read as follows:

Certified security bar installers shall file Security Bar Certificates of Compliance in accordance with provisions of Section 91.108.12.1 Paragraph 2 of this code.

Sec. 8. Section 91.112 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 9. Section 91.113 of the Los Angeles Municipal Code is added immediately proceeding Table No. 1-A to read as follows:

SEC. 91.113. PERMIT FEES.

Sec. 10. Section 91.200 of the Los Angeles Municipal Code is renumbered as Section 91.201 and amended to read as follows:

SEC. 91.201. GENERAL.

Chapter 2 of the C.B.C. is adopted by reference with the following exceptions, modifications and additions:

Sec. 11. Section 91.202 of the Los Angeles Municipal Code is amended by the addition of the following definitions in alphabetical order to read as follows:

APPROVED AGENCY or APPROVED TESTING AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services which has been approved.

APPROVED FABRICATOR. An established and qualified person, firm or corporation approved by the Superintendent of Building pursuant to Division 17 of this Code and LAMC Section 96.200.

Sec. 12. The following notation in Division 3 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections in Division 3 are deleted in entirety by Ord No. 172,592:

91.301; 9.303; 91.305; 91.307; 91.308, 91.310 thru 91.312.

Sec. 13. The following notation in Division 6 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections in Division 6 are deleted in entirety by Ord No. 172,592:

91.601 thru 91.603.

Sec. 14. The following notation in Division 7 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections in Division 7 are deleted in entirety by Ord No. 172,592:

91.709; 91.710; 91.713.

Sec. 15. The following notation in Division 8 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections in Division 8 are deleted in entirety by Ord No. 172,592:

91.802; 91.804.

Sec. 16. Section 91.1207 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1207. SOUND TRANSMISSION.

Section 1207 of the C.B.C. is adopted by reference, except Sections 1207.1, 1207.11.1, 1207.11.3, 1207.11.4, and 1207.12 of the C.B.C. are not adopted, and in lieu, Sections 91.1207.1, 91.1207.3, 91.1207.4, 91.1207.5, 91.1207.6, 91.1207.7, 91.1207.8, 91.1207.9, 91.1207.10, 91.1207.11.1, 91.1207.11.2, 91.1207.11.3, 91.1207.11.4, 91.1207.12 and 91.1207.13 are added.

Sec. 17. Section 91.1207.2 of the Los Angeles Municipal Code is added to read as follows:

91.1207.2. Definitions. The following special definitions shall apply to this section:

SOUND TRANSMISSION CLASS (STC) is a single-number rating used to compare walls, floor-ceiling assemblies and doors for their sound-insulating properties with respect to speech and small household appliance noise. The STC is derived from laboratory measurements of sound transmission loss across a series of 16 test bands. Laboratory STC ratings should be used to the greatest extent possible in determining that the design complies with this section.

FIELD SOUND TRANSMISSION CLASS (FSTC) is a single-number rating similar to STC, except that the transmission loss values used to derive the FSTC are measured in the field. All sound transmitted from the source room to the receiving room is assumed to be through the separating wall or floor-ceiling assembly. This section does not require determination of the FSTC, and field-measured values of noise reduction should not be reported as transmission loss.

IMPACT INSULATION CLASS (IIC) is a single-number rating used to compare the effectiveness of floor-ceiling assemblies in providing reduction of impact-generated sounds such as footsteps. The IIC is derived from laboratory measurements of impact sound pressure level across a series of 16 test bands using a standardized tapping machine. Laboratory IIC ratings should be used to the greatest extent possible in determining that the design complies with this section.

FIELD IMPACT INSULATION CLASS (FIIC) is a single- number rating similar to the IIC, except that the impact sound pressure levels are measured in the field.

NOISE ISOLATION CLASS (NIC) is a single-number rating derived from measured values of noise reduction between two enclosed spaces that are connected by one or more paths. The NIC is not adjusted or normalized to a standard reverberation time.

NORMALIZED NOISE ISOLATION CLASS (NNIC) is a single-number rating similar to the NIC, except that the measured noise reduction values are normalized to a reverberation time of one-half second.

NORMALIZED A-WEIGHTED SOUND LEVEL DIFFERENCE (Dn) means for a specified source room sound spectrum, Dn is the difference, in decibels, between the average sound levels produced in two rooms after adjustment to the expected acoustical conditions when the receiving room under test is normally furnished.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn) is the A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 db adjustment added to sound levels occurring during nighttime hours (10 p.m. to 7 a.m.).

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) is a metric similar to the Ldn, except that a 5 db adjustment is added to the equivalent continuous sound exposure level for evening hours (7 p.m. to 10 p.m.) in addition to the 10 db nighttime adjustment used in the Ldn.

Sec. 18. Section 91.1207.3 of the Los Angeles Municipal Code is added to read as follows:

91.1207.3. Relevant Standards. The current edition of the following standards is generally applicable for determining compliance with this section. Copies may be obtained from the American Society for Testing and Materials (ASTM) at 100 Barr Harbor Drive, West Conshohocken, PA, 19428-2959. ASTM C 634, Standard Terminology Relating to Building and Environmental Acoustics. ASTME 90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements. ASTM E 336, Standard Test Method for Measurement of Airborne Sound Attenuation Between Rooms in Buildings. ASTM E 413, Classification for Rating Sound Insulation. ASTM E 492, Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine. ASTM E 497, Standard Recommended Practice for Installation of Fixed Partitions of Light Frame Type for the Purpose of Conserving Their Sound Insulation Efficiency. ASTM E 597, Recommended Practice for Determining a Single-Number Rating of Airborne Sound Isolation in Multi-unit Building Specifications. ASTM E 966, Standard Guide for Field Measurements of Airborne Sound Insulation of Building Facades and Façade Elements. ASTM E 989, Standard Classification for Determination of Impact Insulation Class (IIC). ASTM E 1007, Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures. ASTM E 1014, Standard Guide for Measurement of Outdoor A-Weighted Sound Levels.

Sec. 19. Section 91.1207.4 of the Los Angeles Municipal Code is added to read as follows:

91.1207.4. Complaints. Where a complaint as to noncompliance with this chapter requires a field test, the complainant shall post a bond or adequate funds in escrow for the cost of said testing. Such costs shall be chargeable to the complainant if the field tests show compliance with this chapter. If the tests show noncompliance, testing costs shall be borne to the owner or builder.

Sec. 20. Section 91.1207.5 of the Los Angeles Municipal Code is added to read as follows:

91.1207.5. Local Modification. The governing body of any city or county or city and county may, by ordinance, adopt changes or modifications to the requirements of this section as set forth in Section 17922.7 of the Health and Safety Code.

Sec. 21. Section 91.1207.6 of the Los Angeles Municipal Code is added to read as follows:

91.1207.6. Interdwelling Sound Transmission Control.

91.1207.6.1. Wall and Floor-Ceiling Assemblies. Wall and floor-ceiling assemblies separating dwelling units or guest rooms from each other and from public or service areas such as interior corridors, garages and mechanical spaces shall provide airborne sound insulation for walls, and both airborne and impact sound insulation for floor-ceiling assemblies.

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

Sec. 22. Section 91.1207.7 of the Los Angeles Municipal Code is added to read as follows:

91.1207.7. Airborne Sound Insulation. All such acoustically rated separating wall and floor-ceiling assemblies shall provide airborne sound insulation equal to that required to meet a sound transmission class (STC) rating of 50 based on laboratory tests as defined in ASTM E 90 and E 413. Field-tested assemblies shall meet a noise isolation class (NIC) rating of 45 for occupied units and a normalized noise isolation class (NINIC) rating of 45 for unoccupied units as defined in ASTM E 336 and E 413. ASTM E 597 may be used as simplified procedure for field tests of the airborne sound isolation between rooms in unoccupied buildings. In such tests, the minimum value of Dn is 45 db for compliance. Entrance doors from interior corridors together with their perimeter seals shall have STC ratings not less than 26. Such tested doors shall operate normally with commercially available seals. Solid-core wood-slab doors 13/8 inches (35 mm) thick minimum or 18 gauge insulated steel-slab doors with compression seals all around, including the threshold, may be considered adequate without other substantiating information. Field tests of corridor walls should not include segments with doors. If such tests are impractical, however, the NIC or NNIC rating for the composite wall-door assembly shall not be less than 30. Penetrations or openings in construction assemblies for piping, electrical devices, recessed cabinets, bathtubs, soffits or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings.

Sec. 23. Section 91.1207.8 of the Los Angeles Municipal Code is added to read as follows:

91.1207.8. Impact Sound Insulation. All acoustically rated separating floor-ceiling assemblies shall provide impact sound insulation equal to that required to meet a IIC rating of 50 based on laboratory tests as defined in ASTM E 492 and E 989. Field-tested assemblies shall meet a field impact insulation class (FIIC) rating of 45 for both occupied and unoccupied units as defined in ASTM E 1007 and E 989, with the

exception that the measured impact sound pressure levels shall not be normalized to a standard amount of absorption in the receiving room. Floor coverings may be included in the assembly to obtain the required ratings. These coverings must be retained as a permanent part of the assembly and may be replaced only by other floor coverings that provide the required impact sound insulation.

Sec. 24. Section 91.1207.9 of the Los Angeles Municipal Code is added to read as follows:

91.1207.9. Tested Assemblies. Laboratory-tested wall or floor-ceiling designs having STC or IIC ratings of 50 or more may be used by the building official to determine compliance with this section during plan review phase. Field tests shall be required by the building official when evidence of sound leaks or flanking paths is noted, or when the separating assembly is not built according to the approved design. Generic sound transmission control systems as listed in the Catalog of STC and IIC Ratings for Wall and Floor-Ceiling Assemblies, as published by the Office of Noise Control, California Department of Health Services, or the Fire Resistance Design Manual, as published by the Gypsum Association, may be used to evaluate construction assemblies for their sound transmission properties. Other tests from recognized laboratories may also be used. When ratings for essentially similar assemblies differ, and when ratings are below STC or IIC 50, field testing may be used to demonstrate that the building complies with this section. For field testing, rooms should ideally be large and reverberant for reliable measurements to be made in all test bands. This is often not possible for bathrooms, kitchens, hallways or rooms with large amounts of sound-absorptive materials. Field test results should, however, report the measured values in all bands, noting those which do not meet relevant ASTM criteria for diffusion. It should be noted that STC ratings do not adequately characterize the sound insulation of construction assemblies when the intruding noise is predominantly low-pitched, as is often produced by amplified music or by large pieces of mechanical equipment. It should also be noted that the transmission of impact sound from a standardized tapping machine may vary considerably for a given design due to differences in specimen size, flanking transmission through associated structure and the acoustical response of the room below. Laboratory IIC values should therefore be used with caution when estimating the performance of hard-surfaced floors in the field. Additionally, IIC ratings may not always be adequate to characterize the subjectively annoying creak or boom generated by footfalls on a lumber floor.

Sec. 25. Section 91.1207.10 of the Los Angeles Municipal Code is added to read as follows:

91.1207.10. Certification. Field testing, when required, shall be done under the supervision of a person experienced in the field of acoustical testing and engineering, who shall forward test results to the building official showing that the sound isolation requirements stated above have been met. Documentation of field test results should generally follow the requirements outlined in relevant ASTM standards.

Sec. 26. Section 91.1207.11 of the Los Angeles Municipal Code is added to read as follows:

91.1207.11. Exterior Sound Transmission Control.

Sec. 27. Section 91.1207.11.2 of the Los Angeles Municipal Code is added to read as follows:

91.1207.11.2. Allowable Interior Noise Levels. Interior noise levels attributable to exterior sources shall not exceed 45 db in any habitable room. The noise metric shall be either the day-night average sound level (Ldn) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

Note: Ldn is the preferred metric for implementing these standards. Worst-case noise levels, either existing or future, shall be used as the basis for determining compliance with this section. Future noise levels shall be predicted for a period of at least 10 years from the time of building permit application.

Sec. 28. Section 91.1207.13 of the Los Angeles Municipal Code is added to read as follows:

91.1207.13. Field Testing. When inspection indicates that the construction is not in accordance with the approved design, or that the noise reduction is compromised due to sound leaks or flanking paths, field testing may be required. A test report showing compliance or noncompliance with prescribed interior allowable levels shall be submitted to the building official. Measurements of outdoor sound levels shall generally follow the guidelines in ASTM E 1014. Field measurements of the A-weighted airborne sound insulation of buildings from exterior sources shall generally follow the guidelines in ASTM E 966. For the purpose of this standard, sound level differences measured in unoccupied units shall be normalized to a receiving room reverberation time of one-half second. Sound level differences measured in occupied units shall not be normalized to a standard reverberation time.

Sec. 29. Section 91.1300 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1300. GENERAL.

In order to comply with the purpose of this division, buildings shall be designed to comply with the requirements of Part 6, Title 24 of the California Building Standards Code – California Energy Code, 2013 Edition.

Sec. 30. Section 91.1507 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1507. REQUIREMENTS FOR ROOF COVERINGS.

Section 1507 of the C.B.C. is adopted by reference, except Sections 1507.3.1, and Table 1507.3.7 of the C.B.C. are not adopted and in lieu, Section 91.1507.3.1 and Table 1507.3.7 are added.

Sec. 31. The Title of Division 16 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 1, DIVISION 16

STRUCTURAL DESIGN

Sec. 32. Section 91.1603.1.9 of the Los Angeles Municipal Code is amended to read as follows:

91.1603.1.9. Systems and Components Requiring Special Inspections for Seismic Resistance. Construction documents or specifications shall be prepared for those systems and components requiring special inspection for seismic resistance as specified in Section 91.1705.11 by the registered design professional responsible for their design and shall be submitted for approval in accordance with Section 91.106.3.3. Reference to seismic standards in lieu of detailed drawings is acceptable.

Sec. 33. Section 91.1609 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1609. WIND LOADS.

Section 1609 of the C.B.C. is adopted by reference, and Section 91.1609.1.1.2 is added.

91.1609.1.1.2. High Wind Velocity Areas. The Superintendent of Building may designate certain areas of the City as **"high wind velocity areas"** when evidence or studies indicate that the wind velocity results in damage to structures conforming to the minimum requirements of this Code. The Superintendent of Building may specify additional requirements over and above those required by this Code with respect to the following:

1. Glazing of openings in exterior walls.
2. Anchorage of post and beam construction.
3. Cantilever overhangs.
4. Roofing and roof framing.

Sec. 34. Section 91.1613 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1613. EARTHQUAKE LOADS.

Section 1613 of the C.B.C. is adopted by reference, C.B.C. Section 1613.6.7. is not adopted and in lieu of it Sections 91.1613.5.3 through 91.1613.10.5 are added or amended to read as follows.

91.1613.5.3. Modify ASCE 7, Section 12.2.3.1 Exception 3 to read as follows:

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

91.1613.5.4. General. The text of ASCE 7, Section 12.11.2.2.3 is modified to read 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 tow 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 subdiaphragms to transmit the anchorage forces to the main continuous crossties.

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

91.1613.5.5. The Equation 12.2-1 of ASCE 7, Section 12.12.3 is modified to read as follows:

$$\delta_M = \frac{C_d \delta_{max}}{I}$$

(Equation 12.12-1)

91.1613.5.6. General. The text of ASCE 7, Section 12.12.5 is modified to read as follows:

12.12.5. Deformation Compatibility for Seismic Design Category D through F. For structures assigned to Seismic Design Category D, E, or F, every structural component not included in the seismic force-resisting system in the direction under consideration shall be designed to be adequate for the gravity load effects and the seismic forces resulting from displacement to the design story drift (Δ) as determined in accordance with Section 12.8.6 (see also Section 12.12.1).

EXCEPTION: Reinforced concrete frame members not designed as part of the seismic force-resisting system shall comply with Section 21.9 of ACI 318.

Where determining the moments and shears induced in components that are not included in the seismic force-resisting system in the direction under consideration, the stiffening effects of adjoining rigid structural and nonstructural elements shall be considered and a rational value of member and restraint stiffness shall be used.

When designing the diaphragm to comply with the requirements stated above, the return walls and fins/canopies at entrances shall be considered. Seismic compatibility with the diaphragm shall be provided by either seismically isolating the element or by attaching the element and integrating its load into the diaphragm.

91.1613.6. Reserved.

91.1613.7. Reserved.

91.1613.8. Additional Seismic Requirements.

91.1613.8.1. Scope. This part contains special requirements for suspended ceilings and lighting systems. The provisions of Section 13.5.6 of ASCE 7 shall apply except as modified here.

91.1613.8.1.2. Design and Installation Requirements.

91.1613.8.1.2.1. Bracing at Discontinuity. Positive bracing to the structure shall be provided at changes in the ceiling plane elevation or at discontinuities in the ceiling grid system.

91.1613.8.1.2.2. Support for Appendages. Cable trays, electrical conduits and piping shall be independently supported and independently braced from the structure.

91.1613.8.1.2.3. 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 in accordance with Section 13.5.6.2.2(e) of ASCE 7.

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies shall comply with CBC Section 713. Sprinkler heads and other penetrations shall have a 2 in. (50mm) oversize ring, sleeve, or adapter through the ceiling tile to allow for free movement of at least 1 in. (25mm) in all horizontal directions. Alternatively, a swing joint that can accommodate 1 in. (25 mm) of ceiling movement in all horizontal directions is permitted to be provided at the top of the sprinkler head extension.

91.1613.8.1.3. 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:

91.1613.8.1.3.1. General. Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural floor or roof system above and 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 two feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

91.1613.8.1.3.2. 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 four-foot (1219 mm) radius of the exit lights and exit signs.

91.1613.8.1.3.3. 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 CBC Section 1006.3.

91.1613.8.1.3.4. Supports for Appendage. Separate support from the structural floor or roof system above shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

91.1613.9. Seismic Design Provisions for Hillside Buildings.

91.1613.9.1. Purpose. The purpose of this section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing such buildings on or into slopes steeper than one unit vertical in three units horizontal (33.3%). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

91.1613.9.2. Scope. The provisions of this section shall apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level

diaphragm shall be in accordance with the provisions for seismic and wind design as required elsewhere in this division.

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

91.1613.9.3. Definitions. For the purposes of this section, certain terms are defined as follows:

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

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

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

FOUNDATION is concrete or masonry, 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 1613.7.5.and 1613.7.7.3 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 1613.7.6 and 1613.7.7.4.

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.

91.1613.9.4. Analysis and Design.

91.1613.9.4.1. General. Every hillside building within the scope of this section shall be analyzed, designed, and constructed in accordance with the provisions of this 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.

91.1613.9.4.2. Base Level Diaphragm-Downhill Direction. The following provisions shall apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

91.1613.9.4.2.1. Base for Lateral Force Design Defined. For seismic forces acting in the downhill direction, the base of the building shall be the floor at or closest to the top of the highest level of the foundation.

91.1613.9.4.2.2. Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

91.1613.9.5. Base Shear Resistance-Primary Anchors.

91.1613.9.5.1. General. The base shear in the downhill direction shall be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

91.1613.9.5.2. Location of Primary Anchors. A primary anchor and diaphragm strut shall be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts shall also be provided where interior vertical lateral-force-resisting elements occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors shall in no case exceed 30 feet (9144 mm).

91.1613.9.5.3. Design of Primary Anchors and Diaphragm Struts. Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.7.8.

91.1613.9.5.4. Limitations. The following lateral-force-resisting elements shall not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing,
2. Cement plaster and lath,
3. Gypsum wallboard, and

4. Tension only braced frames.

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

91.1613.9.6. Base Shear Resistance-Secondary Anchors.

91.1613.9.6.1. General. In addition to the primary anchors required by Section 91.1613.7.5, 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.

91.1613.9.6.2. Secondary Anchor Capacity and Spacing. Secondary anchors at the base level diaphragm shall be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm, but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1219 mm) on center.

91.1613.9.6.3. Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 91.1613.9.8.

91.1613.9.7. 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.

91.1613.9.7.1. Diaphragm Defined. Every floor level below the base level diaphragm shall be designed as a diaphragm.

91.1613.9.7.2. Design Force. Each diaphragm below the base level diaphragm shall be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

91.1613.9.7.3. Design Force Resistance-Primary Anchors. The design force described in Section 91.1613.9.7.2 shall be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation. Primary anchors shall

be provided and designed in accordance with the requirements and limitations of Section 91.1613.8.5.

91.1613.9.7.4. Design Force Resistance-Secondary Anchors.

91.1613.9.7.4.1. General. In addition to the primary anchors required in Section 91.1613.8.7.3, 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.

91.1613.9.7.4.2. Secondary Anchor Capacity. Secondary anchors at each diaphragm below the base level diaphragm shall be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1219 mm) on center.

91.1613.9.7.4.3. Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 91.1613.9.8.

91.1613.9.8. Primary and Secondary Anchorage and Diaphragm Strut Design. Primary and secondary anchors and diaphragm struts shall be designed in accordance with the following provisions:

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

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

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

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

5. **Allowable Stress Increase.** The 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.

91.1613.9.9. Lateral-Force-Resisting Elements Normal to the Downhill Direction.

91.1613.9.9.1. General. In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this section.

91.1613.9.9.2. Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 5 for bearing wall and building frame systems.

91.1613.9.9.3. Vertical Distribution of Seismic Forces. For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 shall be determined using the height measured from the top of the lowest level of the building foundation.

91.1613.9.9.4. Drift Limitations. The story drift below the base level diaphragm shall not exceed 0.007 times the story height at strength design force level. The total drift from the base level diaphragm to the top of the foundation shall not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of

the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

91.1613.9.9.5. Distribution of Lateral Forces.

91.1613.9.9.5.1. General. The design lateral force shall be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

91.1613.9.9.5.2. Wood Structural Panel Sheathed Walls. The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by AF&PA 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 eight feet (2438 mm) and the maximum vertical height of a step shall be two feet, eight inches (813 mm).

91.1613.9.9.5.3. Reinforced Concrete or Masonry Shear Walls. Reinforced concrete or masonry shear walls shall have forces distributed in proportion to the rigidity of each section of the wall.

91.1613.9.9.6. Limitations. The following lateral force-resisting-elements shall not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

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

Braced frames designed in accordance with the requirements of Section 2205.2.2 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.

91.1613.9.10. Specific Design Provisions.

91.1613.9.10.1. Footings and Grade Beams. All footings and grade beams shall comply with the following:

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

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

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

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

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

91.1613.9.10.2. Protection Against Decay and Termites. All wood to earth separation shall comply with the following:

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

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

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) 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.

91.1613.9.10.3. Sill Plates. All sill plates and anchorage shall comply with the following:

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

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

91.1613.9.10.4. Column Base Plate Anchorage. The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4,000 pounds (17.8 kN) or more 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 five inches (127 mm) of the concrete or masonry pedestal. The base plate anchor bolts shall be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases shall be galvanized and each anchor bolt shall have at least two galvanized nuts above the base plate.

91.1613.9.10.5. Steel Beam to Column Supports. All steel beam to column supports shall be positively braced in each direction. Steel beams shall have stiffener plates installed on each side of the beam web at the column. The stiffener plates shall be welded to each beam flange and the beam web. Each brace connection or structural member shall consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

Sec. 35. Section 91.1616 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 36. The Title of Division 17 of Article 1, Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 1, DIVISION 17

STRUCTURAL TESTS AND SPECIAL INSPECTIONS

Sec. 37. Section 91.1702.1 of the Los Angeles Municipal Code is amended to read as follows:

91.1702.1. Reserved.

Sec. 38. Section 91.1703.6.1 of the Los Angeles Municipal Code is added to read as follows:

91.1703.6.1. Follow-up Inspection. The applicant shall provide for special inspections of fabricated items in accordance with Section 1704.2.5.

Sec. 39. Section 91.1704 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1704. SPECIAL INSPECTIONS.

Section 1704 of the C.B.C. is adopted by reference, except that Sections 1704.2, 1704.2.1, 1704.2.3, 1704.2.4, 1704.2.5.1, 1704.2.5.2, 1704.3,1704.3.1, 1704.4, 1704.5, 1704.5.1, 1704.5.2, 1704.7, 1704.8 and 1704.9 of the C.B.C. are not adopted and in lieu Sections 91.1704.2, 91.1704.2.1, 91.1704.2.1.1, 91.1704.2.1.1.2, 91.1704.2.1.3, 91.1704.2.3, 91.1704.2.4, 91.1704.3, 91.1704.3.1,91.1704.4, 91.1704.4.1.1, 91.1704.4.1.2, 91.1704.4.1.3, 91.1704.4.1.4, 91.1704.4.1.5, 91.1704.4.1.6, 91.1704.5, 91.1704.5.1 and 91.1704.5.1.2, are added or amended, respectively, to read as follows:

Sec. 40. Section 91.1704.1 through and including 91.1704.1.4.2 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 41. Section 91.1704.2 of the Los Angeles Municipal Code is added to read as follows:

91.1704.2. Special Inspections. Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more Deputy Inspectors to perform inspections during construction on the types of work listed under Section 1705. The Registered Deputy Inspector shall be a qualified person as set forth in Section 91.1704.1.3 and shall demonstrate competence to the satisfaction of the Superintendent of Building for inspection of the particular type of construction or operation requiring special inspection. The Registered Deputy Inspector shall be approved by and shall be responsible to the registered design professional in charge of the design of the structure.

The special inspections shall be in addition to the inspections made by the employees of the department as set forth in Section 110 of this Code.

All special inspections shall be made by a Registered Deputy Inspector. Whenever the term "Special Inspector" is used in this Code, it shall mean "Registered Deputy Inspector" as described in Section 1704.2.1 of this Code.

EXCEPTIONS:

1. Special inspections are not required for construction of a minor nature or as warranted by conditions in the jurisdiction as approved by the Superintendent of Building.

2. Unless otherwise required by the Superintendent of Building, special inspections are not required for Group U occupancies that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

3. Special inspections are not required for portions of structures designed and constructed in accordance with the cold-formed steel light-frame

construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308.

91.1704.2.1. Registered Deputy Inspector Qualifications. The deputy inspector shall provide written documentation to the Superintendent of Building demonstrating his or her competence and relevant experience or training. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities. These qualifications are in addition to qualifications specified in other sections of this Code.

Application for registration as a Registered Deputy Inspector shall be made to the Superintendent of Building on a form furnished by the Department. A separate application shall be made for each type of registration desired. Registration is available for the following types of inspections: Reinforced Concrete (RC), Structural Masonry (SM), Structural Steel/Welding (SSW), Grading (GD), Sprayed Fire resistant Materials (SFRM), Methane Barrier (MB) and Wood (WD).

A committee appointed by the Superintendent of Building shall examine each applicant as to his or her experience and training for performing the duties of an inspector of the type for which application has been made. Additionally, the applicant will be examined on the applicant's knowledge of the Los Angeles Municipal Code and Register Deputy Inspector duties, responsibilities and procedures. When satisfied as to the fitness of the applicant, the Superintendent of Building shall issue a Certificate of Registration. Upon application for renewal of a Certificate of Registration, the applicant shall be reexamined to ascertain the applicant's fitness to perform the duties of inspector of the type for which application has been made.

EXCEPTION: If the Department determines that the initial examination (which includes general knowledge, code requirements and plan comprehension) for the special inspector program under the International Code Council (ICC) is equivalent to the above-described initial or renewal examination, then the Department may accept the results of the ICC examination in lieu of the Department's examination in that category; however, the Department will be examining the applicant's knowledge of the Los Angeles Municipal Code and deputy inspector duties, responsibilities and procedures.

The Superintendent of Building shall issue separate Certificate of Registration for each type of registration requiring special inspection in accordance with Sections 91.1704 and 91.1707 of this Code and as determined by the Superintendent of Building for any construction requiring either continuous or periodic special inspection.

Nothing here shall be deemed to prohibit any one person from being qualified for more than one type of special inspection, provided he or she applies, pays the required fees, takes the required examinations and is duly qualified by the Superintendent of Building for each type.

Each Certificate of Registration shall expire three years from the date of issuance, but may be renewed by the Superintendent of Building within a grace period of 30 days thereafter.

The Department shall maintain a list of the names of all Registered Deputy Inspectors, showing the type of work each has been authorized to inspect. This list shall be available to the public.

Upon evidence satisfactory to the Superintendent of Building of incompetence, of willful or negligent failure to observe or report violations of this Code, or of any other failure to perform properly and effectively the duties assumed by a Registered Deputy Inspector, the Superintendent of Building may revoke, suspend or refuse to renew any Certificate of Registration. But prior to that action, the holder shall be given an opportunity to appear before the Superintendent of Building and be heard.

Except where there is an employee of the City of Los Angeles inspecting buildings or structures being erected or repaired by the City, no Registered Deputy Inspector shall receive any compensation whatsoever from the City. A Registered Deputy Inspector shall undertake and perform the duties of inspection solely on the request of the owner or the owner's agent. The designation shall be deemed to indicate that the duties incident to the inspection are within the course and scope of the Registered Deputy Inspector's employment by the owner or agent, and except where the Registered Deputy Inspector is in fact an employee of the City, the Registered Deputy Inspector shall not be deemed an employee of the City, the contractor, a subcontractor or a material vendor for any purpose.

The registered design professional in responsible charge and engineers of record involved in the design of the project are permitted to act as the supervising agency and their personnel are permitted to act as the deputy inspector for the work designed by them, provided they qualify as deputy inspectors.

91.1704.2.1.1. Duties and Responsibilities of the Registered Deputy Inspector.

1. The Registered Deputy Inspector employed on any work must be present during the execution of all the work the Registered Deputy Inspector has undertaken to inspect. The Registered Deputy Inspector shall notify the Department of the commencement of inspection of a job and shall specify the type of inspection for which the Registered Deputy Inspector has been engaged. This notification shall be made no later than the last working day preceding the commencement of inspection. The Registered Deputy Inspector shall report to the job sufficiently in advance of construction to review the plans and to inspect all materials to be used or concealed within the work; shall inspect the construction, erection, placing or other use of the materials; and shall observe whether there is compliance with the Code as to all of the foregoing. During the execution of the work, the Registered Deputy Inspector shall not undertake or engage in any other task or occupation that will interfere with the proper

performance of his or her duties relating to the inspections. The Registered Deputy Inspector shall report, as directed, to the Superintendent of Building, noting all violations of this Code that have occurred and any other information as may be required. At the conclusion of the Registered Deputy Inspector's duties on any project, which has been completed in accordance with this Code, the Registered Deputy Inspector shall submit a report to the Department setting forth the portion of the work inspected. The report shall be made on forms supplied by the Department and shall be filed in the records of the Department.

2. Nothing here shall be deemed to authorize any Registered Deputy Inspector to approve any inspection required by this Code, other than the special inspection for which the Registered Deputy Inspector was hired.

3. Where, in the opinion of the Department, the magnitude or complexity of a job warrants it, additional Registered Deputy Inspectors may be required.

4. Where, in the opinion of the Department, the Registered Deputy Inspector is negligent in the performance of the Deputy Inspector's duties, the job shall be stopped.

5. Nothing herein shall be deemed to authorize any registered deputy inspector to approve the pouring of concrete, the placement of masonry, structural steel or fill prior to the approval of the regular building inspector.

91.1704.2.1.2. Fees for Registered Deputy Inspector.

1. **New Application.** Before accepting any application for registration as a Registered Deputy Inspector, the Department shall collect a new examination fee of $528.00. A separate application shall be submitted and a separate examination fee shall be collected for each additional type of registration desired. When the applicant passes the examination(s), a Certificate(s) of Registration for each type of examination passed shall be issued. If the applicant fails to pass an examination, the applicant may reapply and again pay the examination fees. No refund(s) will be given to the applicant after the Department has administered the examination(s).

2. **Renewal Application.** Before renewing a Certificate of Registration as a Registered Deputy Inspector, the Department shall collect a renewal Registration and examination fee in the amount of $482.00. A separate application shall be submitted and a separate examination fee shall be collected for each additional type of renewal registration desired. When the applicant passes the examination(s), a Certificate(s) of Registration for each type of examination passed shall be issued. If the applicant fails to pass the examination(s), the applicant may reapply, however the applicant must again pay

the renewal Registration and examination fees before the Department can issue the Certificate of Registration(s). No refund(s) will be given to applicant after the Department has administered the examination.

3. **International Code Council (ICC) Certification(s).** International Code Council (ICC) Certification(s) is required prior to taking the Department's new or renewal examination(s). In addition to ICC's certification, the Department's examination will be required for each type of registration and fees collected as specified in this Section.

EXCEPTIONS:

If the ICC does not have an examination for a Department registration, the applicant will be required to take the Department examination only.

The ICC Certification may not be required when the Department registration is utilized by the Department of Public Works for City business only.

91.1704.2.1.3. Failure to Pass Examination for Registered Deputy Inspector. Every applicant who fails to pass a new or renewal examination(s) shall not be eligible for re-examination until 30 days after taking the previous examination.

Sec. 42. Section 91.1704.2.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 43. Section 91.1704.2.3 of the Los Angeles Municipal Code is added to read as follows:

91.1704.2.3. Statement of Special Inspections. The permit applicant shall submit a statement of special inspections in accordance with Section 107.1 of this Code submit a statement of special inspections prepared by the registered design professional in responsible charge as a condition for permit issuance. This statement shall be in accordance with Section 1704.3.

EXCEPTIONS:

1. A statement of special inspections is not required for portions of structures designed and constructed in accordance with the cold-formed steel light-frame construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308.

2. The statement of special inspections is permitted to be prepared by a qualified person approved by the Superintendent of Building for construction not designed by a registered design professional.

Sec. 44. Section 91.1704.2.4 of the Los Angeles Municipal Code is added to read as follows:

91.1704.2.4. Report Requirement. In addition to all the requirements of Section 91.1704.1.4 , Registered Deputy inspectors shall keep records of inspections. The deputy inspector shall furnish inspection reports to the Superintendent of Building, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was or was not completed in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the Superintendent of Building and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon prior to the start of work by the permit applicant and the Superintendent of Building prior to the start of work.

Sec. 45. Section 91.1704.2.5.1 of the Los Angeles Municipal Code is added to read as follows:

91.1704.2.5.1. Fabrication and Implementation Procedures. The deputy inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards. The deputy inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work.

EXCEPTION: Special inspections as required by Section 1704.2.5 shall not be required where the fabricator is approved in accordance with Section 1704.2.5.2.

Sec. 46. Section 91.1704.2.5.2 of the Los Angeles Municipal Code is added to read as follows:

91.1704.2.5.2. Fabricator Approval. Pursuant to LAMC Section 96.200, special inspections required by Section 1705 are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by the Department. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the Superintendent of Building stating that the work was performed in accordance with the approved construction documents.

Sec. 47. Section 91.1704.3 of the Los Angeles Municipal Code is added to read as follows:

91.1704.3. Statement of Special Inspections. Where special inspection or testing is required by Section 1705, the registered design professional in responsible charge shall prepare a statement of special inspections in accordance with Section 1704.3.1 for submittal by the applicant in accordance with Section 1704.2.3.

EXCEPTION: The statement of special inspections is permitted to be prepared by a qualified person approved by the Superintendent of Building for construction not designed by a registered design professional.

91.1704.3.1. Content of Statement of Special Inspections. The statement of special inspections shall identify the following:

1. The materials, systems, components and work required to have special inspection or testing by the Superintendent of Building or by the registered design professional responsible for each portion of the work.

2. The type and extent of each special inspection.

3. The type and extent of each test.

4. Additional requirements for special inspection or testing for seismic or wind resistance as specified in Sections 1705.10, 1705.11 and 1705.12.

5. For each type of special inspection, identification as to whether it will be continuous special inspection or periodic special inspection.

Sec. 48. Section 91.1704.3.1.1 through and including 91.1704.3.1.3 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 49. Section 91.1704.4 of the Los Angeles Municipal Code is amended to read as follows:

91.1704.4. Contractor Responsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the Superintendent of Building and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

Sec. 50. Section 91.1704.4.1 of the Los Angeles Municipal Code is added to read as follows:

91.1704.4.1. Certified Licensed Contractors.

91.1704.4.1.1. Registration. Application for registration as a certified licensed contractor shall be made to the Superintendent of Building on a form furnished by the Department and a separate application shall be made for each type of registration desired. Before the application can be accepted, the applicant must furnish proof satisfactory to the Department that the applicant holds a valid active California State Contractor's License in the same specialty as the certification requested.

91.1704.4.1.2. Application.

1. **Form.** Application for a Certificate of Registration shall be made on a form furnished by the Department.

2. **Information Necessary.** The application shall bear the name and address of the applicant and, if the applicant is employed by a firm, partnership or corporation, the names of the principal officers should also be included. The application shall carry other information deemed necessary by the Department.

3. **Verification.** The applicant shall declare that the information contained in the application is true and correct.

4. **Fee.** The application shall be accompanied by an examination fee of $188.

91.1704.4.1.3. Examination.

1. **Examination Required.** Before issuance of a Certificate of Registration, the applicant shall have successfully passed the examination required for the issuance of the Certificate of Registration within 90 days preceding the date of the issuance. To be eligible for the examination for a Certificate of Registration, the applicant shall have a valid California State Contractor's License in an appropriate specialty and a valid City Business Tax Certificate.

2. **Board of Examiners.** The Superintendent of Building and/or Board of Examiners composed of three qualified persons appointed by the Superintendent shall conduct examinations. The results of every examination shall be subject to the approval of the Superintendent of Building. Each examiner shall serve at the pleasure of the Superintendent of Building and shall serve for a period of one year unless reappointed by the Superintendent.

3. **Scope of Examination.** The examination shall, in the judgment of the Superintendent of Building, fairly determine the ability of the applicant to perform properly the work, which he or she would be authorized to do by the Certificate of Registration requested, and may include the following:

a. A written test.

b. Practical tests as may be required.

c. An oral interview as may be required.

d. Other tests as may be required by the Board of Examiners.

4. **Time of Examination.** The applicant shall be examined as soon as practicable after filing an application.

5. **Rules and Regulations.** The Department shall have the authority to establish rules and regulations for the conduct of examinations.

6. **Fitness of Applicant.** Any applicant may be required to submit satisfactory proof of his or her fitness to carry out the intent of this Code.

7. **Failure to Pass.** An applicant who fails to pass an examination shall not be eligible for another examination until four weeks after taking the previous examination.

91.1704.4.1.4. Issuance of Certificates.

1. The Superintendent of Building shall issue separate Certificates of Registration for each of the following categories:

a. FAU/AC units; evaporative coolers.

b. Domestic water piping/plumbing fixtures/hot water heaters/solar panels.

c. Reroofing and roof repair.

d. Electrical equipment/fixtures/smoke detectors.

e. Masonry and concrete fences.

f. Masonry chimney repairs.

g. Shower pan replacement.

Nothing here prohibits any person from being qualified for more than one type of certification, provided the person makes application, pays the required fees, takes the required examinations and is duly qualified by the Superintendent of Building for each type of certification.

2. Upon payment of a $45.00 fee, the Department may issue a Certificate of Registration to every applicant who passes the required examination for a Certified Licensed Contractor.

3. Each Certificate of Registration shall expire 12 months from the date of issuance.

4. The Superintendent of Building shall keep on file a list, open to public inspection, of the names of all registered certified licensed contractors, showing the type of work each has been authorized to inspect.

5. Renewal of Certificates. Expired Certificates of Registration may be renewed at any time within 30 days following the date of expiration. After a Certificate of Registration has been expired for 30 days, it may not be renewed; rather, a new application for a new certificate must be submitted at that time.

91.1704.4.1.5. Exhibition of Certificate.

1. Every person having a fixed place of business shall keep his or her Certificate of Registration posted in some conspicuous location at his or her place of business during the time the certificate is in force.

2. Every person not having a fixed place of business shall carry his or her Certificate of Registration with him or her at all times while doing any inspections or other work pursuant to this certificate.

91.1704.4.1.6. Revocation of Certificate. The Superintendent of Building may revoke, suspend or refuse to renew any Certificate of Registration upon a showing of incompetence, willful or negligent failure to observe or report violations of this Code, or failure to maintain a valid active California State Contractor's License in the same specialty as the certification. Prior to any action, the holder shall be given an opportunity to appear before the Superintendent of Building and be heard.

Suspension or revocation of any Certificate of Registration issued under this Section shall be in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.

Sec. 51. Section 91.1704.5 of the Los Angeles Municipal Code is added to read as follows:

91.1704.5. Structural Observations. Where required by the provisions of Section 1704.5.1 or 1704.5.2, the owner shall employ the registered design professional in responsible charge for the structural design, or another registered design professional designated by the registered design professional in responsible charge for the structural design to perform structural observations as defined in Section 1702.

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

The owner or owner's representative shall coordinate and call a preconstruction meeting between the engineer or architect responsible for the structural design, structural observer, contractor, affected subcontractors and deputy 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 systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the first report submitted to the Superintendent of Building.

Observed deficiencies shall be reported in writing to the owner's representative, Registered Deputy Inspector, contractor and the Superintendent of Building. Upon the form prescribed by the Superintendent of Building, the structural observer shall submit to the Superintendent of Building a written statement at each significant construction stage stating that the site visits have been made and identify 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 Superintendent of Building.

91.1704.5.1. 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 in accordance with Table 1604.5.

2. The height of the structure is greater than 75 feet (22 860 mm) above the base.

3. The structure is assigned to Seismic Design Category E, is classified as Risk Category I or II in accordance with Table 1604.5, and is greater than two stories above grade plane 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 2000 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.

4. When so designated by the registered design professional responsible for the structural design.

5. When such observation is specifically required by the Department.

91.1704.5.2. Structural Observations for Wind Requirements. Structural observations shall be provided for those structures sited where V_{asd} as determined in accordance with Section 1609.3.1 exceeds 110 mph (49 m/sec), where one or more of the following conditions exist:

1. The structure is classified as Risk Category III or IV in accordance with Table 1604.5.

2. The building height of the structure is greater than 75 feet (22 860 mm).

3. When so designated by the registered design professional responsible for the structural design.

4. When such observation is specifically required by the Superintendent of Building.

Sec. 52. Section 91.1704.7 through and including 91.1704.22.2 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 53. Section 91.1705 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1705. REQUIRED VERIFICATION AND INSPECTION.

Section 1705 of the C.B.C. is adopted by reference, except Sections 1705.1.1, 1705.2.2.1.1, 1705.2.2.2, 1705.3, 1705.3.1, 1705.6, 1705.7, 1705.8, 1705.11, 1705.11.1, 1705.11.4, 1705.12.2, 1705.16.2,1705.17 of the C.B.C. are not adopted and in lieu Sections 91.1705.1.1, 91.1705.1.2, 91.1705.1.3, 91.1705.1.4, 91.1705.1.5, 91.1705.1.6, 91.1705.1.7, 91.1705.1.8, 91.1705.1.9, 91.1705.1.10, 91.1705.1.11, 91.1705.2.2.1.1, 91.1705.2.2.1.2, 91.1705.2.2.1.3, 91.1705.2.2.1.3.1, 91.1705.2.2.1.3.2, 91.1705.2.2.2, 91.1705.3, 91.1705.3.1, 91.1705.3.2, 91.1705.6, 91.1705.6.1, 91.1705.7, 91.1705.8, 91.1705.11, 91.1705.11.1, 91.1705.11.4, 91.1705.12.2, 91.1705.16.2, and 91.1705.17 are added.

91.1705.1.1. Special Cases. Special inspections shall be required for proposed work that is, in the opinion of the Superintendent of Building, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.

2. Unusual design applications of materials described in this code.

3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this Code.

91.1705.1.2. Certifications by Architect, Engineer or Geologist. If a structure or portion of a structure has been designed to utilize higher stresses requiring continuous inspection, the architect or engineer in charge of the design shall certify by signature to the Department that to the best of his or her knowledge, the structure or portion utilizing higher stresses was constructed in conformity with the approved design. If the grading or foundation earthwork has required continuous inspection, the responsible engineering geologist or soils engineer shall certify by signature to the Department that to the best of his or her knowledge the field work was completed in conformity with the technical design data.

91.1705.1.3. Department's Responsibility. The employment of a Registered Deputy Inspector for any work does not deprive the Department of the right to make periodic or called inspections of all or portions of the work. On any work requiring continuous inspection by a Registered Deputy Inspector, the called inspections required by Section 91.108 of this Code may be delegated to the Registered Deputy Inspector by the Superintendent of Building.

91.1705.1.4. Structural, Termite and Fungus Damage. Every building raised from its foundation shall be inspected. If there is any superficial evidence of structural damage, termites or fungus growth, the permittee shall remove and renew the damaged or infested members before reseating the building or moving it from its existing site or into the City.

91.1705.1.5. Emergencies or Catastrophes. In the event of an emergency or of a major catastrophe in the City, the Department may deputize Emergency Building Inspectors for the Department. The inspectors shall receive no compensation from the City, and they shall be appointed for the periods of time the Department deems advisable.

91.1705.1.6. Special Activity Inspection. In addition to the construction or work inspected as described in Sections 91.108 and 91.1704 through 91.1705 of this Code, there are other construction activities that are sufficiently important to the structural stability of the structure, the occupants of and the fire and life safety of the structure that inspection by a specially qualified inspector of these activities is necessary in order to ensure compliance with the requirements of this Code. These special activity inspections may occur during off-site fabrication or during on-site construction.

Inspections by Department Approved Special Activity Inspectors will be required in accordance with regulations promulgated by the Superintendent of Building where:

1. The structure is more than five stories or 60 feet (18,288 mm) in height.

2. The structure exceeds 50,000 square feet (4645 m^2) of ground area or 200,000 square feet (18 580 m^2) of total floor area.

3. Nondestructive structural testing methods are utilized.

4. The quality identification markings of the materials used are not inspectable after installation.

5. The manner of use of materials precludes full inspection after installation.

EXCEPTION: The Department may waive continuous or periodic inspection required by this Section where minor quantities are involved and no unusual hazards exist.

In addition to the projects included in the above categories, the Superintendent of Building may require Special Activity inspections if the Superintendent determines that these inspections are needed to ensure compliance with the provisions of this Code and the work involves:

6. Unique, novel or innovative construction;

7. Highly complex or intricate construction;

8. Unique, novel or innovative grading, earth support or foundation procedures; or

9. New methods of construction not yet provided for in the rules and regulations.

Special Activity inspection authority will be determined on a case by case basis and will require Deputy Inspector registration. The Superintendent of Building shall adopt rules and regulations implementing the provisions of this Section. These regulations may establish and set the requirements for different types of Department Approved Special Activity Inspectors.

91.1705.1.7. Special Activity Inspection Authority.

91.1705.1.1.8. Registration. The procedures and conditions of registration as a Special Activity Inspector shall be the same as applicable to a Registered Deputy Inspector under Section 91.1704.2.1.2., except that the extent and duration of special inspection authority shall be as specified in the rules and regulations adopted by the Superintendent of Building.

91.1705.1.9. Duties. Except as otherwise indicated by regulations promulgated by the Superintendent of Building, the duties and responsibilities for a Special Activity Inspector shall be the same as specified for a Registered Deputy Inspector under Section 91.1704.2.1.1 of this Code.

91.1705.1.10. Fees. The procedures for the examination, registration and renewal of authority as a Special Activity Inspector shall be the same as specified for Registered Deputy Inspectors under Section 91.1704.1.3 of this Code.

91.1705.1.11. Renewal Process. Section 91.1704.1.3 applies to the application, examination and renewal process for registration as a Special Activity Inspector.

Sec. 54. Section 91.1705.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 55. Section 91.1705.2.2.1.1 of the Los Angeles Municipal Code is added to read as follows:

91.1705.2.2.1.1. Cold-formed Steel. Welding inspection shall be performed by a registered deputy inspector qualified by the Department for cold-formed steel floor and roof decks. Welding shall be in accordance with AWS D1.3.

91.1705.2.2.1.2. Reinforcing Steel. Welding inspection shall be performed by a registered deputy inspector qualified by the Department for reinforcing steel. Welding shall be in accordance with AWS D1.4 and ACI 318.

91.1705.2.2.1.3. Certification of Welders.

91.1705.2.2.1.3.1. The Department shall establish procedures, rules and regulations for the issuance of Welder's Certifications.

A fee of $110.00 shall be paid on each application for certification or renewal. $50.00 of the fee shall be paid prior to the Department's examination for a new certification and the remaining amount shall be paid after the examination. Certificates shall be issued for a period of three years and may be renewed for additional three-year periods.

91.1705.2.2.1.3.2. The Superintendent of Building shall suspend or revoke any certificate upon evidence of failure of the person so certified to conduct welding operations in compliance with any of the conditions upon which it is based, or where quality of workmanship is not equivalent to that required by the code, or for any of the reasons set forth in Article 8, Chapter IX of the Los Angeles Municipal Code. Any action shall be in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.

91.1705.2.2.2. Cold-formed Steel Trusses Spanning 60 Feet or Greater. Where a cold-formed steel truss clear span is 60 feet (18 288 mm) or greater, the deputy inspector shall verify that the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing are installed in accordance with the approved truss submittal package.

Sec. 56. Section 91.1705.3 of the Los Angeles Municipal Code is amended to read as follows:

91.1705.3. Concrete Construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1705.3.

EXCEPTION: Special inspections 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, no greater than 2,500 pounds per square inch (psi) (17.2 MPa).

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

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

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

2.3. The structural design of the footing is based on a specified compressive strength, f'_c, no greater than 2,500 pounds per square inch (psi) (17.2 MPa), regardless of the compressive strength specified in the construction documents or used in the footing construction.

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 foundation walls constructed in accordance with Table 1807.1.6.2.

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

TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD[a]	IBC REFERENCE

1. Inspection of reinforcing steel, including prestressing tendons, and placement.	—	X	ACI 318: 3.5, 7.1-7.7	1910.4
2. Inspection of reinforcing steel welding in accordance with Table 1705.2.2, Item 2b.	—	—	AWS D1.4 ACI 318: 3.5.2	—
3. Inspection of anchors cast in concrete where allowable loads have been increased or where strength design is used.	—	X	ACI 318: 8.1.3, 21.2.8	1908.5, 1909.1
4. Inspection of anchors post-installed in hardened concrete members[b].	—	X	ACI 318: 3.8.6, 8.1.3, 21.2.8	1909.1
5. Verifying use of required design mix.	—	X	ACI 318: Ch. 4, 5.2-5.4	1904.2, 1910.2, 1910.3
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10
7. Inspection of concrete and shotcrete placement for proper application	X	—	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8

techniques.				
8. Inspection for maintenance of specified curing temperature and techniques.	—	X	ACI 318: 5.11-5.13	1910.9
9. Inspection of prestressed concrete: a.Application of prestressing forces. b.Grouting of bonded prestressing ten-dons in the seismic force-resisting system.	X X	— —	ACI 318: 18.20 ACI 318: 18.18.4	—
10. Erection of precast concrete members.	—	X	ACI 318: Ch. 16	—
11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 6.2	—
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 6.1.1	—

For SI: 1 inch = 25.4 mm.

a. Where applicable, see also Section 1705.11, Special inspections for seismic

resistance.

b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with ACI 355.2 or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the Superintendent of Building prior to the commencement of the work.

91.1705.3.1. Structural Inspection - Concrete. During the construction of all buildings over 160 feet (48,768 mm) in height with concrete special moment-resisting space frames, a structural inspector under the supervision of the engineer responsible for the structural design shall be present to inspect the materials and workmanship for conformance with approved plans, specifications and change orders involved in construction of the ductile frames and shear walls. This inspection may be made by one or more structural inspectors, provided that at least one structural inspector is present during the placement of all concrete and reinforcement in the structural frame and shear walls.

The number of structural inspectors to be provided for each structure shall be determined by the engineer responsible for the structural design, provided that more than one structural inspector shall be provided where the magnitude of a structure prevents a single inspector from adequately performing the inspection.

The owner shall provide for each structural inspector. Each structural inspector shall be paid by the owner directly or through the person responsible for the structural design. Each structural inspector shall be responsible to the person who prepared the structural design.

The inspection by the structural inspector or inspectors shall be in addition to inspections made by Department employees as specified in Section 91.108 of this Code and by Registered Deputy Inspectors as specified for other parts of the work in Section 91.1704.1 this Code.

Prior to the issuance of the Certificate of Occupancy, each structural inspector shall submit a report in writing to the engineer and the Department certifying that the portions of the structural frame inspected by the inspector were constructed in accordance with the approved plans, specifications, change orders and Division 19 of this Code.

91.1705.3.2. Materials. In the absence of sufficient data or documentation providing evidence of conformance to quality standards for materials in Chapter 3 of ACI 318, the Superintendent of Building shall require testing of materials in accordance with the appropriate standards and criteria for the material in Chapter 3 of ACI 318. Weldability of reinforcement, except that which conforms to ASTM A 706, shall be determined in accordance with the requirements of Section 3.5.2 of ACI 318.

91.1705.6. Soils. Special inspections defined per Sections 7008.2 and 7011.3 of this Code for existing site soil conditions, fill placement and load-bearing requirements shall be as required by this section and Table 1705.6. The approved geotechnical report, and the construction documents prepared by the registered design professionals shall be used to determine compliance. During fill placement, the special inspector shall determine that proper materials and procedures are used in accordance with the provisions of the approved geotechnical report, as specified in C.B.C. Section 1803.5.

EXCEPTION: Special inspection is not required during placement of controlled fill having a total depth of 12 inches (305 mm) or less and where the fill is not used for graded slopes or for support of footings or foundations.

91.1705.6.1. Grading. A registered Grading Inspector is required under all conditions here the site grading or foundation earthwork planned on a project has any of the following:

1.1. A contiguous grading area exceeding 60,000 square feet (5574 m^2).

1.2. An excavated or filled slope steeper than 2 horizontal in 1 vertical (50 percent slope).

1.3. An excavated slope exceeding 40 feet (12,192 mm) in height and the top of which is within 20 feet (6096 mm) of a property line coterminous with improved private property or a public way.

1.4. Foundation excavations below a 1 horizontal in 1 vertical plane inward and down from the property line.

EXCEPTION: The department may waive continuous inspection where minor areas or heights are involved and no unusual hazards exist.

TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X

2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	—	X

a. Frequency of special inspections to be determined by the registered design professional responsible for the project.

91.1705.7. Driven Deep Foundations and Connecting Grade Beams. Special inspections shall be performed during installation and testing of driven deep foundation elements as required by Table 1705.7. The *approved* geotechnical report, required by CBC Section 1803.2, and the construction documents prepared by the registered design professionals in responsible charge, shall be used to determine compliance. Special inspections for connecting grade beams shall be in accordance with Section 91.1705.4 of this Code.

91.1705.8. Cast-in-Place Deep Foundations and Connecting Grade Beams. Special inspections shall be performed during installation and testing of cast-in-place deep foundation elements as required by Table 1705.8. The approved geotechnical report, required by Section 1803.3 and the construction documents prepared by the

registered design professionals in responsible charge, shall be used to determine compliance. Special inspections for connecting grade beams shall be in accordance with Section 91.1705.4 of this Code.

91.1705.11.1. Structural Steel. Special inspection for structural steel shall be in accordance with the quality assurance requirements of AISC 341 and during the fabrication and erection of buildings over 160 feet (48,768 mm) in height with structural steel moment-resisting frames. A Registered Deputy Inspector under the supervision of the engineer responsible for the structural design shall be present during the performance of all structural welding or the installation of all high-strength bolts whether in a fabricator's shop or at the job site.

EXCEPTIONS:

1. Single-pass fillet welds not exceeding 5/16-inch (7.9 mm) in size.

2. Floor and roof deck welding.

91.1705.11.1.1. Certification. For buildings exceeding 160 feet (48,768 mm) in height, the engineer responsible for the structural design and the general contractor responsible for the construction, or their competent authorized representatives, shall make periodic inspections of the work at the site to verify general compliance with the approved plans, specifications and change orders. The engineer and general contractor shall submit a statement in writing to the Department stating that they know from personal knowledge that the materials installed and the structural work performed is in compliance with the approved plans, specifications and change orders.

The phrase "personal knowledge" as used above in reference to the engineer and general contractor means the knowledge resulting from the general observation by the engineer and the general supervision by the contractor of the work, as required by both in the superintendence of the building's construction, and as distinguished from the continuous personal superintendence of the special inspector and/or deputy inspector who are continuously at the site during the progress of the work. The exercise of reasonable diligence to obtain the facts is required and anyone who intentionally remains unaware may be charged with knowledge. The interpretation of personal knowledge as it applies to the special inspector and/or deputy inspector is that the inspector(s) must have actual personal knowledge that the requirements of the plans and specifications are being carried out, which is obtained by the inspector's continuous observation of the work of construction at the site in all stages of its progress.

Exception: Special inspections of structural steel in structures assigned to *Seismic* Design Category C that are not specifically detailed for seismic resistance, with a response modification coefficient, *R*, of 3 or less, excluding cantilever column systems.

91.1705.11.4. Designated Seismic Systems Verifications. The deputy inspector shall examine designated seismic systems requiring seismic qualification in accordance

with Section 1705.12.3 and verify that the *label*, anchorage or mounting conforms to the certificate of compliance and any applicable research report.

91.1705.12.2. Structural Steel. Testing for structural steel shall be in accordance with the quality assurance requirements of AISC 341 and the additional requirements in this Section. Nondestructive testing shall be performed by an approved agency and the written report, including the test results, shall be submitted for evaluation by the Superintendent of Building. The acceptance criteria for nondestructive testing shall be as required in AWS D1.1 as specified by the registered design professional.

Base metal thicker than 1.5 inches (38 mm), where subject to through-thickness weld shrinkage strains, shall be ultrasonically tested for discontinuities behind and adjacent to those welds after joint completion. Any material discontinuities shall be accepted or rejected on the basis of ASTM A 435 or ASTM A 898 (Level 1 criteria) and criteria as established by the registered design professional(s) in responsible charge, and the construction documents.

EXCEPTION: Testing for structural steel in structures assigned to Seismic Design Category C that are not specifically detailed for seismic resistance, with a response modification coefficient, *R*, of 3 or less, excluding cantilever column systems.

91.1705.16.2. Fire-Resistant Joint Systems. Inspection of fire-resistant joint systems that are tested and listed in accordance with Sections 715.3 and 715.4 shall be conducted by an approved deputy inspector in accordance with ASTM E 2393.

91.1705.17. Special Inspection for Smoke Control. Smoke control systems shall be tested by a deputy inspector.

Sec. 56. Section 91.1706 of the Los Angeles Municipal Code is added to read as follows:

SEC. 91.1706. DESIGN STRENGTHS OF MATERIALS

Section 1706 of the CBC is adopted by reference, except Section 1706.1 of the C.B.C. is not adopted and in lieu, Section 91.1706.1 is added.

91.1706.1. Conformance to Standards.

The design strengths and permissible stresses of any structural material that are identified by a manufacturer's designation as to manufacture and grade by mill tests, or the strength and stress grade is otherwise confirmed to the satisfaction of the Superintendent of Building, shall conform to the specifications and methods of design of accepted engineering practice or the *approved* rules in the absence of applicable standards.

Sec. 57. Section 91.1707 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1707. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

Section 1707 of the C.B.C. is adopted by reference, except Sections 1707.1 of the C.B.C. is not adopted and in lieu Section 91.1707.1 is added.

91.1707.1. General. In the absence of approved rules or other approved standards, the Superintendent of Building shall make, or cause to be made, any necessary tests and investigations; or the Superintendent of Building shall accept duly authenticated reports from *approved agencies* in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.11. The cost of all tests and other investigations required under the provisions of this code shall be borne by the applicant.

Sec. 58. Section 91.1707.2 through and including 91.1707.10 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 59. Section 91.1708 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1708. STRUCTURAL TESTING FOR SEISMIC RESISTANCE.

Section 1708 of the C.B.C. is adopted by reference, except Section 1708.1 of the C.B.C. is not adopted and in lieu Section 91.1708.1 is added.

91.1708.1. Where Required. Where proposed construction is not capable of being designed by approved engineering analysis, or where proposed construction design method does not comply with the applicable material design standard, the system of construction or the structural unit and the connections shall be subjected to the tests prescribed in Section 1710. The Superintendent of Building shall accept certified reports of such tests conducted by an approved testing agency, provided that such tests meet the requirements of this code and approved procedures.

Sec. 60. Section 91.1708.3 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 61. Section 91.1709 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 62. Section 91.1710 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 63. Section 91.1711 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 64. Section 91.1712 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1712. CERTIFIED SECUIRTY BAR INSTALLER.

91.1712.1. General. A certified security bar installer may certify to the Department of Building and Safety that any bars, grilles, grates, security rolldown shutters, or similar devices installed on required emergency escape windows or doors meet the requirements of Section 91.6304.3 of this Code.

The Department may allow the use of a certified installer if:

1. The certified installer obtains a Certificate of Registration in accordance with the provisions of this section.

2. The certified installer files with the Department a Certificate of Compliance for each dwelling unit for which certification is being made. The Certificate of Compliance shall be on a form provided by the Department and shall be signed by the property owner and the certified installer.

3. The Certificate of Compliance processing fee is paid in accordance with Section 91.107.7 of this Code.

4. The certified installer files the Certificate of Compliance with the Department within 15 days after completion of the installation.

91.1712.2. Registration. A certified installer shall obtain a Certificate of Registration from the Department of Building and Safety.

91.1712.3. Application.

91.1712.3.1. Forms. Application for a certified security bar installer Certificate of Registration shall be made on a form furnished by the Department.

91.1712.3.2. Information Necessary. The application shall bear the name and address of the applicant and, if a firm, partnership or corporation, the names of the principal officers. The application shall carry other information deemed necessary by the Department.

91.1712.3.3. Verification. The applicant shall declare that the information contained in the application is true and correct.

91.1712.3.4. Fees. The application shall be accompanied by an examination fee of $125.00.

91.1712.4. Examination.

91.1712.4.1. Examination Required. Before any person shall be issued a Certificate of Registration, the applicant, who must be an officer in the case of a firm, partnership or corporation, shall have successfully passed the examination required for the issuance of the certificate within 90 days preceding the date of the issuance.

91.1712.4.2. Experience Required. To be eligible for the examination for a Registration Certificate, the applicant shall have a valid California State Contractor's License in an appropriate specialty and a valid City Business Tax Certificate.

91.1712.4.3. Board of Examiners. The Superintendent of Building or a Board of Examiners composed of qualified person(s) appointed by the Superintendent shall conduct examinations.

The results of every examination shall be subject to the approval of the Superintendent.

Each examiner shall serve at the pleasure of the Superintendent of Building and shall serve for a period of one year unless reappointed by the Superintendent.

91.1712.4.4. Scope of Examination. The examination shall, in the judgment of the board, fairly determine the ability of the applicant to perform properly the work, which he or she would be authorized to do by the certificate requested, and may include the following:

1. A written test.
2. Practical tests as may be required.
3. An oral interview as may be required.
4. Other tests as may be required by the Board of Examiners.

91.1712.4.5. Time of Examination. The applicant shall be examined as soon as practicable after filing an application.

91.1712.4.6. Rules and Regulations. The Department shall have the authority to establish rules and regulations for the conduct of examinations.

91.1712.4.7. Fitness of Applicant. Any applicant for a certificate may be required to submit satisfactory proof of his or her fitness to carry out the intent of this Code.

91.1712.4.8. Failure to Pass. Every applicant who fails to pass an examination shall not be eligible for another examination until four weeks after taking the previous examination. Any applicant who fails to pass on the third try shall not be eligible again until six months after taking the previous examination.

91.1712.5. Issuance of Certificates.

91.1712.5.1. Upon the payment of a $90.00 fee, the Department may issue a Certificate of Registration to every applicant who passes the required examination for a certified security bar installer.

91.1712.5.2. Renewal of Certificates. Expired certificates may be renewed at any time within 12 months following the date of expiration. However, after the first month, the renewal fee shall be increased by ten percent for each subsequent month. After a certificate has been expired for one year, it may not be renewed; however, an applicant may apply for a new certificate at that time.

91.1712.6. Exhibition of Certificate.

91.1712.6.1. Every person having a fixed place of business shall keep his or her Certificate of Registration posted in some conspicuous location at his or her place of business during the time the certificate is in force.

91.1712.6.2. Every person not having a fixed place of business shall carry his or her Certificate of Registration with him or her at all times while doing any work pursuant to this certificate.

91.1712.7. Revocation of Certificate. Any certificate may be suspended or revoked in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.

91.1712.8. Transfer of Certificate. No certificate shall be transferable. A Certificate of Registration issued to a firm, partnership or corporation may not be transferred. The dissolution of a firm, partnership or corporation renders the certificate void.

Sec. 65. Section 91.1713 of the Los Angeles Municipal Code is added to read as follows:

SEC. 91.1713. PREFABRICATED CONSTRUCTION.

91.1713.1. General.

91.1713.1.1. Purpose. The purpose of this section is to regulate materials and establish methods of safe construction where any structure or portion of the structure is wholly or partially prefabricated.

91.1713.1.2. Scope. Unless otherwise specifically stated in this section, all prefabricated construction and all materials used in the construction shall conform to all the requirements of this Code. (See Section 91.104.2.6.)

91.1713.1.3. Definition.

PREFABRICATED ASSEMBLY is a structural unit, the integral parts of which have been built up or assembled prior to incorporation in the building.

91.1713.2. Tests of Materials. Every approval of a material not specifically mentioned in this Code shall incorporate as a proviso, the kind and number of tests to be made during prefabrication.

91.1713.3. Tests of Assemblies. The Superintendent of Building may require special tests to be made on assemblies to determine their durability and weather resistance.

91.1713.4. Connections. See C.B.C. Section 1611.11.1 for design requirements of connections for prefabricated assemblies.

91.1713.5. Pipes and Conduits. See C.B.C. Section 1611.11.2 for design requirements for removal of material for pipes, conduits and other equipment.

91.1713.6. Certificate and Inspection.

91.1713.6.1. Materials. Materials and the assembly of materials shall be inspected to determine compliance with this Code. Every material shall be graded, marked or labeled where required elsewhere in this Code.

91.1713.6.2. Certificate. A Certificate of Approval shall be furnished with every prefabricated assembly, except where the assembly is readily accessible to inspection at the site. The Certificate of Approval shall certify that the assembly in question has been inspected and meets all the requirements of this Code. When mechanical equipment is installed so that it cannot be inspected at the site, the Certificate of Approval shall certify that the equipment complies with all applicable laws and regulations.

91.1713.6.3. Certifying Agency. To be acceptable under this Code, every Certificate of Approval shall be made by an approved agency.

91.1713.6.4. Field Erection. Placement of prefabricated assemblies at the building site shall be inspected by the Department to determine compliance with this Code.

91.1713.6.5. Continuous Inspection. If continuous inspection is required for certain materials where construction takes place on the site, it shall also be required where the same materials are used in prefabricated construction.

EXCEPTION: Continuous inspection will not be required during prefabrication if the approved agency certifies to the construction and furnishes evidence of compliance.

Sec. 65. Section 91.1715 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 66. Section 91.1716 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 67. Section 91.1717 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 68. Section 91.1718 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 69. Section 91.1802 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1802. DEFINITIONS.

Section 1802 of the C.B.C. is adopted by reference.

Sec. 70. Section 91.1804 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1804. EXCAVATION, GRADING AND FILL.

Section 1804 of the C.B.C. is adopted by reference.

Sec. 71. Section 91.1807 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1807. FOUNDATION WALLS, RETAINING WALLS, AND EMBEDDED POST AND POLES.

Section 1807 of the C.B.C. is adopted by reference, except Sections1807.1.4 and 1807.1.6 the C.B.C. are not adopted and in lieu, Sections 91.1807.1.4 and 91.1807.1.6 are added.

91.1807.1.4. Permanent Wood Foundation Systems. Permanent wood foundation systems shall be designed and installed in accordance with AF & PA PWF and as otherwise approved by the Department. 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 2303.1.8.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E or F.

EXCEPTION: Accessory buildings not used for human occupancy and less than 120 square feet (11.1 m^2) in area may be supported on treated wood mud sills.

91.1807.1.6. 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.

Sec. 72. Section 91.1808 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1808. FOUNDATIONS.

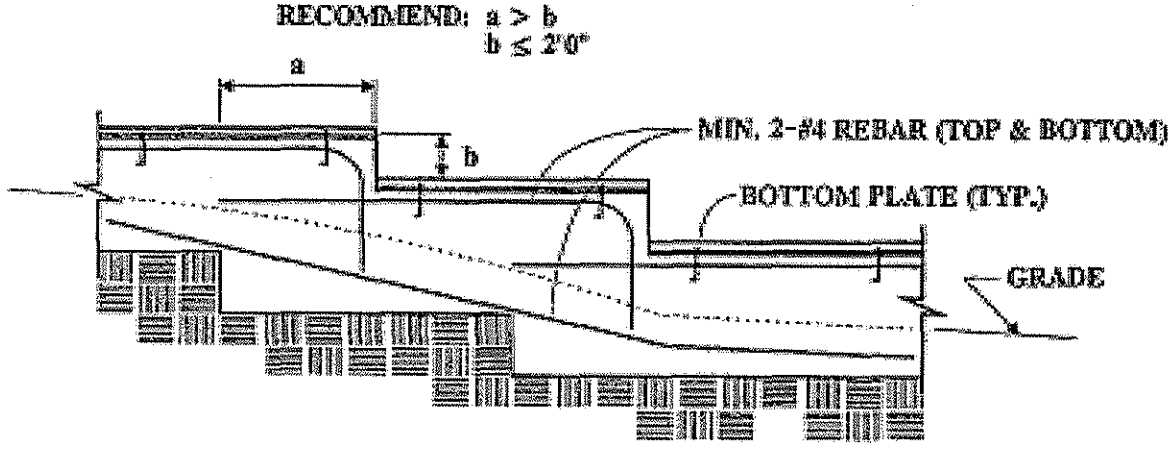
Section 1808 of the C.B.C. is adopted by reference.

Sec. 73. Section 91.1809 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1809. SHALLOW FOUNDATIONS.

Section 1809 of the CBC is adopted by reference, except Section 1809.3, 1809.4 and 1809.12 are not adopted and in lieu Sections 91.1809.3, 91.1809.4, 91.1809.7 and 91.1809.12 are added.

91.1809.3. Stepped Footing. 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 ½ inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1809.3 of this Code.



STEPPED FOUNDATIONS

91.1809.4. Depth and Width of Footings. The minimum depth of footings below the surface of undisturbed soil, compacted fill material or CLSM shall be 12 inches (305 mm). Where applicable, the requirements of C.B.C. Section 1809.5 shall also be satisfied. The minimum width of footings shall be 12 inches (305 mm).

91.1809.7. Prescriptive Footings for Light-Frame Construction. Where a specific design is not provided, concrete or masonry-unit footings supporting walls of light-frame construction shall be permitted to be designed in accordance with Table 1809.7. Prescriptive footings in 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-FRAMED CONSTRUCTION [a, b, c, d, e]

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

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

a. Depth of footings shall be in accordance with Section 1809.4.
b. The ground under the floor is permitted to be excavated to the elevation of the top of the footing.
c. Not adopted.
d. See CBC Section 1908 for additional requirements for footings of structures assigned to Seismic Design Category C, D, E or F.
e. For thickness of foundation walls, see Section 91.1807.1.6 of this Code.
f. Footings are permitted to support a roof in addition to the stipulated number of floors. Footings supporting roof only shall be as required for supporting one floor.

91.1809.12. Timber Footings. Timber footings shall be permitted for buildings of Type V construction and as otherwise approved by the Department. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footings supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the AF&PA NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E or F.

Sec. 74. Section 91.1810.3.2.4 of the Los Angeles Municipal Code is amended to read as follows:

91.1810.3.2.4. Timber. Timber deep foundation elements shall be designed as piles or poles in accordance with AF&PA NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20. Timber shall not be used in structures assigned to Seismic Design Category D, E or F.

Sec. 75. Section 91.1810.3.3.1.4 of the Los Angeles Municipal Code is amended to read as follows:

91.1810.3.3.1.4. Allowable Frictional Resistance. The assumed frictional resistance developed by any uncased cast-in-place deep foundation element shall not exceed one-sixth of the bearing value of the soil material at minimum depth as set forth in CBC Table 1806.2, up to a maximum of 500 psf (24 kPa), unless a greater value is allowed by the Department on the basis of a geotechnical investigation as specified in Section 1803 or a greater value is substantiated by a load test in accordance with CBC Section 1810.3.3.1.2. Frictional resistance and bearing resistance shall not be assumed to act simultaneously.

Sec. 76. Section 91.1810.3.10.4 of the Los Angeles Municipal Code is amended to read as follows:

91.1810.3.10.4. Seismic Reinforcement. For structures assigned to Seismic Design Category C, a permanent steel casing shall be provided from the top of the micropile down to the point of zero curvature. For structures assigned to Seismic Design Category D, E or F, the micropile shall be considered as an alternative system in accordance with L.A.M.C. Section 91.104.2.6. The alternative system design, supporting documentation and test data shall be submitted to the Department for review and approval.

Sec. 77. Division 19 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.1900. BASIC PROVISIONS.

Chapter 19 of the CBC is adopted by reference, except that Sections 1908.1, 1908.1.2, 1908.1.8 and 1909.4 of the CBC are not adopted and Sections 91.1905.1, 91.1905.1.8, 91.1905.1.11, 91.1905.1.12, 91.1905.1.13, and 91.1906.1 of this Code are added.

91.1905.1. General. The text of ACI 318 shall be modified as indicated in C.B.C. Sections 1905.1.1 through 1905.1.13.

91.1905.1.8. ACI 318, Section 22.10. Delete ACI 318, Section 22.10, and replace with the following:

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

22.10.1 – 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 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.

In detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, plain concrete footings with at least two continuous longitudinal reinforcement bars not smaller than No.4 are permitted to have a total area of less than .002 times the gross cross-sectional area of the footing.

91.1905.1.10. ACI 318, Section 21.6.4. Modify ACI 318, Section 21.6.4 by adding section 21.6.4.8 to read as:

21.6.4.8 - Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318 Section 21.6.4.1 items (a) through (c), over the full height of the member.

91.1905.1.11. ACI 318, Section 21.6.4. Modify ACI 318, Section 21.6.4, by adding Section 21.6.4.9 to read as follows:

21.6.4. 9 – At any section where the design strength, $\square P_n$, of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 21.5.4.1 and 21.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 21.6.4.1 through 21.6.4.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For determination of the design strength, P_n, of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

91.1905.1.12. ACI 318, Section 21.9.4. Modify ACI 318, Section 21.9.4, by adding Section 21.9.4.6 to read as follows:

21.9.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated strength of the structure for resisting earthquake-

induced forces. Such walls shall conform to the requirements of ACI 318 Section 21.13.

91.1905.1.13. ACI 318, Section 21.11.6. Modify ACI 318, Section 21.11.6. by adding Section 21.11.6.1 as follows:

21.11.6.1 - Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 d_b thick, where d_b is the diameter of the largest reinforcement in the topping slab. [C.B.C. Section 1913.3.6]

91.1906.1. STRUCTURAL PLAIN CONCRETE.

Scope. The design and construction of structural plain concrete, both cast-in-place and precast, shall comply with the minimum requirements of ACI 318, as modified in Section 1905.

EXCEPTION: For Group R-3 occupancies and buildings of other occupancies less than two stories above grade plane of light-frame construction, the required footing thickness of ACI 318 is permitted to be reduced to 6 inches (152mm), provided that the footing does not extend more than 4 inches (102 mm) on either side of the supported wall. This exception shall not apply to structural elements designed to resist seismic lateral forces for structures assigned to Seismic Design Category D, E, or F.

Sec. 77. Sections 91.1908.1 through and including 91.1909.4 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 78. Section 91.2113.3 of the Los Angeles Municipal Code is amended to read as follows:

91.2113.3. Seismic Reinforcing. Masonry or concrete chimneys shall be constructed, anchored, supported and reinforced as required in this division. In structures assigned to Seismic Design Category C or D, masonry and concrete chimneys shall be reinforced and anchored as detailed in C.B.C. Sections 2113.3.1, 2113.3.2 and 2113.4. In structures assigned to Seismic Design Category A or B, reinforcement and seismic anchorage is not required. In structures assigned to Seismic Design Category E or F, masonry and concrete chimneys shall be reinforced in accordance with the requirements of C.B.C. Sections 2101 through 2108.

Notwithstanding any other provisions of this Code, an existing masonry chimney, which is altered or repaired more than ten percent of its replacement cost within a 12-month period, shall have its entire chimney structure comply with the current requirements of this Code or other standards approved by the Superintendent of Building.

Sec. 79. Section 91.2200 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.2200. BASIC PROVISIONS.

Chapter 22 of the CBC is adopted by reference, except that Section 2204.1 of the CBC is modified as follows 91.2204.1 and 91.2205. 3 are added.

Sec. 80. Section 91.2204 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.2204. CONNECTIONS.

91.2204.1. Welding. The details of design, workmanship and technique for welding, inspection of welding and qualification of welding operators shall conform to the requirements of the specifications listed in Sections 2205, 2206, 2207, 2208, 2209, 2210 and 2211. Special inspection of welding shall be provided where required by Section 91.1705.

All welding, except when performed at the shop of an approved fabricator, shall be done by operators certified by the Department for the type of operation involved in accordance with the provisions of C.B.C. Section 1705.2.2.1.

Complete details of location, type, size and amount of all welds shall be clearly shown on the plans. Where symbols are used on the plans, they shall be the "**Standard Welding Symbols**," AWS A 2.4, of the American Welding Society (AWS). When it is necessary to use a special erection sequence of welding to minimize locked-up stresses or distortion, the Department may require the erection sequence of welding to be shown on the plans.

Welding procedures are qualified if they are in accordance with the AWS. Other welding procedures require special qualification approval by the Department. Each application for a special qualification shall be accompanied by a fee of $50.00.

Sec. 81. Section 91.2205.4 of the Los Angeles Municipal Code is renumbered as Section 91.2205.3 and amended to read as follows:

91.2205.3. Modifications to AISC 341, Section F2.5, Members, Special Concentrically Braced Frames (SCBF) Modifications. AISC 341, Section F2.5b. is modified to add a new requirement as follows:

Section F2.5b(4) - The use of rectangular HSS are not permitted for bracing members, unless filled solid with cement grout having a minimum compressive strength of 3000 psi (20.7 MPa) at 28 days. The effects of composite action in the filled composite brace shall be considered in the sectional properties of the system where it results in the more severe loading condition or detailing.

Sec. 82. Section 91.2306.2.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 83. Section 91.2306.2 of the Los Angeles Municipal Code is amended to read as follows:

91.2306.2. Wood-Frame Diaphragms. Wood-frame diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. Where panels are fastened to framing members with staples, requirements and limitations of AF&PA SDPWS shall be met and the allowable shear values set forth in C.B.C.Table 2306.2(1) or 2306.2(2) shall only be permitted for structures assigned to Seismic Design Category A, B, or C.

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

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

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

EXCEPTION: Wood structural panel diaphragm is 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.

Sec. 84. Section 91.2306.3 of the Los Angeles Municipal Code is amended to read as follows:

91.2306.3. Wood-Frame Shear Walls. Wood-frame shear walls shall be designed and constructed in accordance with AF&PA SDPWS. For structures assigned to Seismic Design Category D, E, or F, application of Tables 4.3A and 4.3B of AF&PA 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 three-ply plywood resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 400 pounds per linear foot (plf).

3. Where shear design values using allow stress design (ASD) exceed 350 plf or load and resistance factor design (LRFD) exceed 500 plf, all framing members receiving edge nailing from abutting panels shall not be less

than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered at all panel edges. See Section 4.3.6.1 and 4.3.6.4.3 of AF&PA SDPWS for sill plate size and anchorage requirements.

4. 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.

5. 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 AF&PA SDPWS shall not be used below the top level in a multi-level building for structures.

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

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

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

Sec. 85. Section 91.2308 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.2308. CONVENTIONAL LIGHT-FRAME CONSTRUCTION.

Section 2308 of the C.B.C. is adopted by reference, except that Sections 2308.3.4, 2308.9.3.1, 2308.12.1, 2308.12.2, 2308.12.4 and 2308.5 of the C.B.C. are not adopted and, in lieu, Sections 91.2308.3.4, 91.2309.3.1, 91.2308.9.3.2, 91.2308.12.1, 91.2308.12.2, 91.2308.12.4, 91.2308.12.5, and Table 2308.4 are added.

Sec. 86. Section 91.2308.9.3.1 of the Los Angeles Municipal Code is added to read as follows:

91.2308.9.3.1. Alternative Bracing. Any bracing required by Section 2308.9.3 is permitted to be replaced by the following:

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 15/32-inch-minimum-thickness (9.5 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table 2304.9.1 and blocked at wood structural panel edges. Two anchor bolts installed in accordance with Section 2308.6 shall be provided in each panel. Anchor bolts shall be placed at each panel outside quarter points. Each panel end stud shall have a tie-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (8006 N). The tie-down device shall be installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom.

Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

2. In the first story of two-story buildings, each wall panel shall be braced in accordance with Section 2308.9.3.1, Item 1, except that 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 not be less than 3,000 pounds (13 344 N).

Sec. 87. Section 91.2308.9.3.2 of the Los Angeles Municipal Code is added to read as follows:

91.2308.9.3.2. Alternate Bracing Wall Panel Adjacent To A Door Or Window Opening. Any bracing required by Section 2308.9.3 is permitted to be replaced by the following when used adjacent to a door or window opening with a full-length header:

1. 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 15/32 inch (9.5 mm) minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.9.3.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.9.3.2. A built-up header

consisting of at least two 2 × 12s and fastened in accordance with Item 24 of Table 2304.9.1 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 2308.6 shall be provided in the center of each sill plate. The studs at each end of the panel shall have a tie-down device fastened to the foundation with an uplift capacity of not less than 4,200 pounds (18 480 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 tie-down device fastened to the foundation with an uplift capacity of not less than 1,000 pounds (4400 N).

The tie-down devices shall be an embedded strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation that is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom.

Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch by 12-inch (305 mm by 305 mm) continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped not less than 15 inches (381 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.

2. In the first story of two-story buildings, each wall panel shall be braced in accordance with Item 1 above, except that each panel shall have a length of not less than 24 inches (610 mm).

Sec. 88. Section 91.2308.12.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 89. The first unnumbered Paragraph of Section 91.2308.12.4 of the Los Angeles Municipal Code is amended to read as follows:

91.2308.12.4. Braced Wall Line Sheathing. Braced wall lines shall be braced by one of the types of sheathing prescribed by Table 2308.12.4 as shown in Figure 2308.9.3.

The sum of lengths of braced wall panels at each braced wall line shall conform to the required percentage of wall length required to be braced per braced wall line in Table 2308.12.4. Braced wall panels shall be distributed along the length of the braced wall line and start at not more than 8 feet (2438 mm) from each end of the braced wall line. Panel sheathing joints shall occur over studs or blocking. Sheathing shall be fastened to studs, top and bottom plates and at panel edges occurring over blocking. Wall framing to which sheathing used for bracing is applied shall be nominal 2-inch-wide [actual 11/2 inch (38 mm)] or larger members. Braced wall panel construction types shall not be mixed within a braced wall line. Braced wall panels required by CBC Section 2308.12.4 may be eliminated when all of the following requirements are met:

Sec. 90. Two unnumbered paragraphs are added at the end of Section 91.2308.12.4 of the Los Angeles Municipal Code to read as follows:

Wood structural panel sheathing shall be minimum of 15/32 inch thick nailed with a 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.

Cripple walls having a stud height exceeding 14 inches (356 mm) shall be considered a story for the purpose of this section and shall be braced as required for braced wall lines in accordance with the required percentage of wall length required to be braced per braced wall line in Table 2308.12.4. Where interior braced wall lines occur without a continuous foundation below, the length of parallel exterior cripple wall bracing shall be one and one-half times the lengths required by Table 2308.12.4. Where the cripple wall sheathing type used is Type S-W and this additional length of bracing cannot be provided, the capacity of Type S-W sheathing shall be increased by reducing the spacing of fasteners along the perimeter of each piece of sheathing to 4 inches (102 mm) o.c.

Sec. 91. Table 2308.12.4 of the Los Angeles Municipal Code is amended to read as follows:

TABLE 2308.12.4

WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E

(Minimum Percentage of Wall Bracing per each Braced Wall Line[a])

CONDITION	SHEATHING TYPE[b]	$S_{DS}<0.50$	$0.5 \leq S_{DS}<0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS}>1.00$
One story	G-P[c]	43	59	75	100
	S-W	21	32	37	48

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

a. Minimum length of panel bracing of one face of the wall for S-W sheathing shall be at least 4'-0" long or both faces of the wall for G-P sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. For SW panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required. The 2:1 h/w ratio limitation does not apply to alternate braced wall panels constructed in accordance with Section 2308.9.3.1 or 2308.9.3.2. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide [actual 11/2 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.
b. G-P = gypsum board, portland cement plaster or gypsum sheathing boards; S-W = wood structural panels.
c. Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:
For 1/2-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;
For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) at 7 inches on center;
For gypsum sheathing board, 13/4 inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;
For gypsum lath, No. 13 gage (0.092 inch) by 11/8 inches long, 19/64-inch head, plasterboard at 5 inches on center;
For Portland cement plaster, No. 11 gage (0.120 inch) by 11/2 inches long, 7/16-inch head at 6 inches on center;
d. S-W 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.

Sec. 92. The following notation in Division 26 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections of Division 26 are deleted in entirety by Ord. No. 172,592:

91.2602; 91.2603; 91.2604

Sec. 93. The following notation in Division 28 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections of Division 28 are deleted in entirety by Ord. No. 172,592:

91.2801; 91.2802

Sec. 94. The following notation in Division 29 of Article 1, Chapter IX of the Los Angeles Municipal Code is deleted in its entirety:

* The following sections of Division 29 are deleted in entirety by Ord. No. 172,592:

91.2901; 91.2902

Sec. 95. Section 91.3001 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.3001. GENERAL.

Section 3001 of the C.B.C. is adopted by reference, except that Sections 3001.1, 3001.2, 3001.4 and 3001.5 of the C.B.C. are not adopted and in lieu, Section 91.3001.1, 91.3001.2, 91.3001.4 and 91.3001.5 are added.

Sec. 96. Section 91.3001.2 of the Los Angeles Municipal Code is amended to read as follows:

91.3001.2. Referenced Standards. Except as otherwise provided for in this code, the design, construction, installation, alteration, repair and maintenance of elevators and conveying systems and their components shall conform to California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 for construction in flood hazard areas established in Section 1612.3.

Sec. 97. Section 91.3001.4 of the Los Angeles Municipal Code is amended to read as follows:

91.3001.4. Change in Use. A change in use of an elevator from freight to passenger, passenger to freight, or from one freight class to another freight class shall comply with California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders.

Sec. 98. Section 91.3001.5 of the Los Angeles Municipal Code is added to read as follows:

91.3001.5. Elevators Utilized to Transport Hazardous Materials. Elevators utilized to transport hazardous materials shall also comply with the California Fire Code Section 2703.10.4.

Sec. 99. Section 91. 3002 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.3002. HOISTWAY ENCLOSURES.

Section 3002 of the C.B.C. is adopted by reference, except that Sections 3002.1.1, 3002.3, 3002.5, 3002.6, 3002.8, 3003.2, 3005.4, 3007.1, 3007.2, 3007.9.1, 3008.2, 3008.2.1, 3008.7.6, 3008.8.1, and 3008.9.1 of the C.B.C. are not adopted and in lieu, Section 91.3002.1.1, 91.3002.3, 91.3002.8, 91.3003.2, 91.3007.1, 91.3007.2, 91.3007.9.1, 91.3008.2, 91.3008.2.1, 91.3008.7.6, 91.3008.8.1, and 91.3008.9.1 are added.

Sec. 100. Section 91.3002.1.1 of the Los Angeles Municipal Code is amended to read as follows:

91.3002.1.1. Opening Protectives. Openings in hoistway enclosures shall be protected as required in Chapter 7.

Sec. 101. Section 91.3002.3 of the Los Angeles Municipal Code is amended to read as follows:

91.2003.3. Emergency Signs. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to sue the elevators in case of fire. The sign shall read: IN CASE OF FIRE, ELEVATORS ARE OUT OF SERVICE. USE EXIT STAIRS.

EXCEPTION: The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.

Sec. 102. Section 91.3002.8 of the Los Angeles Municipal Code is added to read as follows:

91.3002.8. Glass in Elevator Enclosures. Glass in elevator enclosures shall comply with the Elevator Code.

Sec. 103. Section 91.3003.2 of the Los Angeles Municipal Code is added to read as follows:

91.3003.2. Fire-Fighter's Emergency Operation. Elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with the Elevator Code.

Sec. 104. Section 91.3007 of the Los Angeles Municipal Code is added to read as follows:

SEC. 91.3007. FIRE SERVICE ACCESS ELEVATOR.

91.3007.1. General. Where required by Section 403.6.1, every floor of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.10. Except as modified in this section, fire service access elevators shall be installed in accordance with the Chapter and the Elevator Code.

91.3007.2. Phase I Emergency Recall Operation. Actuation of any building fire alarm-initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in the Elevator Code. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position, key-operated "Fire Recall" switch or automatically initiated by the associated elevator lobby, hoistway or elevator machine room smoke detectors. In addition, if the building also contains occupant evacuation elevators in accordance with Section 3008, an independent, three-position, key-operated "Fire Recall" switch conforming to the applicable requirements in the Elevator Code shall be provided at the designated level for each fire service.

91.3007.9.1. Protection of Wiring or Cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a fire-resistance rating of not less than 2 hours, or shall be circuit integrity cable having a fire-resistance rating of not less than 2 hours.

Sec. 105. Section 91.3008 of the Los Angeles Municipal Code is added to read as follows:

SEC. 91.3008. OCCUPANT EVACUATION ELEVATORS.

91.3008.2. Phase I Emergency Recall Operation. An independent, three-position, key-operated "Fire Recall" switch complying with the Elevator Code shall be provided at the designated level for each occupant evacuation elevator.

91.3008.2.1. Operation. The occupant evacuation elevators shall be used for occupant self-evacuation only in the normal elevator operating mode prior to Phase I Emergency Recall Operation in accordance with the requirements in the Elevator Code and the building's fire safety and evacuation plan.

91.3008.7.6. Lobby Status Indicator. Each occupant evacuation elevator lobby shall be equipped with a status indicator arranged to display all of the following information:

1. An illuminated green light and the message, "Elevators available for occupant evacuation," when the elevators are operating in normal service and the fire alarm system is indicating an alarm in the building.

2. An illuminated red light and the message, "Elevators out of service, use exit stairs," when the elevators are in Phase I emergency recall operation in accordance with the requirements in the Elevator Code.

3. No illuminated light or message when the elevators are operating in normal service.

91.3008.8.1. Elevator Recall. The fire command center or an alternate location approved by the fire department shall be provided with the means to manually initiate a Phase I Emergency Recall of the occupant evacuation elevators in accordance with the Elevator Code.

91.3008.9.1. Protection of Wiring or Cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a fire-resistance rating of not less than 2 hours, or shall be circuit integrity cable having a fire-resistance rating of not less than 2 hours.

Sec.106. Section 91.3401.1 of the Los Angeles Municipal Code is amended to read as follows:

91.3401.1. Scope. The provisions of this chapter shall control the alteration, repair, addition and change of occupancy of existing buildings and structures. In addition of the requirements of Chapter 34 of the C.B.C., existing buildings and structures shall comply with the applicable regulations of Divisions 81, 82, 83, 84, 85, 86, 88, 89, 91, and C.B.C. Appendix A1 and A2 of this Code and the voluntary earthquake hazard reduction standards of Divisions 92, 93, 94, 95, and 96 of this code.

[DSA-AC] For applications listed in Section 1.9.1 regulated by the Division of the State Architect-access Compliance for accessibility requirements, See Chapter 11B, Section 11 B-202.

EXCEPTION: Existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.

[HCD I] In addition to the requirements in this chapter, maintenance, alteration, repair, addition, or change of occupancy to existing buildings and accessory structures under the authority of the Department of Housing and Community Development, as provided in Section 1.8.2.1.1, shall comply with California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1.

EXCEPTIONS:

1. Alterations, repair or addition to existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.

2. **(HCD 2)** For moved buildings and maintenance, alteration, repair, addition, or change of occupancy to existing buildings and accessory structures in mobilehome parks or special occupancy parks as provided in Section 1.8.2.1.3. , See California Code of Regulations, Title 25, Division 1, Chapters 2 and 2.2.

3. **(HCD 1)** Limited-density owner-built rural dwellings.

Sec. 107. Section 91.3401.3 of the Los Angeles Municipal Code is amended to read as follows:

91.3401.3. Compliance. Alterations, repairs, additions and changes of occupancy to or relocation of existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in the Los Angeles Fire Code, Los Angeles Mechanical Code, Los Angeles Plumbing Code, Los Angeles Residential Code, and Los Angeles Electrical Code.

Where there are different requirements in this Code, the most restrictive requirement shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

Sec. 108. Section 91.3403.1.1 of the Los Angeles Municipal Code is renumbered as Section 91.3401.4.4 and amended to read as follows:

91.3401.4.4. Replacement, Retention and Extension of Original Materials. The replacement, retention and extension of original materials, and the use of original methods of construction, for any building or accessory structure may remain, provided the aggregate value of work in any one year does not exceed 10 percent of the replacement value, and provided further that no hazardous conditions and such building or structure complied with the building code provisions in effect at the time of original construction and the building or accessory structure does not become or continue to be a substandard building.

Alterations, repairs or rehabilitation of the existing portion in excess of 10 percent of the replacement value of building or structure may be made provided all the work conforms to this Code for a new building and that no hazardous conditions or substandard buildings as are continued or created in the remainder of the building as a result of such work.

Whenever the aggregate value of the addition, alterations, repairs, or rehabilitation of the existing portion is in excess of 50 percent of the replacement value of the building or structure, the entire building or structure shall be made to conform to this Code.

Sec. 109. Section 91.3403.4 of the Los Angeles Municipal Code is added to read as follows:

91.3403.4. Existing Structural Elements Carrying Lateral Load. Where the addition is structurally independent of the existing structure, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the addition is not structurally independent of the existing structure, the existing structure and its addition acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613.

EXCEPTION:

All, except Unreinforced Masonry Building (URM):

Any existing lateral load-carrying structural element whose demand-capacity ratio with the addition considered is no more than 10 percent greater than its demand-capacity ratio with the addition ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.

Unreinforced Masonry Buildings:

Any existing lateral load-carrying structural element whose demand-capacity ratio with the addition considered is no more than 10 percent greater than its demand-capacity ratio with the addition ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613. However, where an addition to an existing unreinforced masonry buildings (URM) is not structurally independent, the existing lateral force resisting elements shall be evaluated for the cumulative effects based on the analysis procedure stipulated per Section A10 or A11 of C.B.C. Appendix A1.

Sec. 110. Section 91.3404.1.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 111. Section 91.3404.4 of the Los Angeles Municipal Code is added to read as follows:

91.3404.4. Existing Structural Elements Carrying Lateral Load. Except as permitted by Section 3404.5, where the alteration increases design lateral loads in accordance with Section 1609 or 1613, or where the alteration results in a structural irregularity as defined in ASCE 7, or where the alteration decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall be shown to meet the requirements of Sections 1609 and 1613.

All, except Unreinforced Masonry Building (URM):

Any existing lateral load-carrying structural element whose demand-capacity ratio with the addition considered is no more than 10 percent greater than its demand-capacity ratio with the addition ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.

Unreinforced Masonry Buildings:

For existing URM Buildings, the lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is no more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613. However, where an alteration is made to a lateral force resisting element of an existing unreinforced masonry building, a structural analysis for the remaining masonry pier per Appendix A1, Section A110 or A111, required, unless the shear stress is within the allowable capacity per structural analysis of Division 88. Where alterations are only made to crosswalls and defined in Division 88, structural analysis per Division 88 is permitted to be used, to ensure equivalency will be provided.

Sec. 112. Section 91.3405.1 of the Los Angeles Municipal Code is amended to read as follows:

91.3405.1. General. Buildings and structures, and parts thereof, shall be repaired in compliance with Section 3401.2 and 3405. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section 3401.2, Division 81, Appendix A1 and A2 and ordinary repairs exempt from a permit in accordance with Section 106, and abatement

of wear due to normal service conditions shall not be subject to the requirements for repairs in this Section.

EXCEPTION: For state-owned buildings, including those owned by the University of California and the California State University and the Judicial Council, the requirements of C.B.C. Sections 3405.2 through 3405.4 are replaced by the requirements of C.B.C. Sections 3417 through 3423.

Sec. 113. Section 91.3405.1.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 114. Section 91.31408.4 of the Los Angeles Municipal Code is added to read as follows:

91.3408.4. Seismic. Except for unreinforced masonry building, when a change of occupancy results in a structure being reclassified to a higher risk category, the structure shall conform to the seismic requirements for a new structure of the higher risk category.

EXCEPTIONS:

1. Specific seismic detailing requirements of Section 1613 for a new structure shall not be required to be met where the seismic performance is shown to be equivalent to that of a new structure. A demonstration of equivalence shall consider the regularity, overstrength, redundancy and ductility of the structure.

2. When a change of use results in a structure being reclassified from Risk Category I or II to Risk Category III and the structure is located where the seismic coefficient, SDS, is less than 0.33, compliance with the seismic requirements of Section 1613 are not required.

3. For change of occupancy of an existing commercial or industrial building to residential use, all existing buildings shall be analyzed for 75% of the design earthquake ground motion, as defined in Section 1613.5 of this code, but in no event shall there be a reduction in the capacity of the seismic force resisting system where that system provides a greater level of protection than the minimum requirements established by this code.

For an existing unreinforced masonry building, structural analysis per Division 16 is required if the risk category is changed to III or IV. Structural analysis per Appendix A1 is required if rating classification per Division 88 is changed. No structural analysis is

required if no change of rating classification nor risk category is changed provided the existing building already in compliance with Division 88 for the existing use.

The most restrictive requirement of Section 3403, 3404 or 3408 shall apply.

Sec. 115. Section 91.6109 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.6109. SWIMMING POOLS AND OTHER BODIES OF WATER – PROTECTIVE DEVICES REQUIRED.

(a) **Fences.** Every swimming pool, fish pond or other body of water, which contains water 18 inches or more in depth, shall be enclosed by a fence, the height of which, including gates, shall be not less than four and one-half feet above the ground. Gates shall be self-latching with the latch located four and one-half feet minimum above the ground. However, for new swimming pools or spas, the height and construction of the fence and gate shall comply with the requirements of Division 31, whichever is more restrictive and provide greater safety.

Where the ground surface on the side of the fence away from the body of water slopes upward, four and one-half feet clearance shall be maintained between the fence and the face of the slope.

EXCEPTION: The provisions of this section shall not apply to oceans, lakes, rivers, streams and similar bodies of water, which are publicly owned over which the State of California of the City or County of Los Angeles has control and jurisdiction.

(b) **Existing Body of Water.** The provisions of this section shall also apply to all existing bodies of water.

Sec. 116. The third unnumbered Paragraph of Section 91.6302.3 of the Los Angeles Municipal Code is amended to read as follows:

Ducts penetrating a ceiling or floor shall be enclosed in a shaft enclosure conforming to the requirements of C.B.C. Section 708. Where a shaft enclosure is not required by C.B.C. Section 708, ducts that convey grease vapors shall be enclosed in a one-hour fire-resistive shaft. The shaft shall be separated from the duct by a minimum 6-inch air space vented to the outside air.

Sec. 117. Paragraph 3 of Section 91.6302.4 of the Los Angeles Municipal Code is amended to read as follows:

3. **Privacy.** Toilet rooms shall be so arranged or equipped with view screens as to protect users of toilets and urinals from view from outside the room when the door to the toilet room is open.

EXCEPTION: View screen is not required if only for single accommodation, unisex, bathroom is provided.

Entrances to the toilet rooms for different sexes shall be properly separated by a space of at least 10 feet or by view screens.

Sec. 118. The Exception in Section 91.6302.5 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 119. Section 91.6304.3 of the Los Angeles Municipal Code is amended to read as follows:

91.6304.3. Additional Requirements for Installation of Bars, Grills, Grates or Similar Devices. In addition to the requirements of Section 1029, all bars, grills, grates or similar devices shall comply with the following:

1. A permit is obtained from the Department of Building and Safety and a fee is paid as required in Section 91.107.4.5 of this Code. Any permit so issued shall be valid for a period of 90 days from its issuance. The Department may allow a "certified installer" to be used, in lieu of obtaining a permit, in accordance with Section 91.1704.

2. Any person who willfully or knowingly, with the intent to deceive, makes a false statement or representation, or knowingly fails to disclose a material fact in any documentation required by the Department to ascertain facts relative to this Section, Section 91.107.4.5 or to Section 91.1704 of this Code, including any oral or written evidence presented, shall be guilty of a misdemeanor.

Sec. 120. The first unnumbered paragraph of Section 91.7005.1 of the Los Angeles Municipal Code is amended to read as follows:

91.7005.1. Hillside Areas. No person shall conduct any grading operation for other than building site development in hillside areas. The Grading permit shall only be issued in conjunction with an approved subdivision of land, a building permit or where the site has already been developed with an existing main building.

Sec. 121. Section 91.7005.2 of the Los Angeles Municipal Code is amended to read as follows:

91.7005.2. Building Foundations. Building foundations and temporary shoring shall be designed and constructed as specified in Division 4 of the Residential Code or in Division 18 and Division 33 of this Code.

Sec. 122. Section 91.7006.7.4 of the Los Angeles Municipal Code added to read as follows:

91.7006.7.4. Baseline Hillside Ordinance Conditions. All conditions of import and export imposed in the approval of the project with respect to the Baseline Hillside Ordinance shall be made a part of the grading permit.

Sec. 123. Section 91.7006.7.4 of the Los Angeles Municipal Code renumbered as Section 91.7006.7.5 and amended to read as follows:

91.7006.7. 5. Special Hillside Conditions. No permit requiring the import or export of more than 1,000 cubic yards (764 m^3) shall be issued for areas designated "hillside" except as specified in this section. A fee of $529.00 for the first 1,000 cubic yards and $100.00 additional for each 1,000 cubic yards or portion of 1,000 cubic yards, in addition to the permit fee shall be paid for processing an application for grading under the provisions of this section.

Sec. 124. The Title of and Section 91.7006.8.2 of the Los Angeles Municipal Code are amended to read as follows:

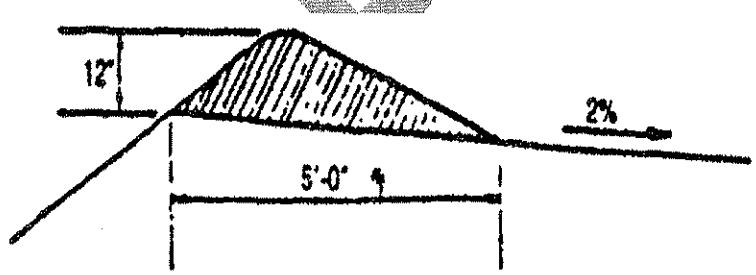
91.7006.8.2. Baseline Hillside Ordinance (Ordinance No. 181624). No permit shall be issued for the import or export of earth materials to or from and no grading shall be conducted on any grading site in Hillside Ordinance areas unless the grading has been approved by City Planning with respect to compliance with the Baseline Hillside Ordinance.

> **EXCEPTION:** The requirements of this section shall not apply to any grading that is determined by the Department of Building and Safety to be Remedial Grading as defined in Section 12.03 of the Los Angeles Municipal Code.

Sec. 125. Figure B following Section 91.7015.7 of the Los Angeles Municipal Code is amended to read as follows:

DIVERTER TERRACE
For top of cut and/or fill slopes

FIGURE B



Sec. 126. Section 91.7200 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.7200. PURPOSE.

These Fire District Regulations were formerly found in Division 61.

Sec. 127. Section 91.7208 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.7208. PROHIBITED VEHICLES.

No vehicle in Fire District No. 1 shall be used except as permitted for a mobilehome, travel trailer or camp car in a park designed for that use or for an industrial catering truck as defined in Section 91.202 of this Code. However, no person shall park an industrial catering truck continuously at any location on private property for the purpose of dispensing food or drink for a period of time exceeding one hour, and regardless of the length of time parked at any location, no person after departure from that location shall again park an industrial catering truck at that location, or at any location on private property within 500 feet of that location or private property, for the purpose of dispensing food or drink within a period of four hours after departure.

Sec. 128. Section 91.8101.2 of the Los Angeles Municipal Code is added to read as follows:

91.8101.2. Scope. The provisions of this chapter shall apply to all or portions of existing buildings, structures or premises.

EXCEPTIONS:

1. Historical buildings may comply with Section 8119 of this code.

2. Existing commercial or industrial buildings, for which a building permit was issued prior to April 1, 1994, may be converted to "joint living and work quarters" provided the existing building complies with Chapter 85 of this Code.

Sec. 129. Section 91.8110 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.8110. UNREINFORCED MASONRY BEARING WALL BUILDINGS.

Existing unreinforced masonry bearing wall buildings constructed or under construction prior to October 6, 1933, shall conform to the requirements of C.B.C. Appendix A1.

Sec. 130. Section 91.8201 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.8201. GENERAL.

Every change of occupancy, use and rating classification in any existing building or structure shall conform to the construction requirements for the group occupancy to be housed in the building or structure or for the use to which the building or structure is to be put, as set forth in C.B.C. Chapter 34, Division 34 and 82.

Sec. 131. Section 91.8202 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.8202. CHANGE OF RATING CLASSIFICATION.

An existing building within the scope of Division 88 of this code shall not be changed from one rating classification, as described in Section 91.8804, to another higher risk rating classification unless the building meets or is altered to meet the requirements of C.B.C. Appendix Chapter A1 for the proposed rating classification and the building meets or is altered to meet the other requirements of this code for the use or occupancy change.

EXCEPTION: An existing building within the scope of Division 88 of this code shall not be changed from one occupancy category as defined in Section 91.1604.5 to another higher occupancy category unless the building meets or is altered to meet the other requirements of this Code.

Sec. 132. Section 91.8203 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 91.8203. CHANGE OF OCCUPANCY GROUP OR GROUP DIVISION.

Every change of occupancy to one classified in a different group or a different division of the same group, as described in Division 3 of this Code, shall require a new Certificate of Occupancy whether or not any alterations to the building are required by this Code. For the purpose of this subdivision, the occupancy group and division of interconnected assembly rooms shall be based on the total occupant load in such rooms.

If the building or portion thereof does not conform to the requirements of this Code for the proposed occupancy group or division, the building or portion thereof shall be made to conform. The Department may issue a new Certificate of Occupancy without stating therein that all of the requirements of the Code have been met and without requiring compliance with all such requirements if it is found that the change in occupancy group or division will result in no overall increase in hazard to life, limb, health, property or public welfare.

Sec. 133. The second unnumbered paragraph of Section 91.8204 of the Los Angeles Municipal Code is amended to read as follows:

Any assembly occupancy in a building constructed prior to October 6, 1933, shall not be expanded or arranged to accommodate a larger number of occupants than that for which it was previously authorized by the Department unless the entire building conforms to the provisions of Division 16.

Sec. 134. Subsection B of Section 91.8501.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 135. Subsection C of Section 91.8501.2 of the Los Angeles Municipal Code is renumbered as Subsection B and amended to read as follows:

B. **Structural Requirements for all Existing Buildings.** For all existing buildings, the change of occupancy or use of any portion of an Existing Building to a Joint Living and Work Quarters may be permitted provided the entire building complies or is made to comply with all the structural requirements in Section 91.8502.12 of this division.

Sec. 136. The definitions of FEMA 351,"RECOMMENDED SEISMIC EVALUATION AND UPGRADE CRITERIA FOR EXISTING WELDED STEEL MOMENT FRAME BUILDINGS" and FEMA 356, "PRESTANDARD AND COMMENTARY FOR THE SEISMIC REHABILITATION OF BUILDINGS" in Section 91.8501.3 of the Los Angeles Municipal Code are deleted in their entirety.

Sec. 137. The first unnumbered paragraph of Section 91.8502.1.2 of the Los Angeles Municipal Code is amended to read as follows:

91.8502.1.2. Emergency Escape. Every room below the fourth story where occupants sleep in Joint Living and Work Quarters shall be provided with an emergency escape or rescue window or door, which complies with the requirements of C.B.C. Section 1029.

Sec. 138. The third unnumbered paragraph of Section 91.8502.3.2 of the Los Angeles Municipal Code is amended to read as follows:

Combination fire and smoke dampers shall be listed to conform to UL 555 and UL 555S and smoke dampers shall be listed to conform to UL 555S and they shall be accessible for inspection, service and repair. Pneumatic tubing to operate these dampers shall be of noncombustible materials.

Sec. 139. The first unnumbered paragraph of Section 91.8502.5 of the Los Angeles Municipal Code is amended to read as follows:

91.8502.5. Fire Alarm System. If a fire alarm system is required by C.B.C. Section 907.2.9 or 403.4.2 for a new building of the same type of construction and occupancy,

or installed at the option of the owner, then the entire building shall have fire alarm systems that are in full compliance with CBC Section 907.2.9. In a high-rise building, the fire alarm systems shall be supplied by a generator used as an emergency system in accordance with CBC Section 403.4.8. For all other buildings, an alternate source of power may be used provided it is approved by both the Fire Department and the Department.

Sec. 140. Paragraph 2 of Section 91.8502.7.1 of the Los Angeles Municipal Code is amended to read as follows:

2. Existing doors between the corridor and the Joint Living and Work Quarters that are part of the historic fabric of a Qualified Historical Building may be allowed to remain provided approved smoke gaskets and self-closing and latching devices to prevent smoke penetration are installed on the door, or the existing door shall be replaced with a door conforming to the requirements of C.B.C. Section 715.4.

Sec. 141. Section 91.8502.12 of the Los Angeles Municipal Code is amended to read as follows:

91.8502.12. Structural Design Requirements (Seismic Provision). The conversion of any portion of an Existing Building to a Joint Living and Work Quarters shall be analyzed for 75 percent of the Design Earthquake Ground motion, as defined in C.B.C. Section 1613.2 and as specified in CBC Section 1613.5, but in no event shall there be a reduction in the capacity of the seismic force resisting system where that system provides a greater level of protection than the minimum requirements established by this division.

EXCEPTION: Unreinforced Masonry Bearing Wall Buildings (URM). The conversion of any portion of an existing URM building shall comply with of Appendix Chapter A1 of Part 10 of the California Code of Regulations Title 24 (California Existing Building Code).

Performance-based engineering analysis and design procedures may be used to evaluate the existing structure and the design of strengthening elements when approved by the Superintendent of Building. All structural elements of the building shall be strengthened to meet the minimum design analysis as specified in Sections 91.8502.12.1 through 91.8502.12. 3 of this Code or new structural elements shall be added when required. All new structural elements shall meet current detailing requirements of CBC Section 1604.

For other types of buildings not mentioned in this section, such as Steel Frame Buildings with Semi-Rigid Beam-Column Connections, Dual Systems with Steel Moment Frames and Concrete Shear Walls, or Steel Frame Buildings with Steel Bracing, shall comply with the standards developed by the Department.

Sec. 142. Section 91.8502.12.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 143. Section 91.8502.12.2 of the Los Angeles Municipal Code is renumbered as Section 91.8502.12.1 and amended to read as follows

91.8502.12.1. Reinforced Concrete Buildings and Concrete Frame Buildings With and Without Masonry Infill Walls. Reinforced concrete buildings or concrete frame buildings with or without masonry infill walls and that are within the scope of Section 91.9502 of this article, shall comply with all the provisions of Division 95 of this article.

EXCEPTION: When approved by the Superintendent of Building, the Guidelines for Seismic Retrofit of Existing Buildings may be permitted as an alternate standard to strengthen reinforced concrete buildings and concrete frame buildings with and without masonry infill walls.

Sec. 144. Section 91.8502.12.3 of the Los Angeles Municipal Code is renumbered as Section 91.8502.12.2 and amended to read as follows:

91.8502.12.2. Steel Frame Buildings with Masonry Infill Walls. Steel frame buildings with masonry infill walls shall be made to comply with the standards as developed by the Department and all the provisions of Division 95 of this article except for the following: Item A of Section 91.9509.6 of this article, Items 1 and 2 of Section 91.9509.7.2 of this article, and Sections 91.9509.9 and 91.9511.5.1 of this Article.

Sec. 145. Section 91.8502.12.4 of the Los Angeles Municipal Code is renumbered as Section 91.8502.12.3.

Sec. 146. The first unnumbered paragraph of Section 91.9305.2 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.2. Scope. This Division requires the alteration, repair, replacement or addition of structural elements and their connections to meet the strength and stiffness requirements of this Code. The lateral load path analysis shall include the resisting elements and connections from the wood diaphragm above any soft, weak or open front wall lines to the foundation soil interface or reinforced concrete slab or masonry wall supporting elements below. The top story of any building need not be analyzed. The lateral load path analysis for added structural elements shall also include evaluation of the allowable soil bearing and lateral pressures in accordance with Section 1806 of this Code.

Sec. 147. Section 91.9305.3 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.3. Design Base Shear. The design base shear shall be 75 percent of the value from Section 12.8.1 of ASCE 7. The value of R used in the design of the strengthening of any story shall not exceed the lowest value of R used in the same direction at any story above. The system overstrength factor, Ω_0, and the deflection amplification factor, C_d, shall not be less than the largest respective value corresponding to the R factor being used in the direction under consideration.

EXCEPTIONS:

1. For structures assigned to Seismic Design Category B, value of R, Ω_0, and C_d, shall be permitted to be based on the seismic force-resisting system being used to achieve the required strengthening.

2. For structures assigned to Seismic Design Category C or D, value of R, Ω_0, and C_d, shall be permitted to be based on the seismic force-resisting system being used to achieve the required strengthening, provided that when the strengthening is complete, the strengthened structure will not have an extreme weak story irregularity defined as Type 5b in ASCE 7 Table 12.3-2.

3. For structures assigned to Seismic Design Category E, value of R, Ω_0, and C_d, shall be permitted to be based on the seismic force-resisting system being used to achieve the required strengthening, provided that when the strengthening is complete, the strengthened structure will not have an extreme soft story, a weak story, or an extreme weak story irregularity defined, respectively, as Type 1b, 5a and 5b in ASCE 7 Table 12.3-2.

Sec. 147. The first unnumbered paragraph of Section 91.9305.6 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.6. Story Drift Limitation. The calculated story drift for each retrofitted level shall not exceed the allowable deformation compatible with all vertical load-resisting elements and 0.025 times the story height. The calculated story drift shall not be reduced by the effects of horizontal diaphragm stiffness but shall be increased when these effects produce rotation. Drift calculations shall be in accordance with the building code.

Sec. 148. Section 91.9305.7 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.7. P-Delta Effect. The requirements of the building code shall apply, except as modified herein. All structural framing elements and their connections not required by the design to be part of the lateral force resisting system shall be designed and/or detailed to be adequate to maintain support of design dead plus live loads when subject to the expected deformations caused by seismic forces. The stress analysis of

cantilever columns shall use a buckling factor of 2.1 for the direction normal to the axis of the beam.

Sec. 149. Section 91.9305.8 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.8. Ties and Continuity. All parts of the structure included in the scope of Section 91.9305.2 shall be interconnected and the connection shall be capable of resisting the seismic force created by the parts being connected. Any smaller portion of a building shall be tied to the remainder of the building with elements having a strength of C_s times the tributary dead load of the smaller portion. A positive connection for resisting a horizontal force acting parallel to the member shall be provided for each beam, girder or truss included in the lateral load path. This force shall not be less than 0.08 times the combined tributary dead and live loads or as required by the lateral load path transfer, whichever is greater.

Sec. 150. Section 91.9305.9 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.9. Collector Elements. Collector elements shall be provided which can transfer the seismic forces originating in other portions of the building to the elements within the scope of Section 91.9305.2 that provide resistance to those forces as defined in Section 91.9305.3.

Sec. 151. Section 91.9305.11 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.11. Wood-Framed Shear Walls. Shear walls shall have sufficient strength and stiffness to resist the tributary seismic loads and shall conform to the special requirements of this section.

Sec. 152. Section 91.9305.11.2.1 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.11.2.1. Drift Limit. Wood structural panel shear walls shall meet the story drift limitation of Section 91.9305.6. Conformance to the story drift limitation shall be determined by approved testing or calculation or analogies drawn from there and not the use of an aspect ratio. Calculated deflection shall be in accordance with Division 23 of this code, "**Calculation of Shear Wall Deflection**" and 25 percent shall be added to account for inelastic action and repetitive loading. Contribution to the deflection from the anchor or tie down slippage shall also be included. The slippage contribution shall include the vertical elongation of the metal, the vertical slippage of the connectors and compression or shrinkage of the wood elements. The vertical slippage shall be multiplied by the aspect ratio and added to the total horizontal deflection. Individual shear panels shall be permitted to exceed the maximum aspect ratio provided the story drift and allowable shear capacities are not exceeded.

Sec. 153. Section 91.9305.11.2.2 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.11.2.2. Openings. Shear walls are permitted to be designed for continuity around openings in accordance with the building code. Blockings and steel strapping shall be provided at corners of the openings to transfer forces from the discontinuous boundary elements into adjoining panel elements. Alternatively, perforated shear wall provisions of the building code are permitted to be used.

Relocated and altered openings shall comply with the emergency escape requirements in Division 10 of this Code. Relocated and altered openings shall comply with the light and ventilation requirements in Division 12 of this Code unless otherwise approved by the Superintendent of Building.

Sec. 154. Section 91.9305.11.2.3 of the Los Angeles Municipal Code is amended to read as follows:

91.9305.11.2.3. Wood Species of Framing Members. Allowable shear values for wood structural panels shall consider the species of the framing members. When the allowable shear values are constructed of other species of lumber, the allowable shear values for wood structural panels shall be determined in accordance with Division 23 of this Code.

Sec. 155. Section 91.9306.2 of the Los Angeles Municipal Code is amended to read as follows:

91.9306.2. Allowable Foundation and Lateral Pressures. Allowable foundation and lateral pressures shall be permitted to use the values from C.B.C. Table 1806.2. For soil that supports embedded vertical elements, Section 91.9305.6 shall apply.

Sec. 156. The definition of FOUNDATION EXTENDING IN THE DOWNHILL-DIRECTION in Section 91.9403 of the Los Angeles Municipal Code is amended to read as follows:

FOUNDATION EXTENDING IN THE DOWNHILL-DIRECTION is a descending foundation and approximately perpendicular to the slope contours.

Sec. 157. Section 91.9406.5.8 of the Los Angeles Municipal Code is amended to read as follows:

91.9406.5.8. Seismic Load Factor. Steel elements of the diaphragm anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The strength design specified in Section 91.1912.1 using a load factor of 2.0 in lieu of 1.4 for earthquake loading shall be used for the design of embedment in concrete.

Sec. 158. Item 4 of Section 91.9406.7.2 of the Los Angeles Municipal Code is amended to read as follows:

4. The design lateral forces shall be distributed to lateral force resisting elements of varying heights in accordance with the stiffness of each individual element. 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 Sections 91.2305.3.2 and 91.2305.3.8.2.9 or other equivalent methods. 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 as an independent shear wall.

Sec. 159. Section 91.9408.3 of the Los Angeles Municipal Code is amended to read as follows:

91.9408.3. Structural Observation by the Engineer or Architect of Record. The owner shall employ the engineer or architect of record, or other engineer or architect designated by the engineer or architect of record, to perform structural observations as required by Section 91.1710 of the Los Angeles Building Code.

Sec. 160. Section 91.9516.3 of the Los Angeles Municipal Code is amended to read as follows:

91.9516.3. Engineer's Statement. The responsible engineer shall state on the approved plans, the following:

1. "I am responsible for this building's seismic strengthening design in compliance with the minimum seismic resistance standards of Chapter 95 of the Los Angeles Building Code."

or when applicable:

2. "The Registered Deputy Inspector, required as a condition of the use of structural design stresses requiring continuous inspection, will be responsible to me as required by Section 91.1704 of the Los Angeles Building Code."

Sec. 161. The first unnumbered paragraph of Section 91.9603 of the Los Angeles Municipal Code is amended to read as follows:

For the purposes of this Division, the applicable definitions in Division 2, Sections 1602, 1613.2, 1902 and 2302 of this Code; Sections 1.2, 3.1, 4.1 and 11.2 of ASCE 7, and the following shall apply:

Sec. 162. The first unnumbered paragraph of Section 91.9604.3 of the Los Angeles Municipal Code is amended to read as follows:

91.9604.3. Development of Anchor Loads into the Diaphragm. Development of anchor loads into roof and floor diaphragms shall comply with Section 12.11 of ASCE 7.

Sec. 163. Subdivision (3) of Subsection (b) of Section 98.0719 of the Los Angeles Municipal Code is amended to read as follows:

(3) Whether any of the exceptions set forth in Section 98.0716(a)(3)(A) through (C) have been met.

Sec. 164. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that this ordinance was passed by the Council of the City of Los Angeles, at its meeting of _____.

HOLLY WOLCOTT, Interim City Clerk

By _____
Deputy

Approved _____

_____
Mayor

Approved as to Form and Legality

MICHAEL N. FEUER, City Attorney

By _____
KIM RODGERS WESTHOFF

Date _____

File No. _____

M:\Real Prop_Env_Land Use\Land Use\Kim Westhoff\DBS--2013 Code Amendment\2014 Building Code Ordinance KRW Draft.docx