

BUILDING STANDARDS COMMISSION

2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
(916) 263-0916 FAX (916) 263-0959



March 4, 2011

Darik Doggett, Building Official
City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740

Dear Mr. Doggett:

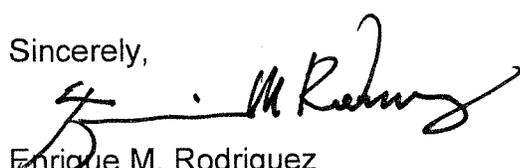
This letter is to acknowledge receipt on January 10, 2011 of the City of Seal Beach submittal pertaining to Ordinance No. 1600 with findings and is acceptable for filing. Your filing attests to your understanding that according to Health and Safety Code Section 17958.7 no modification or change to the California Building Standards Code shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission (the Commission).

This letter attests only to the filing of these local modifications with the Commission, which is not authorized by law to determine the merit of the filing.

As a reminder, local modifications are specific to a particular edition of the Code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the Code is published. In addition, should you receive Fire Protection District ordinances for ratification, it is required to submit the ratified ordinances to the Department of Housing and Community Development [H&SC Section 13869.7(c)], attention State Housing Law Program Manager, rather than the Commission.

If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,


Enrique M. Rodriguez
Associate Construction Analyst

cc: Chron
Local Filings

City of Seal Beach



CITY HALL 211 EIGHTH STREET
SEAL BEACH, CALIFORNIA 90740
(562) 431-2527 • www.ci.seal-beach.ca.us

1/5/11

California Building Standards Commission
2525 Natomas Park Dr., Suite 130
Sacramento, California 95833-2936

RE: City of Seal Beach, Building Adoption Ordinance

Mr. Dave Walls:

The City of Seal Beach has adopted the current Building, Residential, Green Building Standards, Plumbing, Mechanical, and Electrical Codes of the State of California.

The City of Seal Beach has recommended changes and modifications to the Codes and have advised that certain said changes and modifications to the 2010 Editions of the California Building, Residential, Plumbing, Mechanical and Electrical Codes are reasonably necessary due to local conditions in the City of Seal Beach and have further advised that the remainder of said changes and modifications are of an administrative or procedural nature, or concern themselves with subjects not covered by the Code or are reasonably necessary to safeguard life and property within the City of Seal Beach.

The enclosed City Ordinance is for your files.

If additional information is desired please telephone this office at (562)431-2527 x1315.

Sincerely,

Darik Doggett
Building Official

Attachment: Ordinance 1600

2011 JAN 10 P 1:12
CALIFORNIA BUILDING
STANDARDS COMMISSION

ORDINANCE NUMBER 1600

AN ORDINANCE OF THE CITY OF SEAL BEACH, CALIFORNIA AMENDING THE MUNICIPAL CODE OF THE CITY OF SEAL BEACH BY DELETING TITLE 9, CHAPTER 9.60 BUILDING CODE IN ITS ENTIRETY, ADOPTING A NEW TITLE 9 CHAPTER 9.60 BUILDING CODE AND ADOPTING BY REFERENCE THE CALIFORNIA BUILDING CODE, 2010 EDITION, INCORPORATING THE 2009 "INTERNATIONAL BUILDING CODE," INCLUDING APPENDIX F, I, AND J; THE CALIFORNIA RESIDENTIAL CODE, 2010 EDITION, INCORPORATING THE 2009 "INTERNATIONAL RESIDENTIAL CODE," INCLUDING APPENDIX H; THE CALIFORNIA PLUMBING CODE, 2010 EDITION, INCORPORATING THE 2009 "UNIFORM PLUMBING CODE," INCLUDING APPENDIX A, AND L; THE CALIFORNIA MECHANICAL CODE, 2010 EDITION, INCORPORATING THE 2009 "UNIFORM MECHANICAL CODE,"; THE CALIFORNIA ELECTRICAL CODE, 2010 EDITION, INCORPORATING THE 2008 "NATIONAL ELECTRICAL CODE"; THE CALIFORNIA FIRE CODE, 2010 EDITION, INCORPORATING THE 2009 "INTERNATIONAL FIRE CODE," INCLUDING APPENDIX B, BB, C, AND CC; THE "CALIFORNIA GREEN BUILDING STANDARDS CODE," 2010 EDITION, INCLUDING APPENDIX A4, A5; THE "INTERNATIONAL PROPERTY MAINTENANCE CODE," 2009 EDITION; THE "UNIFORM SWIMMING POOL, SPA, AND HOT TUB CODE," 2009 EDITION; THE "UNIFORM SOLAR ENERGY CODE," 2009 EDITION; THE "CALIFORNIA ENERGY CODE," 2010 EDITION; THE "CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE," 2007 EDITION; THE "CALIFORNIA HISTORICAL BUILDING CODE," 2010 EDITION; THE "CALIFORNIA EXISTING BUILDING CODE," 2010 EDITION; THE "CALIFORNIA REFERENCED STANDARDS CODE," 2010 EDITION; AND THE "CALIFORNIA ADMINISTRATIVE CODE," 2010 EDITION.

THE SEAL BEACH CITY COUNCIL DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Title 9 Public Property, Public Works and Building Regulations, Chapter 9.60 Building Code, of the Seal Beach Municipal Code is deleted in its entirety and replaced with a new Chapter 9.60 Building Code to read as follows:

Chapter 9.60 Building Code

§ 9.60.005 Codes Adopted by Reference.

A. Except as hereinafter provided in this chapter, the codes listed below are adopted by reference as the Building and Safety Code of the City of Seal Beach:

1. California Building Code, 2010 Edition, Incorporating the 2009 "International Building Code" including Appendix F, I and J.
2. California Residential Code, 2010 Edition, Incorporating the 2009 "International Residential Code" including Appendix H
3. California Green Building Standards Code, 2010 Edition, including Appendix A4, A5.
4. California Plumbing Code, 2010 Edition, incorporating the 2009 "Uniform Plumbing Code" including Appendix A and L.

5. California Mechanical Code, 2010 Edition, incorporating the 2009 "Uniform Mechanical Code"

6. California Electrical Code, 2010 Edition, incorporating the 2008 "National Electrical Code"

7. California Fire Code, 2010 Edition, incorporating the 2009 "International Fire Code" including Appendix B, BB, C and CC.

8. "International Property Maintenance Code" 2009 Edition.

9. "Uniform Swimming Pool, Spa and Hot Tub Code" 2009 Edition.

10. "Uniform Solar Energy Code" 2009 Edition.

11. "California Energy Code" 2010 Edition.

12. "California Elevator Safety Construction Code" 2007 Edition.

13. "California Historical Building Code" 2010 Edition.

14. "California Existing Building Code" 2010 Edition.

15. "California Referenced Standards Code" 2010 Edition.

16. "California Administrative Code" 2010 Edition.

B. One copy of each of the above codes shall be maintained by the city clerk for use and examination by the public.

C. All amendments to codes adopted herein by reference shall be considered as part of the Building and Safety Code.

§ 9.60.010 Applicability.

The provisions of this Title shall apply to the construction, removal, alteration, moving or repair of any work or equipment on any premises within the city except work:

- A. Of the federal government, the state or the county.
- B. Located on property owned by a public school district.
- C. Located primarily in the public way.
- D. Consisting of public utility wiring.
- E. Otherwise specifically excepted by this code.

§ 9.60.015 Engineering Data.

Computations, related diagrams and other engineering data sufficient to show the correctness of the structural, electrical, mechanical, plumbing and other plans shall be submitted when required by the building official.

§ 9.60.020 Building Permit Requirement.

A. It shall be unlawful for any person to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the same to occur unless a

separate building permit for each building or structure has first been obtained from the building official.

B. Paragraph A shall not apply to the following:

1. Structures placed in public streets, alleys and sidewalks pursuant to a public works permit, except those regulated by Chapter 32, Encroachment Into The Public Right-Of Way, and Chapter 33, Safeguards During Construction of the California Building Code.

2. Buildings or structures owned by the federal government, the state, the county, a public school district, or any other building and/or structures exempt under state law (i.e., hospitals, nursing homes, etc.).

3. Work done by city employees on city-owned or leased structures.

4. Waterfront and marine structures for which a public works permit has been obtained.

5. Masonry planter boxes not more than 18-inches in height.

6. Fences less than 36-inches in height above grade.

7. Unroofed walks, platforms, driveways and slabs not more than 18-inches above grade and not over any basement or story below located on private property.

8. Application of hot or cold paint or other roof coating on a roof of a building.

9. Installation of a row of ceramic tile not exceeding 6-inches in height around a bathtub or a laundry tub.

10. Replacement of broken or damaged ceramic tile in an existing installation.

11. Plaster patching not in excess of 10 square yards of interior or exterior plaster.

12. Installation or removal of a household type or single installation unit system or refrigeration that is self-contained and hermetically sealed, a single type of refrigeration of 22 cubic feet capacity or less, N.E.M.A. rating, that is self-contained, that employs no other type of refrigerant than Freon or methyl chloride, a single unit type of refrigeration of 15 cubic feet capacity or less, N.E.M.A. rating, that employs sulphur dioxide refrigerant.

13. Pools not over 18-inches in depth, where there is no electrical or plumbing installation.

14. Any portable heating appliance.

15. Any portable ventilating equipment.

16. Any portable comfort cooling unit.

17. Any steam, hot or chilled water piping within any comfort heating or cooling equipment regulated by this code.

18. Replacement of any component part or assembly of an appliance that does not alter its original approval and complies with other applicable requirements of this code.

19. Any portable evaporative cooler.
20. Any refrigeration equipment for which a permit has been issued pursuant to this code.
21. The stopping of leaks in drains, soil, waste or vent pipe; provided, however, that should any trap, drainpipe, soil, waste or vent pipe be or become defective such that it is necessary to remove and replace the same with new material, the same shall be considered new work and a permit shall be procured and inspections made as hereinafter provided.
22. Clearing of stoppage or the repairing of leaks in pipes, valves, or fixtures, when such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
23. One story detached accessory buildings, limited to: prefabricated tool and storage sheds not exceeding 120 square feet, and playhouses and similar structures not exceeding 50 square feet.
24. Oil derricks.
25. Movable cases, counters and partitions not over 5-feet high.
26. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2:1.
27. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
28. Temporary motion picture, television and theater stage sets and scenery.
29. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 18 inches deep, does not exceed 5,000 gallons and are installed entirely above grade.

§ 9.60.025 Moving Buildings.

- A. Any person proposing to move a building into the city from outside the city, or to move a building from a location within the city to another location within the city, shall submit the following to the building official:
 1. Three copies of plans containing the following:
 - a. Site plan of the lot to which the building is to be located with the building shown on the lot.
 - b. Foundation plan.
 - c. Complete floor plan and all elevations.
 - d. All electrical, gas and water facilities in the building as well as the service location of same.
 - e. Location of sewer service into the building.
 2. Information as to when the structure was built and the applicable codes in effect at the time.
 3. Copies of building permits if available.

4. Name of legal owner of building and lot to which building is to be located.

5. Any other information required by the building official to determine the safety of the building.

B. The building official shall physically inspect the building prior to its transportation to insure that it is safe or may be made safe. Conditions may be imposed as deemed necessary to insure the building is safe. The owner of the building shall agree in writing to make such changes prior to the issuance of the moving permit.

C. The owner shall post a bond (surety or cash) with the city, in favor of the city for the cost of work required to be done in order to comply with the conditions of the moving permit. Upon fulfilling all conditions imposed on the moving permit and issuance of certificate of occupancy, any unused portion of the bond will be returned to the owner.

D. Building permits and plan check fees must be paid based on the value of work to be done.

E. Inspections will be made by the building department for all work.

F. Upon issuance of the moving permit the owner shall arrange with the public works department and police department for the necessary transportation permits to physically move the building into or through the city.

G. No building shall remain on any street for longer than 8 hours and if left on the street during the hours of darkness, necessary red lights as approved by the police department and city engineer shall be provided and maintained in working order.

H. The application, plans and specifications filed by an applicant for a building, mechanical, plumbing, sewer and/or electrical permit shall be checked by the building official. Such plans shall be reviewed by other departments of the city to check compliance with the laws under their jurisdiction. If the building official is satisfied that the work described in a permit application and the plans filed therewith conform to the requirements of this code and other pertinent laws, and that the applicable fee has been paid, a permit shall be issued to the applicant. When the building official issues the permit, "APPROVED." shall be endorsed in writing or stamp on both sets of plans and specifications. Such approved plans and specifications shall not be changed without authorization from the building official, and all work shall be done in accordance with the approved plans. Plan changes and additional plans require approval by the building official prior to their incorporation into the work.

The building official may issue a building, plumbing, sewer or electrical permit for the construction of part of the building or structure before the entire plans and specifications for the whole building or structure have been submitted or approved. Issuance of such a permit shall not constitute a guaranty that the permit for the entire building or structure will be granted.

On existing premises on which swimming pool installations are to be altered, repaired, or renovated, deviations from the provisions of this code are permitted if necessary and first approved by the building official.

The issuance or granting of a permit or approval of plans shall not prevent the building official from thereafter requiring the correction of errors in the plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or from revoking any certificate or approval when issued in error.

Nothing contained in this code shall be construed to restrict the use, nor to require any person to reinstall, reconstruct, alter, change or remove any structural, plumbing, mechanical or electrical wiring or equipment that complied with laws of this jurisdiction in effect before the effective date of this code, unless the same is dangerous, unsafe or hazardous to life or property.

Additions or alterations to, and alterations and renewals of existing installations, shall be made in compliance with the provisions of this code.

I. Permits required by this code shall be issued to the following:

1. A person who both:

a. Holds a valid unexpired and unrevoked contractor's license as issued by the state contractor's licensing board plus a city business license.

b. Files a certificate of worker's compensation insurance, or a certificate of exemption from worker's compensation insurance.

2. An owner of any single family building, or dwelling, not exceeding 3 stories including appurtenances thereto, who contracts for such a project with a licensed and insured contractor or contractors. Electrical, sewer, mechanical and plumbing permits shall be issued to licensed contractors only.

J. Any permit required by this code may be issued to any owner to do any work regulated by this code in a structure, building or a dwelling, including the usual accessory buildings and quarters in connection with such buildings, provided that all of the following criteria are satisfied:

1. The owner shall personally purchase all material and shall personally, or through the owner's employees, perform all labor in connection therewith.

2. Such structure, building or dwelling unit, with or without accessory buildings and quarters or appurtenances thereto, is not intended or offered for sale.

3. The owner files a certificate of consent to self-insure, or a certificate of worker's compensation insurance, or a certificate of exemption from worker's compensation insurance.

4. The owner shall complete and return prior to permit issuance an owner-verification form as required by California Health and Safety Code Section 19831, and as prepared or amended by the building official.

K. Any person regularly employing 1 or more journeymen mechanics and/or maintenance men for the purpose of installation, alteration, maintenance or repair on such person's commercial or industrial buildings and premises, shall make monthly reports within 15 days following the end of each month covering all installations, additions or alterations and shall pay for each the permit fees provided for by this code. All such work shall be installed and done in accordance with the provisions of this code; and such work shall be subject to inspection by the building official to the same extent as all other similar work for which such inspection is provided. Single projects valued in excess of \$200 shall provide drawings, updated monthly, to the building official. A written request, approved by the building official, shall be submitted in advance of this program.

L. No person shall allow any other person to do or cause to be done work under a permit secured by a permittee except persons in the permittee's employ.

§ 9.60.030 Retention of Plans.

A. One set of building official-approved plans, specifications and computations shall be retained by the building official as required by state law, and 1 set of approved plans and specifications shall be returned to the applicant, which set shall be kept on the site of such building or work at all times during which the authorized work is in progress. This set of approved plans (plus future plans or changes that the building official has stamped approved) shall be the only plan used for inspections required by this chapter.

B. Plans submitted for checking for which no permit is issued, and on which no action is taken by the applicant for 180 days, may be returned to the last known address of the applicant, or destroyed by the building official. The building official may extend the time for action by the applicant for a period of 180 days upon request by the applicant showing that uncontrollable circumstances have prevented action from being taken. No application shall be extended more than once. In order to renew action on the plans, a payment of a new plan check fee shall be made.

§ 9.60.035 Building Fees.

A. A fee for each building, sewer, electrical and demolition permit shall be paid as per the fee schedule established by city council resolution. The determination fee amount shall be made by the building official in accordance with city council resolution.

B. In addition to any other penalty imposed, any person who shall commence work for which a permit is required without first having obtained the permit shall, if subsequently granted the permit, pay double the permit cost fixed to such work plus a special investigation fee if a special investigation is required. This provision shall not apply to emergency work when it has been proven to the satisfaction of the building official that such work was urgently necessary and that it was not practical to obtain a permit before commencement. In all cases of emergency work, a permit must be obtained as soon as it is practical to do so, and if there be an unreasonable delay, a double permit fee shall be charged.

C. The fee for supplementary permits to cover any additional valuation for work included in the original permit shall be as established by Council resolution. Plan check fees shall be paid for the supplementary work. The fee for a building permit authorizing changes from approved plans or specifications shall be established by Council resolution.

§ 9.60.040 Plan Checking Fees.

When the valuation of the proposed construction exceeds \$1,000 and a plan is required to be submitted, a plan checking fee shall be paid to the building official at the time of submitting plans and specifications for checking. The plan checking fees shall be as established by city council resolution.

§ 9.60.045 Demolition Permit Fees.

Existing buildings or structures or portions thereof, including sewer, plumbing, electrical and mechanical installations requiring demolition in whole or part, shall pay the required demolition permit fees.

§ 9.60.050 Inspections.

A. All construction or work for which a permit is required shall be subject to inspection by the building official, and certain types of construction shall have continuous inspection by special inspectors as specified in this chapter. The permittee shall coordinate the sequence of on-site construction

between and with the subcontractors or the electrical, plumbing, mechanical or sewer contractors working concurrently with a general contractor. The permittee's agent shall be a fully authorized employee or official of the permittee with complete control of the permittee's employees and the subcontractors; provided, however, that this requirement shall not apply to (i) an electrical, plumbing, mechanical or sewer permittee not working concurrently with a general contractor; or (ii) work being coordinated by a construction manager or owner's representative or by an owner.

B. The building official, upon notification from the permittee, shall make the following inspections of swimming pools and shall either approve that portion of construction as completed, or shall notify the permittee wherein the same fails to comply with the law. The following inspections are required:

1. Special Inspection: A special inspector as specified in this chapter shall be present at all times during gunite operations. The special inspector shall assure that the steel, piping, steps, skimmer, drain and other elements imbedded in the gunite is in accordance with the approved plan. The special inspector shall assure the gunite complies with Chapter 17, Structural Tests and Special Inspections, California Building Code. The special inspector shall forward the inspection reports, including results of cylinder tests, to the building official. The building official's approval shall be conditioned on the street right-of-way being clean and clear of construction materials.

2. Preplaster Inspection: (After the special inspection report and laboratory test report is satisfactory, 3,000 p.s.i.) To be made when all fence and gates are installed.

3. Final Inspection: To be made when all work pertaining to pool is complete. Approval is conditioned on the street being clear and clean and on damaged street elements being repaired.

C. In addition to the called inspections, specified above, the building official may make or require any other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the building department. For the purpose of determining compliance, the building official may cause any structure to be reinspected.

D. The notification by the permittee to make an inspection shall signify that the required work is complete, all work was coordinated between all trades by the permittee, and to the best of the permittee's knowledge complies with the applicable referenced model code. The permittee shall accompany the inspector and shall note and assure correction of deficiencies. The permittee shall notify the building official that deficiencies (if any) are completed and a reinspection is required in which case the requirements of the preceding sentence refers to the reinspection.

E. It shall be the duty of the person requesting inspection regulated by this code to provide access to and means for proper inspection. The building official shall not be liable for any expense entailed in the removal or replacement of any material required to allow the inspection.

F. When any reinspection is required due to the negligence of the permittee or other responsible persons, or due to the failure of such parties to comply with previous correction instructions, a fee may be charged by the building official prior to each reinspection in accordance with city council resolution.

G. It shall be the duty of the person doing the work authorized by the permit to make sure that the work will stand the tests prescribed in this code before the above notification is given.

§ 9.60.055 Excessive Inspections.

If in the opinion of the building official, the work is not being coordinated or executed by the permittee, which then requires an inordinate number of reinspections, or corrections called for are not made, or the work deviates from the approved set of plans or the building code, the building official shall require a reinspection fee in accordance with the current resolution adopted by the city council for building fee purposes.

§ 9.60.060 Special Inspections.

A. In addition to the inspections to be made as specified in this chapter, the owner shall employ a special inspector who shall be present at all times during construction of the types of work noted in Chapter 17, Special Tests and Special Inspections, of the California Building Code.

B. An occupant, owner or prospective owner of a building or structure may apply for an inspection of the building or structure. A deposit in the amount determined by the building official shall be made. The building inspector(s) shall be assured there will be no opposition in entering the building when conducting the inspection. The inspector(s) shall not enter crawl spaces. All areas shall be accessible and open for the inspector(s) to observe. The applicant or such person's representative shall accompany the inspectors.

C. The written report shall be based on the building code standards. It will be restricted to those portions of the building observed by the inspector(s). Concealed portions or inaccessible portions of the building can be reported only to the extent that judgment can be made based on visible evidence. Unsafe conditions observed will be processed as prescribed by the building code.

D. The fees shall be as set by city council resolution.

§ 9.60.065 California Building Code Amendments.

The following amendments are made to the California Building Code, as adopted by this chapter:

A. **CHAPTER 1 SCOPE AND ADMINISTRATION** is hereby amended as follows:

Section 104.8 Liability is hereby amended by adding a sentence to the end of the paragraph as follows:

"The provisions of this section shall apply if the building official or his/her authorized representative is employees of this jurisdiction and shall also apply if the building official or his/her authorized representative is acting under contract as agents of this jurisdiction."

Section 105.2 Work exempt from permit is hereby amended to revise items 2 and 4 under Building to read as follows:

- 2. Walls and fences not over 36 inches (915.5 mm) high.
- 4. (Deleted)

Section 113, Board of Appeals is amended to read as follows:

SECTION 113 - BOARD OF APPEALS

For all sections of the California Building Code, California Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Elevator Safety Construction Code, California Historical Building Code, California Fire Code, California Existing

Building Code, California Referenced Standards Code, International Property Maintenance Code, Uniform Pool, Spa and Hot Tub Code and Uniform Solar Energy Code, including any and all amendments included within this division, the following shall apply pertaining to board of appeals and shall replace any sections of those codes that pertain to board of appeals.

In order to determine the suitability of alternate materials and methods of construction and provisions of these codes, there shall be and there is hereby create a board of appeals, consisting of five members, composed of the mayor and the other members of the city council. Said members shall hold their respective membership on said board of appeals by reason of, and concurrently with their terms of service as council members and shall cease to be such members upon their ceasing to be such council members. The director of development services shall be the secretary of the board. The board may adopt reasonable rules and regulations for conducting its investigations and shall render all its decisions and findings on contested matters, in writing to the director of development services, with a duplicate copy thereof to any appellant or contestant affected by any such decision or finding, and may recommend to the city council such new legislation, if any, as is consistent therewith.

Three members of the board shall constitute a quorum. The mayor shall be the presiding officer of the board and in the mayor's absence the mayor pro-tem shall preside. Meetings shall be conducted in accordance with the Brown Act.

The board shall have the right, subject to such limits as the city council may prescribe by resolution, to employ at the cost and expense of the city, such qualified individuals as the board, in its discretion, may deem reasonably necessary in order to assist it in its investigations and making its findings and decisions."

Section 114 Violations is hereby amended to read as follows:

SECTION 114 - VIOLATIONS

For all sections of the California Building Code, California Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Elevator Safety Construction Code, California Historical Building Code, California Existing Building Code, California Fire Code, California Referenced Standards Code, International Property Maintenance Code, Uniform Pool, Spa and Hot Tub Code and Uniform Solar Energy Code, any and all amendments included within this division, the following shall apply pertaining to violations and shall replace any sections of those codes that pertain to violation.

It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or maintain any building or structure in the city, or cause same to be done, contrary to or in violation of any of the provisions of this ordinance.

Any person, firm, or corporation violating any of the provisions of this Chapter, shall be deemed guilty of a misdemeanor, and each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this ordinance is committed, continued, or permitted, and upon conviction of any such violation such persons shall be punished by a fine of not more than \$1,000 or by imprisonment for not more than six months, or by both such fine and imprisonment."

B. CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY is amended to read as follows:

Section 403 High-Rise Buildings is hereby amended as follows:

403 High-Rise Buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access, and Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access

Section 403.1 Applicability is hereby amended as follows:

403.1 Applicability. New high-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access, and new Group I-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access shall comply with Sections 403.2 through 403.6.

403.1.1 Definitions, High Rise Building, is hereby amended as follows:

HIGH-RISE BUILDING. In other than Group I-2 occupancies "high-rise buildings" as used by this Code:

1. "Existing high-rise structure" means a high-rise structure, the construction of which commenced or completed prior to July 1, 1974
2. "High-rise structure" means every building of any type of construction or occupancy having floor used for human occupancy located more than 55 feet above the lowest floor level having building access, except buildings used as hospitals as defined by the Health and Safety Code Section 1250.
3. "New high-rise structure" means a high-rise structure, the construction of which commenced on or after July 1, 1974

Section 403.4.7.2 Standby power loads of the California Building Code is hereby amended by deleting #2 and renumber as follows:

403.4.7.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.4.5;
2. Standby power shall be provided for elevators in accordance with Sections 1007.4, 3003, 3007 and 3008.

Section 403.4.8.1 Emergency power loads of the California Building Code is hereby amended as follows:

403.4.8.1 1 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10;
2. Elevator car lighting;
3. Emergency voice/alarm communications system;
4. Automatic fire detection systems;
5. Fire alarm systems;
6. Electrically powered fire pumps; and
7. Ventilation and automatic fire detection equipment for smoke proof enclosures.

Section 412.2 Definitions is hereby amended by adding the following definitions:

APPROACH-DEPARTURE PATH. The flight path of the helicopter as it approaches or departs from the landing pad.

EMERGENCY HELICOPTER LANDING FACILITY (EHLF). A landing area on the roof of a building that is not intended to function as a heliport or helistop but

is capable of accommodating fire or medical helicopters engaged in emergency operations.

SAFETY AREA. A defined area surrounding the landing pad which is free of obstructions.

TAKEOFF AND LANDING AREA. The combination of the landing pad centered within the surrounding safety area.

Section 412.7 of the California Building Code is hereby amended by adding Sections 412.7.5 through 412.7.5.13 as follows:

412.7.5. Emergency Helicopter Landing Facility. Emergency Helicopter Landing Facility (EHLF) shall be constructed as specified in Section 412.7.5.1 through 412.7.5.13.

412.7.5.1 General. Every building of any type of construction or occupancy having floors used for human occupancy located more than 75 ft above the lowest level of the fire department vehicle access shall have a rooftop emergency helicopter landing facility (EHLF) in a location approved by the fire code official for use by fire, police, and emergency medical helicopters only.

412.7.5.2 Rooftop Landing Pad. The landing pad shall be 50 ft. x 50 ft. or a 50 ft. diameter circle that is pitched or sloped to provide drainage away from access points and passenger holding areas at a slope of 0.5 percent to 2 percent. The landing pad surface shall be constructed of approved non-combustible, nonporous materials. It shall be capable of supporting a helicopter with a maximum gross weight of 15,000 lbs. For structural design requirements, see California Building Code.

412.7.5.3 Approach-Departure Path. The emergency helicopter landing facility shall have two approach-departure paths separated in plan from each other by at least 90 degrees. No objects shall penetrate above the approach-departure paths. The approach-departure path begins at the edge of the landing pad, with the same width or diameter as the landing pad and is a rising slope extending outward and upward at a ratio of eight feet horizontal distance for every one foot of vertical height.

412.7.5.4 Safety Area. The safety area is a horizontal plane level with the landing pad surface and shall extend 25 ft in all directions from the edge of the landing pad. No objects shall penetrate above the plane of the safety area.

412.7.5.5 Safety Net. If the rooftop landing pad is elevated more than 30 in. (2'-6") above the adjoining surfaces, a 6 ft in wide horizontal safety net capable of supporting 25 lbs/psf shall be provided around the perimeter of the landing pad. The inner edge of the safety net attached to the landing pad shall be slightly dropped (greater than 5 in. but less than 18 in.) below the pad elevation. The safety net shall slope upward but the outer safety net edge shall not be above the elevation of the landing pad.

412.7.5.6 Take-off and Landing Area. The takeoff and landing area shall be free of obstructions and 100 ft x 100 ft. or 100 ft. diameter.

412.7.5.7 Wind Indicating Device. An approved wind indicating device shall be provided but shall not extend into the safety area or the approach-departure paths.

412.7.5.8 Special Markings. The emergency helicopter landing facility shall be marked as indicated in Figure 412.7.5.8

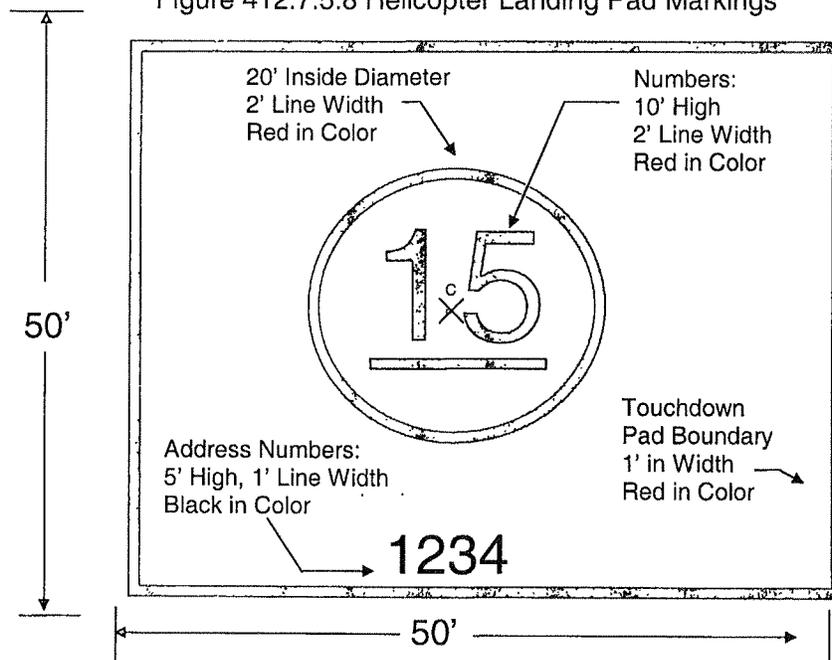
412.7.5.9 EHLF Exits. Two stairway exits shall be provided from the landing platform area to the roof surface. For landing areas less than 2,501 square feet in area, the second exit may be a fire escape or ladder leading to the roof surface below. The stairway from the landing facility platform to the floor below shall comply with CFC 1009.4.2 for riser height and tread depth. Handrails shall be provided, but shall not extend above the platform surface.

412.7.5.10 Standpipe Systems. The standpipe system shall be extended to the roof level on which the EHLF is located. All portions of the EHLF area shall be within 150 feet of a 2.5-inch outlet on a Class I or III standpipe.

412.7.5.11 Fire Extinguishers. A minimum of one portable fire extinguisher having a minimum 80-B:C rating shall be provided and located near the stairways or ramp to the landing pad. The fire extinguisher cabinets shall not penetrate the approach-departure paths, or the safety area. Installation, inspection, and maintenance of extinguishers shall be in accordance with the CFC, Section 906.

412.7.5.13 EHLF. Fueling, maintenance, repairs, or storage of helicopters shall not be permitted.

Figure 412.7.5.8 Helicopter Landing Pad Markings



1. The preferred background is white or tan.
2. The circled, red numbers indicate the allowable weight that the facility is capable of supporting in thousands of pounds.
3. The numbers shall be oriented towards the preferred flight (typically facing the prevailing wind).

C. **CHAPTER 9 FIRE PROTECTION SYSTEMS** is amended to read as follows:

Adopt Chapter 9 Fire Protection Systems is amended as follows:

Section 903.2 Where required is hereby amended as follows:

903.2 Where Required. Approved automatic sprinkler systems in buildings and structures shall be provided in the following locations:

New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.12, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area, as defined in Section 502.1, exceeds 5,000 square feet (465 m²), or more than two stories in height, regardless of fire areas or allowable area.

Exception:

Group R-3 occupancies. Group R-3 occupancies shall comply with Section 903.2.8.

Existing buildings: Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and when one of the following conditions exists:

1. When the addition is 33% or more of the existing building area and the resulting building area, as defined in Section 502.1, exceeds 5000 square feet (465 m²); or
2. When the addition exceeds 2000 (185.81 m²)square feet and the resulting building area, as defined in Section 502.1, exceeds 5000 square feet (465 m²); or
3. An additional story is added above the second floor regardless of fire areas or allowable area.

Section 903.2.8 Group R is amended as follows:

903.2.8 Group R. An automatic sprinkler system installed in accordance with Subsection 903.3.1 shall be provided throughout all buildings with a Group R fire area as follows:

1. All new Group R occupancies, including the attached garages.
2. All existing Group R occupancies and U-1 garages when the total floor area is increase by 50% of the existing area over a 2-year period.
3. All existing Group R occupancies and U-1 garages when the total area is increased by 750 square feet or more over a 2-year period.
4. All existing Group R occupancies and U-1 garages when an additional story is added to the structure regardless of the area involved.
5. An automatic sprinkler system shall be installed throughout any existing Group R Occupancy building when the floor area of the Alteration or Combination of an Addition and Alteration, within any two year period, is 50% or more of area/value of the existing structure and where the scope of the work exposes building framing and facilitates sprinkler installation and is such that the Building/Fire Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
6. Any addition to an existing building which has fire sprinklers installed.

Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies not housing bedridden clients, not housing non-ambulatory clients above the first floor and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 425.8.3.3.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and buildings or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only,

none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section 903.3.1.1.1, Exempt locations, is hereby amended by revising Exception 4 as follows:

Exception 4. When approved by the fire code official spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire-barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 712, or both.

Section 903.4 Sprinkler system supervision and alarms is hereby amended as follows:

903.4 Sprinkler system supervision and alarms. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions:

1. Automatic sprinkler systems protecting one- and two-family dwellings.
2. Limited area systems serving fewer than 20 sprinklers.
3. Jockey pump control valves that are sealed or locked in the open position.
4. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
5. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.

Section 904.3.5 Monitoring is hereby amended as follows:

904.3.5 Monitoring. Where a building fire alarm or monitoring system is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm or monitoring system in accordance with NFPA 72.

Section 905.4 Location of Class I standpipe hose connections is hereby amended by adding items 7 and 8 as follows:

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official. See Section 909.20.3.2 for additional provisions in smoke proof enclosures.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.

Exception:

Where floor areas adjacent to a horizontal exit are reachable from exit stairway

hose connections by a nozzle attached to 100 feet (30 480 mm) of hose, as measured along the path of travel, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception:

Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations. The distance from a hose connection shall be measured along the patch of travel.
7. The centerline of the 2.5 inches (64 mm) outlet shall be no less than 18 inches (457 mm) above and no more than 24 inches (610 mm) above the finished floor.
8. Every new building with any horizontal dimensions greater than 300 feet (91 440 mm) shall be provided with either access doors or a 2.5 inches (64 mm) outlets so that all portions of the building can be reached with 150 feet (45 720 mm) of hose from an access door or hose outlet. Required access doors shall be located in the exterior of the building and shall be accessible without the use of a ladder. The door dimensions shall be not less than 3 feet (914 mm) in width, and not less than 6 feet 8 inches (2032 mm) in height. These doors are for fire department access only.

Section 907.2.13 High-rise buildings is hereby amended as follows:

907.2.13 High-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access, and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access. High-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access shall be provided with an automatic smoke detection in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412
2. Open parking garages in accordance with Section 406.3

3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1
4. Low-hazard special occupancies in accordance with Section 503.1.1
5. In Group I-2 and R-2.1 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the emergency voice/alarm communication system.

Section 907.3.1 Duct smoke detectors is hereby amended as follows:

907.3.1 Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the California Mechanical Code. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exception:

In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Section 907.5.2.2 Emergency voice/alarm communication system is amended as follows.

907.5.2.2 Emergency voice/alarm communication system. Emergency voice/alarm communication system required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404. In high-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access, and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.
5. Dwelling Units in apartment houses.
6. Hotel guest rooms or suites.

Exception:

In Group I-1 and R-2.1 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

Section 907.6.3.2 High-rise buildings is hereby amended as follows.

907.6.3.2 High-rise buildings. High-rise buildings having occupied floors located more than 55 feet above the lowest level of fire department vehicle access and Group I-2 occupancies having floors located more than 75 feet above the lowest level fire department vehicle access, a separate zone by floor shall be provided for all of the following types of alarm-initiating devices where

provided:

1. Smoke detectors.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes
4. Other approved types of automatic detection devices or suppression systems.

Section 910.3.2.2 Sprinklered buildings is hereby amended as follows:

910.3.2.2 Sprinkler buildings. Where installed in buildings provided with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically by actuation of a heat-responsive device rated at least 100° F above the operating temperature of the sprinkler unless otherwise approved.

D. **CHAPTER 12 INTERIOR ENVIRONMENT** is hereby amended to read as follows:

Section 1206.2 Yards is hereby amended to read as follows:

1206.2 Yards. Yards shall not be less than 3 feet (914 mm) in width for one-story, two-story, three-story or four-story buildings with heights of 35 feet (10,675 mm) or less. For buildings more than 35 feet in height, the minimum width of the yard shall be increased at the rate of 1 foot (305 mm) for each additional story greater than two (2). For buildings exceeding 14 stories in height, the required width of the yard shall be computed on the basis of 14 stories.

E. **CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES** is hereby amended as follows:

Table 1505.1 is hereby amended as follows:

**TABLE 1505.1
MINIMUM ROOF COVERING CLASSIFICATIONS
TYPES OF CONSTRUCTION**

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
A	A	A	A	A	A	A	A	A

Section 1505.1.3 Roof coverings within all other areas is hereby amended to read as follows:

1505.1.3 Roof coverings within all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class B.

The roof covering assembly includes the roof deck, underlayment, interlayment, insulation, and covering which is assigned a roof-covering classification.

Exception:

Group R and U occupancies shall have a minimum roof covering of class A."

Section 1510.7 Smooth or cap-sheet surface is added to read as follows:

1510.7 Smooth or cap-sheet surface. Over gravel-surfaced roof coverings, the roof shall be cleaned of all loose gravel and debris. All blisters, buckles, and

other irregularities shall be cut and made smooth and secure. Minimum ½-inch (12.6 mm) insulation board shall be nailed or securely cemented to the existing roofing with hot bitumen over which a new roof complying with Section 1507.10 shall be installed. When insulation board is to be attached with hot bitumen, the existing surface shall be primed.

F. **CHAPTER 31 SPECIAL CONSTRUCTION** is hereby amended as follows:

Section 3109.4.1. Barrier height and clearances is hereby amended to read as follows:

3109.4.1. Barrier height and clearances. The top of the barrier shall be at least 72 inches (1,829 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, such as an aboveground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm). When barriers have horizontal members spaced less than 45 inches (1,143 mm) apart, the horizontal members shall be placed on the poolside of the barrier. Any decorative design work on the side away from the swimming pool, such as protrusions, indentations or cutouts, which render the barrier easily climbable, is prohibited.

Section 3109.4.4 Private swimming pools (statewide) is hereby amended to clarify that pool barriers that are already in the Code are scoped so as to apply on all private swimming pools and is amended to read as follows:

Section 3109.4.4.1 Definitions is hereby amended by adding the following definition:

“PRIVATE POOL” means any constructed pool, permanent or portable, which is intended for non-commercial use as a swimming pool by not more than three owner families and their guests.

Section 3109.4.4.2 Construction permit; safety features required is amended as follows:

3109.4.4.2 Construction permit; safety features required. Commencing, January 1, 1998 except as provided in Section 3109.4.4.5, whenever a construction permit is issued for construction of a new private pool at a residence, it shall have an enclosure complying with 3109.4.4.3 and, it shall be equipped with at least one of the following safety features.

Section 3109.4.4.3 Enclosure; required characteristics is amended to revise Item 2 as follows:

3109.4.4.3 Enclosure; required characteristics.

2. A minimum height of 72 inches.

G. **CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION** is hereby amended as follows:

Section 3313, Plan review fees and **Section 3314, Grading permit fees** are added to read as follows:

3313 Plan review fees. When plans or other data are required to be submitted, a deposit/fee for plan review shall be made at the time of submitting plans and

specifications for review. The amount of the plan review deposit/fee shall be as set forth by City Council resolution. A separate plan review deposit/fee shall apply to retaining walls or major drainage structures as required by City Council resolution. For excavation and fill on the same site, the deposit/fee shall be based upon the volume of earth moved for both excavation and fill.

3314 Grading permit fees. An inspection deposit for each grading permit shall be paid to the building official as set forth by City Council resolution. Separate permits and fees shall apply to retaining walls or major drainage structures as required by City Council resolution.

H. **Chapter 35 Referenced Standards** is hereby adopted and amended as follows:

NFPA 13, 2010 Edition, Installation of Sprinkler Systems is hereby amended as follows:

Section 6.8.3 is hereby amended as follows:

6.8.3 Fire department connections (FDC) shall be of an approved type. The FDC shall contain a minimum of two 2 ½" inlets. The location shall be approved and be no more than 150 feet from a public hydrant. The size of piping and the number of inlets shall be approved by the chief. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided. FDC may be located within 150 feet of a private fire hydrant when approved by the chief.

Section 8.3.3.1 is hereby amended as follows:

8.3.3.1. When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Sprinklers in light hazard occupancies shall be one of the following:

1. Quick-response type as defined in 3.6.4.7
2. Residential sprinklers in accordance with the requirements of 8.4.5
3. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
4. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 8.16.1.1.1 Residential Waterflow Alarms is hereby added as follows:

8.16.1.1.1 Residential Waterflow Alarms. A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies not requiring a fire alarm system by the California Fire Code shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 DBA above the average ambient sound or a minimum of 75 DBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Section 8.17.2.4.6 is hereby amended as follows:

8.17.2.4.6 Fire department connections shall be on the street side of buildings and shall be located and arranged so that they are immediately adjacent to the

approved fire department access road and that hose lines can be readily and conveniently attached to the inlets without interference from nearby objects including buildings, fence, posts, or other fire department connections.

Section 11.1.1.2 is hereby added as follows:

11.1.1.2 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction/s in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the Fire Code Official:

1. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiplying the result by 0.433;
2. Use a maximum of 40 psi, if available;
3. Utilize the Orange County Fire Authority water-flow test form/directions to document a flow test conducted by the local water agency or a professional engineer licensed in the State of California. The result shall be adjusted in accordance with the graduated scaled found in the guideline.

Section 22.1.3 (43) is hereby amended as follows:

22.1.3 (43) Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in the flow tests shall be shown. Flow test shall be completed within six months of the plan submittal to the authority having jurisdiction.

NFPA 13R 2010 Edition Installation of Sprinkler System in Residential Occupancies up to and Including Four Stories in Height is hereby amended as follows:

Section 6.16.1 is hereby amended as follows:

6.16.1 A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies containing less than the number of stories, dwelling units or occupant load specified in Section 907.2.8 of the 2010 California Fire Code as requiring a fire alarm system shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 dBA above the average ambient sound or a minimum of 75 dBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

There shall also be a minimum of one exterior alarm indicating device, listed for outside service and audible from the access roadway that serves that building.

Section 6.6.6 is hereby amended as follows:

6.6.6 Sprinklers shall not be required in penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, noncombustible elevator shafts where the elevator cars comply with ANSI A17.1, Safety Code for Elevators and Escalators, and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel fired equipment.

Section 6.6.9 is hereby added as follows:

6.6.9 Sprinklers shall not be required in attics that are not located over dwelling units. When attics are separated by unit, each unit's attic space may be protected per NFPA 13D Section 8.6.4.2. All other attics shall be protected per NFPA 13.

NFPA 13D 2010 Edition Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 4.1.5, Stock of Spare Sprinklers is hereby added as follows:

4.1.5 Stock of Spare Sprinklers

Section 4.1.5.1 is hereby added as follows:

4.1.5.1. A supply of at least two sprinklers for each type shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

Section 4.1.5.2 is hereby added as follows:

4.1.5.2 The sprinklers shall correspond to the types and temperature ratings of the sprinklers in the property.

Section 4.1.5.3 is hereby added as follows:

4.1.5.3 The sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed 100 °F (38°C).

Section 4.1.5.4 is hereby added as follows:

4.1.5.4 A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

Section 7.1.2 is hereby amended as follows:

7.1.2 The system piping shall not have a separate control valve unless supervised by a central station, proprietary or remote station alarm service.

Section 7.3.1 is hereby deleted in its entirety and replaced as follows:

7.3.1 At least one water pressure gauge shall be installed on the riser assembly.

Section 7.6 Alarms is hereby deleted in its entirety and replaced as follows:

7.6 Alarms. Exterior alarm indicating device shall be listed for outside service and audible from the street from which the house is addressed. Exterior audible devices shall be placed on the front or side of the structure and the location subject to final approval by the fire code official. Additional interior alarm devices shall be required to provide audibility throughout the structure. Sound levels in all

sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA. Audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Exceptions:

1. When an approved water flow monitoring system is installed, interior audible devices may be powered through the fire alarm control panel.
2. When smoke detectors specified under CBC Section 310.9 are used to sound an alarm upon waterflow switch activation.

Section 8.6.4.2 is hereby added as follows:

8.6.4.2 All attics shall be protected with an intermediate temperature quick response sprinkler which shall be located to protect attic penetrations created by the access scuttles or mechanical equipment

NFPA 14, 2007 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 6.4.5.4.1 is hereby deleted in its entirety and replaced as follows:

6.4.5.4.1 The fire department connection shall have a minimum of two 2 ½ inches, internal threaded (NHS) inlets. Additional inlets shall be provided on a 250 GPM per inlet ratio to meet the system demand. The inlets shall be provided with approved caps to protect the system from entry of debris. The location of the FDC shall be approved and be no more than 150 feet from a public hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red.

Section 7.3.1.1 Hose Connection Height is hereby deleted in its entirety and replaced as follows:

7.3.1.1 Hose Connection Height Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches, or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2010 Edition, Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 5.9.1.3 is hereby amended as follows:

5.9.1.3 The fire department connection shall be of an approved type and contain a minimum of two 2 ½ inch inlets. The location shall be approved and be no more than 150 feet from a public fire hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. The supply pipe shall be painted OSHA safety red.

Section 5.9.1.3.1 is hereby added as follows:

5.9.1.3.1 When the sprinkler density design is 500 gpm (including the interior hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided.

Section 5.9.1.3.2 is hereby added as follows:

5.9.1.3.2 The fire department connection (FDC) may be located within 150 feet of a private fire hydrant provided the FDC connects down-stream of an aboveground sprinkler system check valve.

Section 6.2.1.1 is hereby added as follows:

6.2.1.1 The closest upstream indicating valve to the riser shall be painted OSHA red.

Section 6.2.11 (5) is hereby deleted without replacement:

Section 6.2.11 (6) is hereby amended as follows:

6.2.11 (5) Control valves in a one-hour fire-rated room accessible from the exterior

Section 6.2.11 (7) is hereby deleted without replacement:

Section 6.3.3 is hereby added as follows:

6.3.3 All post indicator valves controlling fire suppression water supplies shall be painted OSHA red.

Section 10.1.6.3 is hereby added as follows:

10.1.6.3 All ferrous pipe shall be coated and wrapped. Joints shall be coated and wrapped after assembly. All fittings shall be protected with a loose 8-mil polyethylene tube. The ends of the tube shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception:

316 Stainless Steel pipe and fittings

Section 10.3.5.2 is hereby amended as follows:

10.3.5.2 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Section 10.3.5.3 is hereby added as follows:

10.3.5.3 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.6.3.1 is hereby amended as follows:

10.6.3.1 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 18 inches, as measured from the interior of the exterior wall. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints or comply with 10.6.2.

Section 10.6.5 is hereby amended as follows:

10.6.5 Pipe Joints shall not be located under foundation footings. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints.

NFPA 72, 2010 Edition National Fire Alarm Code

Section 14.2.1.2.3 is hereby amended as follows:

14.2.1.2.3 If a defect or malfunction is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner' designated representative and fire code official shall be informed of the impairment in writing

within 24 hours.

Section 23.8.2 Fire Alarm Control Units is amended as follows:

23.8.2.2 Fire Alarm Control Units. Except as permitted in 23.8.2.3, the fire alarm systems components shall be permitted to share control equipment or shall be able to operate as stand-alone subsystems, but in any case, they shall be arranged to function as a single system and send a single signal to a central, remote, or proprietary station.

Section 23.8.2.3 is hereby deleted without replacement:

Section 26.2.3.1 is hereby amended by modifying the start paragraph as follows:

26.2.3.1 Supervising station customers or clients and the fire code official shall be notified in writing within 7 days of any scheduled change in service that results in signals from their property being handled by a different supervising station facility.

§ 9.60.070 Amendments to the 2010 California Residential Code.

A. **Table R301.2(1)** is amended to read as follows:

**TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP*	ICE BARRIER UNDERLAYMENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k		Weathering ^a	Frost line Depth ^b	Termite ^c					
Zero	85	No	D ₂ or E	Negligible	12-24"	Very Heavy	43	No	See Footnote ^l	0	60

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. Temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and BFBMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°)" at www.ncdc.noaa.gov/ipsf.html.
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)" at www.ncdc.noaa.gov/ipsf.html.
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANELS	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE
SEAL BEACH, CITY OF	060233	111, 112, 113, 114, 116, 118, 226, 227	JUNE 21, 1974	JULY 3, 1978	DECEMBER 3, 2009

Section R313.1 Townhouse automatic fire sprinklers systems is amended as follows:

R313.1 Townhouse automatic fire sprinklers systems. An automatic residential fire sprinkler system installed in Townhouses as follows:

1. All new Group R occupancies, including the attached garages.
2. All existing Group R occupancies and U-1 garages when the total floor area is increase by 50% of the existing area over a 2-year period.
3. All existing Group R occupancies and U-1 garages when the total area is increased by 750 square feet or more over a 2-year period.
4. All existing Group R occupancies and U-1 garages when an additional story is added to the structure regardless of the area involved.
5. An automatic sprinkler system shall be installed throughout any existing Group R Occupancy building when the floor area of the Alteration or Combination of an Addition and Alteration, within any two year period, is 50% or more of area/value of the existing structure and where the scope of the work exposes building framing and facilitates sprinkler installation and is such that the Building/Fire Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
6. Any addition to an existing building which has fire sprinklers installed.

Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies not housing bedridden clients, not housing non-ambulatory clients above the first floor and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 425.8.3.3.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and buildings or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section R313.2 One- and two-family dwellings automatic fire sprinklers systems is amended by deleting it in its entirety and replacing it with the following:

R313.2 One- and two-family dwellings automatic fire sprinklers systems. An automatic residential fire sprinkler system installed in One-and two-family dwellings as follows:

1. All new Group R occupancies, including the attached garages.
2. All existing Group R occupancies and U-1 garages when the total floor area is increase by 50% of the existing area over a 2-year period.
3. All existing Group R occupancies and U-1 garages when the total area is increased by 750 square feet or more over a 2-year period.
4. All existing Group R occupancies and U-1 garages when an additional story is added to the structure regardless of the area involved.

5. An automatic sprinkler system shall be installed throughout any existing Group R Occupancy building when the floor area of the Alteration or Combination of an Addition and Alteration, within any two year period, is 50% or more of area/value of the existing structure and where the scope of the work exposes building framing and facilitates sprinkler installation and is such that the Building/Fire Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
6. Any addition to an existing building which has fire sprinklers installed.

Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies not housing bedridden clients, not housing non-ambulatory clients above the first floor and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 425.8.3.3.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and buildings or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

B. **Section R403.1.3** is amended by deleting the exception for masonry stem walls:

In Seismic Design Categories D₀, D₁ and D₂ masonry stem walls without solid grout and vertical reinforcing are not permitted.

Section R405.1 is amended to read as follows:

.....at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.

C. **Section R902.1 Roofing covering materials** is hereby amended by revising it to allow only Class A roofs as follows:

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. A minimum Class A roofing shall be installed in areas designated by this section. Classes A roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.

Section R902.1.3 Roof coverings within all other areas, is hereby amended by revising it to require a minimum Class B roof as follows:

R902.1.3 Roof coverings within all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class B.

Section R902.2 Fire-retardant-treated shingles and shakes. First paragraph is hereby amended by revising it to allow only Class A treated wood roofs as follows:

R902.2 Fire-retardant-treated shingles and shakes. Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A roof assemblies.

D. California Residential Code, Chapter 44 Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2010 Edition, Installation of Sprinkler Systems is hereby amended as follows:

Section 6.8.3 is hereby amended as follows:

6.8.3 Fire department connections (FDC) shall be of an approved type. The FDC shall contain a minimum of two 2 ½" inlets. The location shall be approved and be no more than 150 feet from a public hydrant. The size of piping and the number of inlets shall be approved by the chief. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided. FDC may be located within 150 feet of a private fire hydrant when approved by the chief.

Section 8.3.3.1 is hereby amended as follows:

8.3.3.1. When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Sprinklers in light hazard occupancies shall be one of the following:

1. Quick-response type as defined in 3.6.4.7
2. Residential sprinklers in accordance with the requirements of 8.4.5
3. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
4. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 8.17.1.1.1 Residential Waterflow Alarms is hereby added as follows:

8.17.1.1.1 Residential Waterflow Alarms. A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies not requiring a fire alarm system by the California Fire Code shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 DBA above the average ambient sound or a minimum of 75 DBA with all intervening doors closed. Alarms shall

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be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Section 8.17.2.4.6 is hereby amended as follows:

8.17.2.4.6 Fire department connections shall be on the street side of buildings and shall be located and arranged so that they are immediately adjacent to the approved fire department access road and that hose lines can be readily and conveniently attached to the inlets without interference from nearby objects including buildings, fence, posts, or other fire department connections.

Section 11.1.1.2 is hereby added as follows:

11.1.1.2 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction/s in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the Fire Code Official:

1. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiplying the result by 0.433;
2. Use a maximum of 40 psi, if available;
3. Utilize the Orange County Fire Authority water-flow test form/directions to document a flow test conducted by the local water agency or a professional engineer licensed in the State of California. The result shall be adjusted in accordance with the graduated scaled found in the guideline.

Section 22.1.3 (43) is hereby amended as follows:

22.1.3 (43) Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in the flow tests shall be shown. Flow test shall be completed within six months of the plan submittal to the authority having jurisdiction.

NFPA 13R 2010 Edition Installation of Sprinkler System in Residential Occupancies up to and Including Four Stories in Height is hereby amended as follows:

Section 6.16.1 is hereby amended as follows:

A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system where provided. Group R occupancies containing less than the number of stories, dwelling units or occupant load specified in Section 907.2.8 of the 2010 California Fire Code as requiring a fire alarm system shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 dBA above the average ambient sound

or a minimum of 75 dBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

There shall also be a minimum of one exterior alarm indicating device, listed for outside service and audible from the access roadway that serves that building.

Section 6.6.6 is hereby amended as follows:

6.6.6 Sprinklers shall not be required in penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, noncombustible elevator shafts where the elevator cars comply with ANSI A17.1, Safety Code for Elevators and Escalators, and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel fired equipment.

Section 6.6.9 is hereby added as follows:

6.6.9 Sprinklers shall not be required in attics that are not located over dwelling units. When attics are separated by unit, each unit's attic space may be protected per NFPA 13D Section 8.6.4.2. All other attics shall be protected per NFPA 13.

NFPA 13D 2010 Edition Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 4.1.5 is hereby added as follows:

4.1.5 Stock of Spare Sprinklers

Section 4.1.5.1 is hereby added as follows:

4.1.5.1. A supply of at least two sprinklers for each type shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

Section 4.1.5.2 is hereby added as follows:

4.1.5.2 The sprinklers shall correspond to the types and temperature ratings of the sprinklers in the property.

Section 4.1.5.3 is hereby added as follows:

4.1.5.3 The sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed 100 °F (38°C).

Section 4.1.5.4 is hereby added as follows:

4.1.5.4 A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

Section 7.1.2 is hereby amended as follows:

7.1.2 The system piping shall not have a separate control valve unless supervised by a central station, proprietary or remote station alarm service.

Section 7.3.1 is hereby deleted in its entirety and replaced as follows:

7.3.1 At least one water pressure gauge shall be installed on the riser assembly.

Section 7.6 Alarms is hereby deleted in its entirety and replaced as follows:

7.6 Alarms. Exterior alarm indicating device shall be listed for outside service and audible from the street from which the house is addressed. Exterior audible devices shall be placed on the front or side of the structure and the location subject to final approval by the fire code official. Additional interior alarm devices shall be required to provide audibility throughout the structure. Sound levels in all sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA. Audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Exceptions:

3. When an approved water flow monitoring system is installed, interior audible devices may be powered through the fire alarm control panel.
4. When smoke detectors specified under CBC Section 310.9 are used to sound an alarm upon waterflow switch activation.

Section 8.6.4.2 is hereby added as follows:

8.6.4.2 All attics shall be protected with an intermediate temperature quick response sprinkler which shall be located to protect attic penetrations created by the access scuttles or mechanical equipment

NFPA 14, 2007 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 6.4.5.4.1 is hereby deleted in its entirety and replaced as follows:

6.4.5.4.1 The fire department connection shall have a minimum of two 2 ½ inches, internal threaded (NHS) inlets. Additional inlets shall be provided on a 250 GPM per inlet ratio to meet the system demand. The inlets shall be provided with approved caps to protect the system from entry of debris. The location of the FDC shall be approved and be no more than 150 feet from a public hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red.

Section 7.3.1.1 is hereby deleted in its entirety and replaced as follows:

7.3.1.1 Hose Connection Height Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches, or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2010 Edition, Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 5.9.1.3 is hereby amended as follows:

5.9.1.3 The fire department connection shall be of an approved type and contain a minimum of two 2 ½ inch inlets. The location shall be approved and be no more than 150 feet from a public fire hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. The supply pipe shall be painted OSHA safety red.

Section 5.9.1.3.1 is hereby added as follows:

5.9.1.3.1 When the sprinkler density design is 500 gpm (including the interior hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets

shall be provided.

Section 5.9.1.3.2 is hereby added as follows:

5.9.1.3.2 The fire department connection (FDC) may be located within 150 feet of a private fire hydrant provided the FDC connects down-stream of an aboveground sprinkler system check valve.

Section 6.2.1.1 is hereby added as follows:

6.2.1.1 The closest upstream indicating valve to the riser shall be painted OSHA red.

Section 6.2.11 (5) is hereby deleted without replacement:

Section 6.2.11 (6) is hereby amended as follows:

6.2.11 (5) Control valves in a one-hour fire-rated room accessible from the exterior

Section 6.2.11 (7) is hereby deleted without replacement:

Section 6.3.3 is hereby added as follows:

6.3.3 All post indicator valves controlling fire suppression water supplies shall be painted OSHA red.

Section 10.1.6.3 is hereby added as follows:

10.1.6.3 All ferrous pipe shall be coated and wrapped. Joints shall be coated and wrapped after assembly. All fittings shall be protected with a loose 8-mil polyethylene tube. The ends of the tube shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception:

316 Stainless Steel pipe and fittings

Section 10.3.5.2 is hereby amended as follows:

10.3.5.2 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Section 10.3.5.3 is hereby added as follows:

10.3.5.3 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.6.3.1 is hereby amended as follows:

10.6.3.1 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 18 inches, as measured from the interior of the exterior wall. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints or comply with 10.6.2.

Section 10.6.5 is hereby amended as follows:

10.6.5 Pipe Joints shall not be located under foundation footings. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints.

NFPA 72, 2010 Edition National Fire Alarm Code

Section 14.2.1.2.3 is hereby amended as follows:

14.2.1.2.3 If a defect or malfunction is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner' designated representative and fire code official shall be informed of the impairment in writing within 24 hours.

Section 23.8.2 Fire Alarm Control Units is hereby amended as follows:

23.8.2.2 Except as permitted in 23.8.2.3, the fire alarm systems components shall be permitted to share control equipment or shall be able to operate as stand-alone subsystems, but in any case, they shall be arranged to function as a single system and send a single signal to a central, remote, or proprietary station.

Section 23.8.2.3 is hereby deleted without replacement:

Section 26.2.3.1 is hereby amended by modifying the start paragraph as follows:

26.2.3.1 Supervising station customers or clients and the fire code official shall be notified in writing within 7 days of any scheduled change in service that results in signals from their property being handled by a different supervising station facility.

§ 9.60.075 CALIFORNIA MECHANICAL CODE AMENDMENTS.

The following amendments are made to the California Mechanical Code, as adopted pursuant to this chapter:

A. **CHAPTER 1 ADMINISTRATION DIVISION II** is amended as follows:

Section 115.1 General is hereby amended to read as follows:

115.1 General. Fees shall be assessed in accordance with the schedule adopted by resolution of the Seal Beach City Council.

B. **CHAPTER 3 GENERAL REQUIREMENTS** is amended to read as follows:

Section 307.0 Location is hereby amended to add new **Section 307.3 Outdoor Location** to read as follows:

307.3 Outdoor Location. Equipment regulated by this Code shall not be located in any required front or side yard as established by the Building Code or zoning ordinance.

§ 9.60.080 CALIFORNIA PLUMBING CODE AMENDMENTS.

The following amendments are made to the California Plumbing Code, as adopted pursuant to this chapter:

A. **CHAPTER 1 ADMINISTRATION DIVISION II** is amended to read as follows:

Section 102.1 Authority Having Jurisdiction is hereby amended to read as follows:

102.1 Authority Having Jurisdiction. Whenever the term "Authority Having Jurisdiction" is used in this Code, it shall be construed to mean the building

official or such person's authorized representative.

The first paragraph of **Section 103.3.4 - Expiration** is hereby amended to read as follows:

103.3.4 Expiration. Every permit issued by the Authority Having Jurisdiction under the provisions of this Code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days, or if the amount of work done during any continuous period of 180 days amounts to less than ten (10) percent of the total work authorized by such permit. Before such work can be recommenced, a new permit shall first be obtained to do so, and the fee therefore shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further, that such suspensions or abandonment has not exceeded one year.

Section 103.4.1 - Permit fees and **Section 103.4.2 - Plan review fees** are hereby amended to read as follows:

103.4.1 Permit fees. The fee for each permit shall be those set forth as per the latest resolution of the City Council relating to the establishment of an Amended Fee Schedule.

103.4.2 Plan review fees. When a plan or other data is required to be submitted by Section 103.2.2, a plan review fee shall be paid at the time of submitting plans and specifications for review. The plan review fees for plumbing work shall be equal to 65 percent of the total permit fees as set forth in Section 103.4.1 above. When plans are incomplete or changed so as to require additional review, a fee shall be charged as set forth in Section 103.4.1 above.

B. **CHAPTER 3 GENERAL REGULATIONS** is hereby amended to read as follows:

Section 311.13 No outside installation is added to read as follows:

311.13 No outside installation. No water, soil, or waste pipe shall be installed or permitted outside of a building or on an exterior wall. The only exception will be the normal installation of hose bib connection and/or clean-out connection.

Section 313.0 Protection of piping, materials and structures is hereby amended by adding a new subsection **313.13 Corrosive Soils** to read as follows:

313.13 Corrosive soils. All earth within the City of Seal Beach is corrosive unless the permittee proves to the satisfaction of the building official the specific earth is not corrosive to the plumbing, piping, fittings, fixtures and/or equipment for installation to contact with or to be buried in the ground. Steel or galvanized steel shall be protected by at least double spiral wrapping, half overlapping with 10 mil plastic tape (total 40 mils cover) or approved equal.

C. **CHAPTER 12 FUEL PIPING** is hereby amended to read as follows:

Section 1209.5.1.1 Acceptable Materials is hereby amended to read:

1209.5.1.1 Acceptable Materials. All pipe used for the installation, extension, alteration, or repair of any gas piping shall be standard weight wrought iron or steel (galvanized or black), yellow brass (containing not more than seventy-five (75) percent copper), or internally tinned or equivalency treated copper of iron pipe size. Ferrous gas piping installed underground shall be prohibited. Approved Poly Ethylene or other non-metallic pipe shall be used in exterior

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buried and piping systems.

§ 9.60.085 Uniform Swimming Pool, Spa and Hot Tub Code Amendments.

The following amendments are made to the Uniform Swimming Pool, Spa and Hot Tub Code as adopted pursuant to this chapter:

A. **CHAPTER 1 ADMINISTRATION** is hereby amended to read as follows:

Section 102.1 Authority Having Jurisdiction is hereby amended to read as follows:

102.1 Authority Having Jurisdiction. Whenever the term "Authority Having Jurisdiction" is used in this Code, it shall be construed to mean the building official or his authorized representative.

Section 103.3.2 Penalties is hereby amended to revise the first sentence to read as follows:

Any person, firm or corporation violating any provision of this Code shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine of not more than one thousand dollars (\$1,000) or by imprisonment for not more than six (6) months, or both fine and imprisonment.

Section 103.4.1 Permit Fees is hereby amended to read as follows:

Such applicant shall pay for each permit at the time of making application, a fee in accordance with the latest resolution of the City Council relating to the establishment of an Amended Fee Schedule.

B. **CHAPTER 3 GENERAL REQUIREMENTS** is hereby amended as follows:

CHAPTER 3 GENERAL REQUIREMENTS is hereby amended by adding a new **Section 301.4** to read as follows:

301.4 Article 2.5 of the California Health and Safety Code, Sections 115920 through 115927, are hereby adopted in their entirety.

Section 312 Waste Water Disposal is hereby amended by adding an additional sentence is added to the end of **Section 312.1** to read as follows:

The filter waste disposal shall discharge into the sanitary sewer only.

Section 327.0 Design Requirements is added to read as follows:

327.0 Design Requirements.

327.1. Design. Each swimming pool shall be designed by a Civil Engineer licensed to practice in the State of California and each pool shall withstand expansive soil movement, see Chapter 18, California Building Code.

327.2. Continuous inspection. Continuous inspection by a special licensed inspector shall be required on all pools constructed of reinforced gunite. Said special inspector shall take test samples during the placing of concrete or gunite and such samples shall be tested by an approved testing laboratory to attain a minimum strength of 3000 psi. at twenty-eight (28) days. Should such test show the concrete or gunite to fail or to be questionable in quality or strength, the special inspector may require core tests to be taken upon approval of the Building Official. Special inspectors shall submit to the Building and Safety Department a written report showing the dates of inspection, and the result of the

laboratory tests.

327.3. Sand Under Pool Decking. A sand or crushed rock (minimum depth four (4) inches) shall be required under all pool decking and under concrete slabs adjacent to swimming pools.

327.4. Deck Drainage. Decking placed around any swimming pool shall be constructed so that overflow or splash water will drain to an approved deck drainage system and/or to the nearest practicable drainage way as approved by the building official as a safe place to deposit such waters. Provision shall be made so that no such drainage will run off on adjoining property. The deck shall slope away from a building structure, dwelling and/or auxiliary building."

§ 9.60.090 International Property Maintenance Code Amendments.

The following amendments are made to the International Property Maintenance Code as adopted pursuant to this chapter:

A. **Chapter 1 Scope and Administration** is adopted in its entirety with the following amendments:

Section 101.1 TITLE is hereby amended has follows:

Section 101.1 Title. These regulations shall be known as the International Property Maintenance Code of the City of Seal Beach, hereinafter referred to as "this code."

Section 102.3 Application of other codes is hereby amended to read as follows:

Section 102.3 Application of other codes. Repairs, additions or alterations to a structure, or changes of occupancy, shall be done in accordance with the procedures and provisions of the California Building Code, California Residential Code, California Plumbing Code, California Mechanical Code, and the California Electrical Code. Nothing in this code shall be construed to cancel, modify or set aside any provision of the City of Seal Beach Municipal Code.

Section 104 DUTIES AND POWERS OF THE CODE OFFICAL are amended to read as follows:

Section 104.1 General and **Section 104.3 Right of entry** are hereby amended to read as follows:

104.1 General. The building official and the health officer are hereby authorized and directed to administer and enforce all of the provisions of this code. For such purposes, they shall have the powers of a law enforcement officer. The building official shall have the power to render interpretations of this code and to adopt and enforce rules and regulations necessary in order to clarify the application of the provisions of this code. Such interpretations, rules and regulations shall be in conformity with the intent and purpose of this code.

104.3 Right of entry. Whenever necessary to make an inspection to enforce any of the provisions of this code, or whenever the building official, the health officer, or their authorized representatives have reasonable cause to believe that there exists in any structure or upon any premises any condition which makes such structure or premises unsafe, as defined in Section 108 of this code, the building official, the health officer, or their authorized representatives may enter such structure premises at all reasonable times to inspect the same or to perform any duty imposed upon the building official or the health officer by this code; provided that, if such structure or premises be occupied, they shall first present proper credentials and request entry; and if such structure or premises be unoccupied, they shall first make a reasonable effort to locate the owners or

other persons having charge or control of the structure or premises and request entry. If such entry is refused, the building official, the health officer or their authorized representatives shall have recourse to every remedy provided by law to secure entry.

No owner or occupant or any other person having charge, care or control of any structure or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the building official, the health officer or their authorized representatives for the purpose of inspection and examination pursuant to this code. Any person violating this subdivision shall be guilty of a misdemeanor and subject to punishment in accordance with the Seal Beach Municipal Code."

B. **Chapter 2 Definitions** is adopted in its entirety with the following amendments:

Section 201.3 Terms defined in other codes is hereby amended as follows:

Section 201.3 Teams defined in other codes. Where terms are defined in this code and are defined in the California Building Code, California Residential Code, California Plumbing Code, California Mechanical Code, and the California Electrical Code, such terms shall have the meanings ascribed to them as stated in those codes.

C. **Chapter 3 General Requirements** is adopted in its entirety with the following amendments:

Section 303.2 Enclosures is hereby revising the first sentence to read as follows:

Section 303.2 Enclosures. Private swimming pools, hot tubs and spas, containing water more than 24 inches (610 mm) in depth shall be completely surrounded by a fence or barrier at least 72 inches (1,829 mm) in height above the finished ground level measured on the side of the barrier away from the pool.

Section 304.1.1 Unsafe conditions is hereby revising the first sentence to read as follows:

Section 304.1.1 Unsafe conditions. The following conditions shall be determined as unsafe and shall be repaired or replaced to comply with the California Building Code or the California Existing Building Code as required for existing buildings:

Section 305.1.1 Unsafe conditions is hereby revising the first sentence to read as follows:

Section 305.1.1 Unsafe conditions. The following conditions shall be determined as unsafe and shall be repaired or replaced to comply with the California Building Code or the California Existing Building Code as required for existing buildings:

Section 306.1.1 Unsafe conditions is hereby revising the first sentence to read as follows:

Section 306.1.1 Unsafe conditions. Where any of the following conditions cause the component or system to be beyond its limit state, the component or system shall be determined as unsafe and shall be repaired or replaced to comply with the California Building Code, California Residential Code or the California Existing Building Code as required for existing buildings:

D. **Chapter 4 Light, Ventilation and Occupancy Limitations** is adopted in its entirety with the following amendments:

Section 401.3 Alternative devices are hereby amended to read as follows:

Section 401.3 Alternative devices. In lieu of the means for natural light and ventilation herein prescribed, artificial light or mechanical ventilation complying with the California Building Code shall be permitted.

E. **Chapter 5 Plumbing Facilities and Fixture Requirements** is adopted in its entirety with the following amendments:

Section 502.5 Public toilet facilities are hereby revising the first sentence to read as follows:

Section 502.5 Public toilet facilities. Public toilet facilities shall be maintained in a safe sanitary and working condition in accordance with the California Plumbing Code.

Section 505.1 General is hereby amended as follows:

Section 505.1 General. Every sink, lavatory, bathtub or shower, drinking fountain, water or other plumbing fixture shall be properly connected to either a public water system or to an approved private water system. All kitchen sinks, lavatories, laundry facilities, bathtubs and showers shall be supplied with hot or tempered and cold running water in accordance with the California Plumbing Code.

F. **Chapter 6 Mechanical and Electrical Requirements** is adopted in its entirety with the following amendments:

Section 602.2 Residential occupancies are hereby amended as follows:

Section 602.2 Residential occupancies. Dwellings shall be provided with heating facilities capable of maintaining a room temperature of 68°F (20°) in all habitable rooms based on the winter design temperature as indicated in Table R301.2(1) of the California Residential Code. Cooking appliances shall not be used to provide space heating to meet the requirements of this section.

Section 602.3 Heat supply is hereby amended by revising Exception 1 as follows:

Exception:

1. When the outdoor temperature is below the winter outdoor design temperature for the locality, maintenance of the minimum room temperature shall not be required provided that the heating system is operating at its full design capacity. The winter design temperature for the locality shall be as indicated in Table R301.2(1) of the California Residential Code.

Section 604.3.1.1 Electrical equipment is hereby amended as follows:

Section 604.3.1.1 Electrical equipment. Electrical distribution equipment, motor circuits, power equipment, transformers, wire, cable, flexible cords, wiring devices, ground fault circuit interrupters, surge protectors, molded case circuit breakers, low-voltage fuses, luminaries, ballasts, motors and electronic control, signaling and communication equipment that have been exposed to water shall be replaced in accordance with the provisions of the California Electrical Code.

Section 604.3.2.1 Electrical equipment is hereby amended as follows:

Section 604.3.2.1 Electrical equipment. Electrical switches, receptacles and fixtures, including furnace, water heating, security system and power distribution

circuits, that have been exposed to fire, shall be replaced in accordance with the provisions of the California Electrical Code.

§ 9.60.095 California Fire Code Amendments.

The following amendments are made to the California Fire Code as adopted pursuant to this chapter:

A. Adoption of the California Fire Code, 2010 Edition.

The California Fire Code, 2010 Edition, incorporating the 2009 "International Fire Code," including Appendix B, BB, C and CC is hereby adopted by the city for the purpose of prescribing regulations governing conditions hazardous to the life and property from fire or explosion, save and except such portions as are hereinafter added, deleted, modified or amended. One copy of all the above is now on file in the office of the city clerk for public inspection and is adopted with the same force and effect as through set out herein in full.

B. Enforcement and Inspections

The California Fire Code, 2010 Edition, with amendments shall be enforced by the Orange County Fire Authority, which shall be operated under the Director of Fire Services of the Orange County Fire Authority. The Director of Fire Services of the Fire Authority may detail such members of the fire authority as inspectors as shall be necessary from time to time.

C. Chapter 1 Scope and Administration is adopted in its entirety with the following amendments:

Section 105.6.29 Miscellaneous combustible storage is hereby amended as follows:

105.6.29. Miscellaneous combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2500 cubic feet (71 m³) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork, green waste, composting, yard waste, or similar combustible material.

Section 105.6.35 Private fire hydrants is hereby deleted without replacement.

Section 109.3 Violation penalties is hereby amended as follows: Infraction, Misdemeanor, as follows:

109.3 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of either a misdemeanor, infraction or both as prescribed in Section 109.3.2 and 109.3.3 Penalties shall be as prescribed in the Municipal Code. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Sections 109.3.2 Infraction is hereby added as follows:

109.3.2 Infraction. Except as provided in this Code, persons operating or maintaining any occupancy, premises or vehicle subject to this code that shall permit any fire or life safety hazard to exist on premises under their control shall be guilty of an infraction.

Sections 109.3.3 Misdemeanor is hereby added as follows:

109.3.3 Misdemeanor. Persons who fail to take immediate action to abate a fire or life safety hazard when ordered or notified to do so by the chief or a duly authorized representative, or who violate the following sections of this code, shall be guilty of a misdemeanor:

- 104.11.2 Obstructing operations
- 104.11.3 Systems and Devices
- 107.6 Overcrowding
- 109.2.2 Compliance with Orders and Notices
- 111.4 Failure to comply
- 305.4 Deliberate or negligent burning
- 308.1.2 Throwing or placing sources of ignition
- 310.7 Burning Objects
- 2404.7 Open or exposed flames

Chapter 2 - Definitions

Chapter 2 (Definitions) is adopted in its entirety with the following amendments:

Sections 202 General Definitions is hereby amended by adding "Flow-line" and "Hazardous Fire Area", and revising "High-Rise Building" as follows:

202 General Definitions

FLOW-LINE. The lowest continuous elevation on a rolled curb defined by the path traced by a particle in a moving body of water at the bottom of the rolled curb.

HAZARDOUS FIRE AREA. Includes all areas identified within Section 4906.2 and other areas as determined by the Fire Code Official due to the presence of combustible vegetation, or the proximity of the property to an area that contains combustible vegetation.

HIGH-RISE BUILDING. In other than Group I-2 occupancies "high-rise buildings" as used by this Code:

1. "Existing high-rise structure" means a high-rise structure, the construction of which commenced or completed prior to July 1, 1974.
2. "High-rise structure" means every building of any type of construction or occupancy having floor used for human occupancy located more than 55 feet above the lowest floor level having building access except buildings used as hospitals as defined by the Health and Safety Code, Section 1250.
3. "New high-rise structure" means a high-rise structure, the construction of which commenced on or after July 1, 1974.

Chapter 3 - General Precautions Against Fire

Chapter 3 (General Precautions Against Fire) is adopted in its entirety with the following amendments:

Section 304.1.2 (7) Vegetation is hereby amended by adding Section "(E)" as follows:

(E) OCFA Vegetation Management Guideline.

Section 305.5 Chimney spark arrestors is hereby added as follows:

305.5 Chimney spark arrestors. All chimneys attached to any appliance or fireplace that burns solid fuel shall be equipped with an approved spark arrestor, the spark arrester shall meet all of the following requirements:

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1. The net free area of the spark arrester shall not be less than four times the net area of the outlet of the chimney.
2. The spark arrester screen shall have heat or corrosion resistance equivalent to 12 gage steel wire, 19 gage galvanized wire or 24 gage stainless steel.
3. Openings shall not permit the passage of spheres having a diameter larger than ½ inch and shall not block the passage of spheres having a diameter of less than 3/8 inch.
4. The spark arrester shall be accessible for cleaning and the screen or chimney cap shall be removable to allow for cleaning of the chimney flue.

Section 318 Development On Or Near Land Containing Or Emitting Toxic, Combustible or Flammable Liquids, Gases or Vapors, is hereby added as follows:

318 Development On Or Near Land Containing Or Emitting Toxic, Combustible or Flammable Liquids, Gases or Vapors. The fire code official may require the submittal for approval of geological studies, evaluations, reports, remedial recommendations and/or similar documentation from a state-licensed and department-approved individual or firm, on any parcel of land to be developed which has, or is adjacent to, or within 1,000 feet (304.8 m) of a parcel of land that has an active, inactive, or abandoned oil or gas well operation, petroleum or chemical refining facility, petroleum or chemical storage, or may contain or give off toxic, combustible or flammable liquids, gases or vapors.

Section 319 Fuel Modification Requirements for New Construction is hereby added as follows:

319 Fuel Modification Requirements for New Construction. All new buildings to be built or installed in areas containing combustible vegetation shall comply with the following:

1. Preliminary fuel modification plans shall be submitted to and approved by the fire code official concurrent with the submittal for approval of any tentative map.
2. Final fuel modification plans shall be submitted to and approved by the fire code official prior to the issuance of a grading permit.
3. The fuel modification plans shall meet the criteria set forth in the Fuel Modification Section of the Orange County Fire Authority Vegetation Managements Guideline.
4. The fuel modification plan may be altered if conditions change. Any alterations to the fuel modification areas shall have prior approval by the fire code official.
5. All elements of the fuel modification plan shall be maintained in accordance with the approved plan and are subject to the enforcement process outlined in the Fire Code.

Section 320 Clearance of brush or vegetation growth from roadways is hereby added as follows:

320 Clearance of brush or vegetation growth from roadways. The fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for vehicular traffic, to be cleared of flammable vegetation and other combustible growth. Measurement shall be from the flow-line or the end of the improved edge of the roadway surfaces .

Exception:

Single specimens of trees, ornamental shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants used as ground covers, provided that they do not form a means of readily transmitting fire.

Section 321 Unusual Circumstances is hereby added as follows:

321 Unusual circumstances. The fire code official may suspend enforcement of the vegetation management requirements and require reasonable alternative measures designed to advance the purpose of this code if determined that in any specific case that any of the following conditions exist:

1. Difficult terrain.
2. Danger of erosion.
3. Presence of plants included in any state and federal resources agencies, California Native Plant Society and county-approved list of wildlife, plants, rare, endangered and/or threatened species.
4. Stands or groves of trees or heritage trees.
5. Other unusual circumstances that make strict compliance with the clearance of vegetation provisions undesirable or impractical.

Section 322 Use of Equipment is hereby added as follows:

322 Use of equipment. Except as otherwise provided in this section, no person shall use, operate, or cause to be operated, in, upon or adjoining any hazardous fire area any internal combustion engine which uses hydrocarbon fuels, unless the engine is equipped with a spark arrester as defined in Section 322.1 maintained in effective working order, or the engine is constructed, equipped and maintained for the prevention of fire.

Exceptions:

1. Engines used to provide motor power for trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code of the State of California.
2. Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in good mechanical condition

Section 322.1 Spark Arrestors is hereby added as follows:

322.1 Spark arrestors. Spark arrestors shall comply with the following:

1. A spark arrester is a device constructed of nonflammable material specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch (0.58 mm) in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service.
2. Spark arresters affixed to the exhaust system of engines or vehicles subject to Section 322 shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.

Section 323 Restricted Entry is hereby added as follows:

323 Restricted Entry. The fire code official shall determine and publicly announce when hazardous fire areas shall be closed to entry and when such areas shall again be opened to entry. Entry on and occupation of hazardous fire areas, except public roadways, inhabited areas or established trails and camp sites which have not been closed during such time when the hazardous fire area is closed to entry, is prohibited.

Exceptions:

1. Residents and owners of private property within hazardous fire areas and their invitees and guests going to or being upon their lands.

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2. Entry, in the course of duty, by peace or police officers, and other duly authorized public officers, members of a fire department and members of the United States Forest Service.

Section 324 Trespassing on posted property is hereby added as follows:

324 Trespassing on posted property. When the fire code official determines that a specific area within a hazardous fire area presents an exceptional and continuing fire danger because of the density of natural growth, difficulty of terrain, proximity to structures or accessibility to the public, such areas shall be closed until changed conditions warrant termination of closure. Such areas shall be posted as hereinafter provided.

1. Signs. Approved signs prohibiting entry by unauthorized persons and referring to applicable fire code chapters shall be placed on every closed area.
2. Trespassing. Entering and remaining within areas closed and posted is prohibited.

Exception:

Owners and occupiers of private or public property within closed and posted areas, their guests or invitees, and local, state and federal public officers and their authorized agents acting in the course of duty.

Section 325 Outdoor fires is hereby added as follows:

325 Outdoor fires. Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas, except by permit from the fire code official.

Exception:

Outdoor fires within habited premises or designated campsites where such fires are built in a permanent barbecue, portable barbecue, outdoor fireplace, incinerator or grill and are a minimum of 30 feet (9144 mm) from a grass, grain, brush, or forest-covered area. Permanent barbecues, portable barbecues, outdoor fireplaces or grills shall not be used for the disposal of rubbish, trash or combustible waste material.

Section 325.1 Outdoor fire permits is hereby added as follows:

325.1 Outdoor fire permits. Outdoor fire permits shall incorporate such terms and conditions which will reasonably safeguard public safety and property. Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas under the following conditions:

1. When predicted sustained winds exceed 20 MPH at the ground level or a red flag condition has been declared,
2. When a person age 17 or over is not present at all times to watch and tend such fire, or
3. When a public announcement is made that open burning is prohibited.

Chapter 4 - Emergency Planning and Preparedness

Chapter 4 (Emergency Planning and Preparedness) Adopt only the Sections listed below:

1. Section 401
2. Section 402
3. Section 403
4. Section 407

Chapter 5 - Fire Service Features

Chapter 5 (Fire Service Features) is adopted in its entirety with the following amendments

Section 503.1.1 Buildings and facilities is amended by adding exception 4 to read as follows:

4. For Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or 903.3.1.3 the fire apparatus access road shall comply with the requirements of this section and shall extend to within 300 feet (91 m) of the main entry door to the building.

Section 503.2.1 Dimensions is amended as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm). Street widths are to be measured from top face of curb to top face of curb, on streets with curb and gutter, and from flow-line to flow-line on streets with rolled curbs.

Section 503.2.1.1 Hazardous Areas is added as follows:

503.2.1.1 Hazardous Areas. In areas defined as State Responsibility Area: Very High Fire Hazard Severity Zones, and Local Responsibility Area: Very High Fire Hazard Severity Zones Area as adopted by the local agencies, the minimum fire apparatus road width shall be 28 feet (8.53 m).

Exception:

When the road serves no more than 3 dwelling units and the road does not exceed 150 feet (45.7 m) in length, the road width may be 24 feet 7.3 m).

Section 503.4 Obstruction of fire apparatus access roads is amended as follows:

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times. Speed Bumps and speed humps, shall be approved prior to installation.

Section 503.6 Security gates is amended as follows:

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200. Vehicle access gates or barriers shall be in accordance with the Orange County Fire Authority Guidelines "Fire Master Plan for Commercial and Residential Development". All electrically operated vehicle access gates shall be equipped with an automatic opening device in addition to a key opening switch.

Section 505.1 Address Identification is amended as follows:

505.1 Address identification. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of 0.5 inch (12.7 mm) for R-3 occupancies, for all other occupancies the numbers shall be a minimum of 6 inches high with a minimum stroke width of 1 inch. Where access is by a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure.

Section 507.5.1 Where required is amended as follows:

507.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than allowed in APPENDIX C – FIRE HYDRANT LOCATIONS AND DISTRIBUTION from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exception:

For Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or 903.3.1.3, the distance requirement shall be not more than 600 feet (183 m).

Section 510.1 Emergency responder radio coverage in buildings is amended as follows:

510.1 Emergency responder radio coverage in buildings. All new buildings shall have radio coverage for emergency responders in accordance with the city's digital radio ordinance. In the absence of a city ordinance, Orange County Fire Authority's Emergency Responder Digital Radio Guideline shall apply. This section shall not require improvement of the existing public safety communication systems.

Exception:

Where it is determined by the fire code official that coverage system is not needed.

Section 510.2 Radio signal strength is hereby deleted without replacement.

Section 510.3 Emergency responder radio coverage in existing buildings is hereby deleted without replacement.

Chapter 6 - Building Services and Systems

Chapter 6 (Building Service and Systems) is adopted in its entirety with the following amendments

Section 604.2.15.1.1 CFC Standby power loads, is hereby amended as follows:

604.2.15.1.1 Standby power loads. The following loads are classified as standby power loads:

1. Smoke control system.
2. Fire pumps.
3. Standby power shall be provided for elevators in accordance with Section 3003 of the California Building Code.

Section 604.2.15.2.1 CFC (Section 403.1.1 CBC) Emergency power loads, is hereby amended by adding item 6 as follows:

6. Ventilation and automatic fire detection equipment for smoke proof enclosures.

Section 606.8 Refrigerant Detector is hereby amended as follows:

606.8 Refrigerant Detector. Machinery rooms shall contain a refrigerant detector with an audible and visual alarm. The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant from a leak will concentrate. The alarm shall be actuated at a value not greater than the corresponding TLV-TWA values shown in the California Mechanical Code for the refrigerant classification. Detectors and alarms shall be placed in approved locations. Emergency shutoff shall also be automatically activated when the concentration of refrigerant vapor exceeds 25 percent of LFL. The detector shall transmit a signal to an approved location.

Section 606.10.1.2 Manual Operation is hereby amended as follows:

606.10.2 Manual operation. When required by the fire code official, automatic crossover valves shall be capable of manual operation. The manual valves shall be located in an approved location immediately outside of the machinery room, in a secure metal box or equivalent and marked as Emergency Controls.

Section 608.1 Scope is hereby amended as follows:

608.1 Scope. Stationary storage battery systems having an electrolyte capacity of more than 50 gallons (189 L) for flooded lead acid, nickel cadmium (Ni-Cd) and valve-regulated lead acid (VRLA), or 1,000 pounds (454 kg) for lithium-ion and lithium metal polymer, used for facility standby power, emergency power or, uninterrupted power supplies, shall comply with this section and Table 608.1. Indoor charging of electric carts/cars with more than 50 gallons (189 L) shall comply with Section 608.10,

Section 608.10 Indoor charging of electric carts/cars is hereby added as follows:

608.10 Indoor charging of electric carts/cars. Indoor charging of electric carts/cars where the combined volume of all electric/cars battery electrolyte exceeds 50 gallons shall comply with following:

1. Spill control and neutralization shall be provided and comply with Section 608.5.
2. Room ventilation shall be provided and comply with Section 608.6.1
3. Signage shall be provided and comply with Section 608.7
4. Smoke detection shall be provided and comply with Section 907.2

Section 610 Photovoltaic Systems is hereby added as follows:

Section 610 PHOTOVOLTAIC SYSTEMS

Section 610.1 General is hereby added as follows:

610.1 Manual operation. Photovoltaic systems shall comply with Orange County Fire Chief's Association Guideline for Fire Safety Elements of Solar Photovoltaic Systems. The provision of this section may be applied by either the fire code official or the building code official.

Chapter 7 - Fire-Resistive-Rated Construction

Chapter 7 (Fire-Resistive-Rated Construction) is adopted in its entirety without

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amendments.

Chapter 8 - Interior Finish, Decorative Materials and Furnishings

Chapter 8 (Interior Finish, Decorative Materials and Furnishings) adopt only the Sections and Subsections listed below:

1. Section 801
2. Section 802
3. Section 803
4. Section 804
5. Subsection 806.2
6. Subsection 807.1
7. Subsection 807.1.2
8. Subsection 807.4.5.1
9. Subsection 807.4.2.4.1
10. Subsection 807.4.5
11. Subsection 807.4.2.4
12. Table 803.3

Chapter 9 - Fire Protection Systems

Chapter 9 (Fire Protection Systems) is adopted in its entirety with the following amendments:

Section 903.2 Where required is hereby amended as follows:

903.2 Where required. Approved automatic sprinkler systems in buildings and structures shall be provided when one of the following conditions exists

1. New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.12, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet (465 m²) as defined in Section 202, regardless of fire areas or allowable area.

Exception:

Group R-3 occupancies. Group R-3 occupancies shall comply with Section 903.2.8.

2. Existing Buildings: Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and when one of the following conditions exists:
 - a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5000 square feet (465 m²) as defined in Section 202; or
 - b. When an addition exceeds 2000 square feet (186 m²) and the resulting building area exceeds 5000 square feet (465 m²) as defined in Section 202.

Section 903.2.8 Group R is hereby amended as follows:

903.2.8 Group R. An automatic sprinkler system installed in accordance with Subsection 903.3.1 shall be provided throughout all buildings with a Group R fire area as follows:

1. All new Group R occupancies, including the attached garages.
2. All existing Group R occupancies and U-1 garages when the total floor area is increase by 50% of the existing area over a 2-year period.
3. All existing Group R occupancies and U-1 garages when the total area is increased by 750 square feet or more over a 2-year period.

4. All existing Group R occupancies and U-1 garages when an additional story is added to the structure regardless of the area involved.
5. An automatic sprinkler system shall be installed throughout any existing Group R Occupancy building when the floor area of the Alteration or Combination of an Addition and Alteration, within any two year period, is 50% or more of area/value of the existing structure and where the scope of the work exposes building framing and facilitates sprinkler installation and is such that the Building/Fire Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
6. Any addition to an existing building which has fire sprinklers installed.

Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies not housing bedridden clients, not housing non-ambulatory clients above the first floor and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 425.8.3.3.
3. Pursuant to Health and Safety Code Section 13113 occupancies housing ambulatory children only, none of whom are mentally ill or mentally retarded, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and buildings or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code Section 13143.6 occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section 903.3.1.1.1 Exempt locations is hereby amended by revising exception 4 as follows:

Exception:

4. When approved by the fire code official spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 712, or both..

Section 903.4 Sprinkler system supervision and alarms is hereby amended by modifying item 1, deleting item 3 and 5, and renumbering the Exceptions as follows:

1. Automatic sprinkler systems protecting one- and two-family dwellings.
2. Limited area systems serving fewer than 20 sprinklers.
3. Jockey pump control valves that are sealed or locked in the open position.
4. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
5. Trim valves to pressure switches in dry, preaction and deluge sprinkler

systems that are sealed or locked in the open position.

Section 904.3.5 Monitoring is hereby amended as follows:

904.3.5 Monitoring. Where a building fire alarm or monitoring system is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm or monitoring system in accordance with NFPA 72.

Section 905.4 Location of Class I standpipe hose connections is hereby amended by adding items 7 and 8 as follows:

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official. See Section 909.20.3.2 for additional provisions in smoke proof enclosures.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.

Exception:

Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a nozzle attached to 100 feet (30 480 mm) of hose, as measured along the path of travel a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception:

Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3 percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations. The distance from a hose connection shall be measured along the path of travel.
7. The centerline of the 2.5 inches (63.5 mm) outlet shall be no less than 18 inches (457.2 mm) above and no more than 24 inches above the finished floor.
8. Every new building with any horizontal dimensions greater than 300 feet (91,440 mm) shall be provided with either access doors or a 2.5 inches outlets so that all portions of the building can be reached with 150 feet (46 m) of hose from an access door or hose outlet. Required access doors shall be located in the exterior of the building and shall be accessible

without the use of a ladder. The door dimensions shall be not less than 3 feet (914 mm) in width, and not less than 6 feet 8 inches (2032 mm) in height. These doors are for fire department access only.

Section 907.2.13 High-rise buildings is hereby amended as follows:

907.2.13 High-rise buildings having occupied floors located more than 55 feet (16 769 mm) above the lowest level of fire department vehicle access and Group I-2 occupancies having floors located more than 75 feet (22 860 mm) above the lowest level fire department vehicle access shall be provided with an automatic smoke detection in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412 of the California Building Code.
2. Open parking garages in accordance with Section 406.3 of the California Building Code.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the California Building Code.
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the California Building Code.
5. In Group I-2 and R-2.1 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the emergency voice/alarm communication system

Section 907.4.1 Duct smoke detectors is hereby amended as follows:

907.4.1 Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the California Mechanical Code. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exception:

In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Section 907.6.2.2 Emergency voice/alarm communication system is amended as follows.

907.6.2.2 Emergency voice/alarm communication system. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler water-flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation in accordance with the building's plans required by Section 404. In high-rise buildings having occupied floors located more than 55 feet, and Group I-2 occupancies having floors located more than 75 feet (22 860 mm) above the lowest level fire department vehicle access, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as

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follows:

1. Elevator groups.
2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.
5. Dwelling Units in apartment houses.
6. Hotel guest rooms or suites.

Exception:

In Group I-1 and R-2.1 occupancies, the alarm shall sound in a constantly-attended area and a general occupant notification shall be broadcast over the overhead page.

Section 907.7.3.2 High-rise buildings is amended as follows.

907.7.3.2 High-rise buildings. High-rise buildings having occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access and Group I-2 occupancies having occupied floors located more than 75 feet (22 860 mm) above the lowest level fire department vehicle access, a separate zone by floor shall be provided for all of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes
4. Other approved types of automatic detection devices or suppression systems.

Section 910.3.2.2 Sprinklered buildings is hereby amended as follows:

910.3.2.2 Sprinklered Buildings. Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically by actuation of a heat-responsive device rated at least 100° F above the operating temperature of the sprinkler, unless otherwise approved.

Chapter 10 - Means of Egress

Chapter 10 (Means of Egress) is adopted in its entirety without amendments.

Chapter 11 - Aviation Facilities

Chapter 11 (Aviation Facilities) is adopted in its entirety with the following amendments:

Section 1102.1 Definitions is hereby amended by adding the following definitions:

APPROACH-DEPARTURE PATH. The flight path of the helicopter as it approaches or departs from the landing pad.

EMERGENCY HELICOPTER LANDING FACILITY (EHLF). A landing area on the roof of a high rise building that is not intended to function as a heliport or helistop but is capable of accommodating fire or medical helicopters engaged in emergency operations.

SAFETY AREA. A defined area surrounding the landing pad which is free of obstructions.

TAKEOFF AND LANDING AREA. The combination of the landing pad centered within the surrounding safety area.

Section 1108 EHLF is hereby amended by adding the following subsections:

Section 1108.1 through 1108.1. 11 are hereby added as follows:

1108.1 General. Every building of any type of construction or occupancy having floors used for human occupancy located more than 75 ft above the lowest level of the fire department vehicle access shall have a rooftop emergency helicopter landing facility (EHLF) in a location approved by the fire code official for use by fire, police, and emergency medical helicopters only.

1108.1.1 Rooftop Landing Pad. The landing pad shall be 50 ft. x 50 ft. or a 50-ft. diameter circle that is pitched or sloped to provide drainage away from access points and passenger holding areas at a slope of 0.5 percent to 2 percent. The landing pad surface shall be constructed of approved non-combustible, nonporous materials. It shall be capable of supporting a helicopter with a maximum gross weight of 15,000 lbs. For structural design requirements, see California Building Code.

1108.1.2 Approach-Departure Path. The emergency helicopter landing facility shall have two approach-departure paths separated from each other by at least 90 degrees. No objects shall penetrate above the approach-departure paths. The approach-departure path begins at the edge of the landing pad, with the same width or diameter as the landing pad and is a rising slope extending outward and upward at a ratio of eight feet horizontal distance for every one foot of vertical height.

1108.1.3 Safety Area. The safety area is a horizontal plane level with the landing pad surface and shall extend 25 ft in all directions from the edge of the landing pad. No objects shall penetrate above the plane of the safety area.

1108.1.4 Safety Net. If the rooftop landing pad is elevated more than 30 in. (2'-6") above the adjoining surfaces, a 6 ft in wide horizontal safety net capable of supporting 25 lbs/psf shall be provided around the perimeter of the landing pad. The inner edge of the safety net attached to the landing pad shall be slightly dropped (greater than 5 in. but less than 18 in.) below the pad elevation. The safety net shall slope upward but the outer safety net edge shall not be above the elevation of the landing pad.

1108.1.5 Take-off and Landing Area. The takeoff and landing area shall be free of obstructions and 100 ft x 100 ft. or 100 ft. diameter.

1108.1.6 Wind Indicating Device. An approved wind indicating device shall be provided but shall not extend into the safety area or the approach-departure paths.

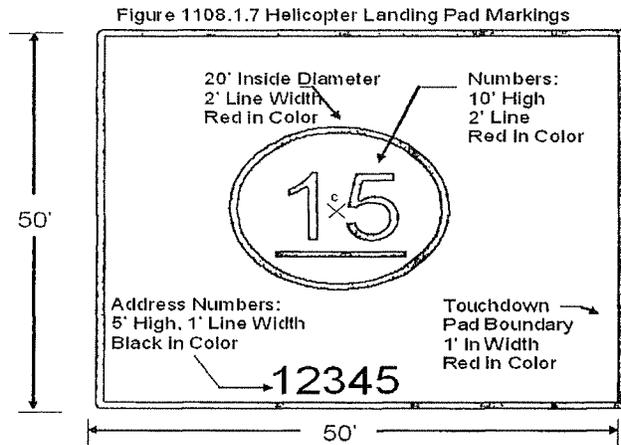
1108.1.7 Special Markings. The emergency helicopter landing facility shall be marked as indicated in Figure 1108.1.7

1108.1.8 EHLF Exits. Two stairway exits shall be provided from the landing platform area to the roof surface. For landing areas less than 2,501 square feet in area, the second exit may be a fire escape or ladder leading to the roof surface below. The stairway from the landing facility platform to the floor below shall comply with CFC 1009.4.2 for riser height and tread depth. Handrails shall be provided, but shall not extend above the platform surface.

1108.1.9 Standpipe systems. The standpipe system shall be extended to the roof level on which the EHLF is located. All portions of the EHLF area shall be within 150 feet of a 2.5-inch outlet on a Class I or III standpipe.

1108.1.10 Fire extinguishers. A minimum of one portable fire extinguisher having a minimum 80-B:C rating shall be provided and located near the stairway or ramp to the landing pad. The fire extinguisher cabinets shall not penetrate the approach-departure paths, or the safety area. Installation, inspection, and maintenance of extinguishers shall be in accordance with the CFC, Section 906.

1108.1.11 EHLF. Fueling, maintenance, repairs, or storage of helicopters is prohibited.



- 1 The preferred background is white or tan
- 2 The circled, red numbers indicate the allowable weight that the facility is capable of supporting in thousands of pounds
- 3 The numbers shall be oriented towards the preferred flight (typically facing the prevailing wind)

Chapter 12 - Dry Cleaning

Chapter 12 (Dry Cleaning) is adopted in its entirety without amendments.

Chapter 13 - Combustible Dust-Producing Operations

Chapter 13 (Combustible Dust-Producing Operations) is adopted in its entirety without amendments.

Chapter 14 - Fire Safety During Construction and Demolition

Chapter 14 (Fire Safety During Construction and Demolition) is adopted in its entirety without amendments.

Chapter 15 - Flammable Finishes

Chapter 15 (Flammable Finishes) is adopted in its entirety without amendments.

Chapter 16 - Fruit and Crop Ripening

Chapter 16 (Fruit and Crop Ripening) is adopted in its entirety without amendments.

Chapter 17 - Fumigation and Thermal Insecticidal Fogging

(Not adopted by the State Fire Marshal)

Chapter 18 - Semiconductor Fabrication Facilities

Chapter 18 (Semiconductor Fabrication Facilities) is adopted in its entirety without amendments

Chapter 19 - Lumber Yards and Woodworking Facilities

Chapter 19 (Lumber Yards and Woodworking Facilities) is adopted in its entirety with the following amendments:

Section 1901.2 Permit is hereby amended as follows:

1901.2 Permit. Permits shall be required as set forth in Section 105.6. For Miscellaneous Combustible Storage Permit, see Section 105.6.29.

Section 1908.1 General is hereby amended as follows:

1908.1 General. The storage and processing of more than 400 cubic feet of wood chips, hogged materials, fines, compost, green waste, and raw product produced from yard waste, debris and recycling facilities shall comply with Sections 1908.2 through 1908.10.

Section 1908.2 Storage site is hereby amended as follows:

1908.2 Storage site. Storage sites shall be level and on solid ground or other all-weather surface. Sites shall be thoroughly cleaned and approval from fire code official is obtained before transferring products to the site.

Section 1908.3 Size of piles is hereby amended as follows:

1908.3 Size of piles. Piles shall not exceed 15 feet (4572 mm) in height, 50 feet (15 240 mm) in width and 100 feet (30 480 mm) in length.

Section 1908.7 Pile fire protection is hereby amended as follows:

1908.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. Oscillating sprinklers with a sufficient projectile reach are required to maintain a 40% to 60% moisture content and wet down burning/smoldering areas.

Section 1908.9 Material-handling equipment, is hereby amended as follows:

1908.9 Material-handling equipment. All material handling equipment operated by an internal combustion engine shall be provided and maintained with an approved spark arrester. Approved material-handling equipment shall be available for moving wood chips, hogged material, wood fines and raw product during fire-fighting operations.

Chapter 20 - Manufacture of Organic Coatings

Chapter 20 (Manufacture of Organic Coatings) is adopted in its entirety without amendments.

Chapter 21 - Industrial Ovens

Chapter 21 (Industrial Ovens) is adopted in its entirety without amendments.

Chapter 22 - Motor Fuel-Dispensing Facilities and Repair Garages

Chapter 22 (Motor Fuel-Dispensing Facilities and Repair Garages) is

adopted in its entirety without amendments.

Chapter 23 - High-Piled Combustible Storage

Chapter 23 (High-Piled Combustible Storage) shall be adopted in its entirety with the following amendments.

Section 2308.3 Flue spaces is hereby amended as follows:

2308.3 Flue spaces. Flue spaces shall be provided in accordance with Table 2308.3. Required flue spaces shall be maintained. In double-row racks a pallet/commodity stop shall be provided along the longitudinal flue space at each level. The stop shall be steel or other ferrous material ¼ inch thick and in the mounted position shall extend a minimum of 4 inches above the shelf or cross member, or other method approved by fire code official. In double row racks and where products are hand-stacked chain link shall be securely attached to the rear of both racks. Chain link shall be a minimum of 12 gauge. Attachment method shall be in compliance with Figure 2308.3 or other methods as approved by the fire code official.

Table 2308.3 Required Flue Spaces for Rack Storage is hereby amended as follows:

TABLE 2308.3: REQUIRED FLUE SPACES FOR RACK STORAGE

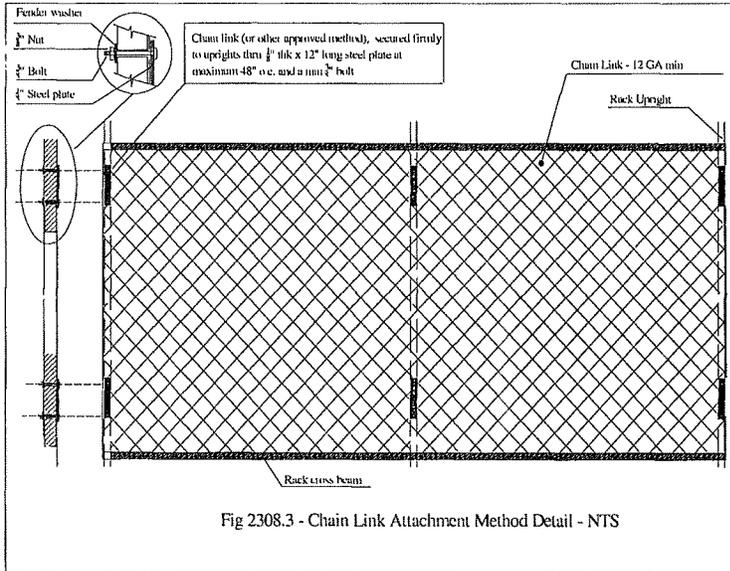
RACK CONFIGURATION	FIRE SPRINKLER PROTECTION Storage Height		SPRINKLER AT THE CEILING WITH OR WITHOUT MINIMUM IN-RACK SPRINKLERS			IN-RACK SPRINKLERS AT EVERY TIER	NON-SPRINKLERED
			≤ 25 feet		> 25 feet	Any Height	Any Height
			Option 1	Option 2			
Single-row Rack	Transverse Flue Space	Size ^b	3 inch	NA	3 inch	NR	NR
		Vertically Aligned	NR	NA	Yes	NA	
	Longitudinal Flue Space		NR	NA	NR	NR	
Double-row Rack	Transverse Flue Space	Size ^b	6 inch ^{a, c}	3 inch	3 inch	NR	
		Vertically Aligned	NR	NR	Yes	NA	
	Longitudinal Flue Space		NR	6 inch	6 inch	NR	
Multi-row Rack	Transverse Flue Space	Size ^b	6 inch ^c	NA	6 inch	NR	
		Vertically Aligned	NR	NA	Yes	NA	
	Longitudinal Flue Space		NR	NA	NR	NR	

NR = "not required." NA means "not applicable."

^a Three-inch transverse flue spaces shall be provided at least every 10 feet where ESFR sprinkler protection is provided.

^b Random variations are allowed, provided that the configuration does not obstruct water penetration.

^c Transverse flue space shall be maintained by mechanical means as approved.



Chapter 24 - Tents, Canopies, and Other Membrane Structures

Chapter 24 (Tents, Canopies, and Other Membrane Structures) is adopted in its entirety without amendments.

Chapter 25 - Tire Rebuilding & Tire Storage

Chapter 25 (Tire Rebuilding & Tire Storage) is adopted in its entirety without amendments.

Chapter 26 - Welding and Other Hot Works

Chapter 26 (Welding and Other Hot Works) is adopted in its entirety without amendments.

Chapter 27 - Hazardous Materials – General Provisions

Chapter 27 (Hazardous Materials – General Provisions) is adopted in it's entirety with the following amendments.

Section 2701.5.2 Hazardous Materials Inventory Statement (HMIS), is hereby amended by modifying the starting paragraph as follows:

2701.5.2 Hazardous Materials Inventory Statement (HMIS). When required by the *fire code official*, an application for a permit shall include Orange County Fire Authority's Chemical Classification Packet which shall be completed and approved prior to approval of plans, and/or the storage, use or handling of chemicals on the premises. The HMIS shall include the following information:

1. Product Name
2. Component
3. Chemical Abstract Service (CAS) number
4. Location where stored or used.
5. Container size
6. Hazard classification
7. Amount in storage
8. Amount in use-*closed* systems
9. Amount in use-*open* systems.

Table 2703.1.1(1) Maximum Allowable Quantity per Control Area is hereby amended by deleting Footnote K without replacement as follows:

Section 2703.1.1.1 Extremely Hazardous Substances is hereby added as follows:

2703.1.1.1 Extremely Hazardous Substances. No person shall use or store any amount of extremely hazardous substances (EHS) in excess of the disclosable amounts (see Health and Safety Code Section 25500 et al) in a residential zoned or any residentially developed property.

Section 2703.5 Hazard identification signs is hereby amended by modifying the NFPA standard as follows:

2703.5 Hazard identification signs. Unless otherwise exempted by the fire code official, visible hazard identification signs as specified in the Orange County Fire Authority Signage Guidelines for the specific material contained shall be placed on stationary containers and above-ground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.

Chapter 28 - Aerosols

Chapter 28 (Aerosols) is adopted in its entirety without amendments.

Chapter 29 - Combustible Fibers

Chapter 29 (Combustible Fibers) is adopted in its entirety without amendments.

Chapter 30 - Compressed Gases

Chapter 30 (Compressed Gases) is adopted in its entirety without amendments.

Chapter 31 - Corrosive Materials

Chapter 31 (Corrosive Materials) is adopted in its entirety without amendments.

Chapter 32 - Cryogenic Fluids

Chapter 32 (Cryogenic Fluids) is adopted in its entirety with the following amendment.

Section 3203.4.1 Identification signs is hereby amended as follows:

3203.4.1 Identification signs. Visible hazard identification signs in accordance with the Orange County Fire Authority Signage Guidelines shall be provided at entrances to buildings or areas in which cryogenic fluids are stored, handled or used.

Chapter 33 - Explosives and Fireworks

Chapter 33 (Explosives and Fireworks) California Fire Code Chapter 33 is adopted in its entirety with the following amendments

Section 3301.2 Retail Fireworks is hereby added as follows:

3301.2 Retail Fireworks. The storage, use, sale, possession, and handling of fireworks 1.4G (commonly referred to as Safe & Sane) and fireworks 1.3G is prohibited.

Exception:

Fireworks 1.4G and fireworks 1.3G may be part of an electrically fired public display when permitted and conducted by a licensed pyrotechnic operator

Section 3301.3 Seizure of Fireworks is hereby added as follows:

3301.3 Seizure of Fireworks. The fire code official shall have the authority to seize, take, and remove all fireworks stored, sold, offered for sale, used or handled in violation of the provisions of Title 19 CCR, Chapter 6. Any seizure or removal pursuant to this section shall be in compliance with all applicable statutory, constitutional, and decisional law.

Section 3308.1 General is hereby amended as follows:

3308.1 GENERAL. Outdoor fireworks displays, use of pyrotechnics before proximity audience and pyrotechnic special effects in theatrical, and group entertainment productions, shall comply with California Code of Regulations, Title 19 , Division 1, Chapter 6 – Fireworks, the Orange County Fire Authority Guidelines for Public Fireworks Displays, and with the conditions of the permit as approved by the fire code official.

Section 3308.2 Firing is hereby added as follows:

3308.2 Firing. All fireworks displays shall be electrically fired.

Chapter 34 - Flammable and Combustible Liquids

Chapter 34 (Flammable and Combustible Liquids) is adopted in its entirety with the following amendment.

Section 3404.2.3.2 Label or placard is hereby amended by modifying the NFPA standard as follows:

3404.2.3.2 Label or placard. Tanks more than 100 gallons (379 L) in capacity, which are permanently installed or mounted and used for the storage of Class I, II or III liquids, shall bear a label and placard identifying the material therein. Placards shall be in accordance with the Orange County Fire Authority Signage Guidelines.

Chapter 35 - Flammable Gases

Chapter 35 (Flammable Gases) is adopted in its entirety without amendments.

Chapter 36 - Flammable Solids

Chapter 36 (Flammable Solids) is adopted in its entirety without amendments.

Chapter 37 - Highly Toxic and Toxic Materials

Chapter 37 (Highly Toxic and Toxic Materials) is adopted in its entirety with the following amendments.

Section 3704.2.2.7 Treatment system is hereby amending the exception as follows:

Exception:

1. Toxic gases – storage/use. Treatment systems are not required for toxic gases supplied by cylinders or portable tanks not exceeding 1,700 pounds (772 Kg) water capacity when the following are provided:
 - 1.1 A listed or approved gas detection system with a sensing interval not exceeding 5 minutes.
 - 1.2 For storage, valve outlets are equipped with gas-tight outlet plugs or caps.
 - 1.3 For use, an approved listed or approved automatic-closing fail-safe valve located immediately adjacent to cylinder valves. The fail-safe valve shall close when gas is detected at the permissible exposure limit (PEL) by a gas detection system monitoring the exhaust system at the point of discharge from the gas cabinet, exhausted enclosure, ventilated enclosure or gas room. The gas detection system shall comply with Section 3704.2.2.10.

Chapter 38 - Liquefied Petroleum Gases

Chapter 38 (Liquefied Petroleum Gases) is adopted in its entirety without amendments.

Chapter 39 - Organic Peroxides

Chapter 39 (Organic Peroxides) is adopted in its entirety without amendments.

Chapter 40 - Oxidizers

Chapter 40 (Oxidizers) is adopted in its entirety without amendments.

Chapter 41 - Pyrophoric Materials

Chapter 41 (Pyrophoric Materials) is adopted in its entirety without amendments.

Chapter 42 - Pyroxylin Plastics

Chapter 42 (Pyroxylin Plastics) is adopted in its entirety without amendments.

Chapter 43 - Unstable (Reactive) Materials

Chapter 43 Unstable (Reactive) Materials is adopted in its entirety without amendments.

Chapter 44 - Water-Reactive Solids and Liquids

Chapter 44 (Water-Reactive Solids and Liquids) is adopted in its entirety without amendments.

Chapter 45 - Marinas

Chapter 45 (Marinas) is adopted in its entirety with the following amendments.

Section 4503.7 Slip Identification is amended as follows:

Section 4503.7 Slip identification. Slips and mooring spaces shall be individually identified by an approved numeric or alphabetic designator. Space designators shall be posted at the space. Signs indicating the space designators located on finger piers and floats shall be posted at the base of all piers, finger piers, floats and finger floats. A monument sign shall be installed at each gate designating slip and mooring spaces in contrasting colors.

Section 4504.2 Standpipes is hereby amended by adding section 4504.2.2 as follows:

4504.2.2 All standpipes exposed to the outside elements shall be painted for corrosion protection.

Exception:

Stainless Steel (316 Grade) Standpipes

Chapter 46 - Construction Requirements for Existing Buildings

Chapter 46 (Construction Requirements for Existing Buildings) is adopted, but only those Sections and Subsections listed below:

1. Section 4606
2. Subsection 4603.6
3. Subsection 4603.6.3
4. Subsection 4603.6.3.1
5. Subsection 4603.6.8 through 4603.6.8.2
6. Subsection 4603.6.9 through 4603.6.9.10
7. Subsection 4603.7 through 4603.7.5.3

Chapter 47 - Referenced Standards

Chapter 47 (Referenced Standards) is adopted in its entirety with the following amendments:

NFPA 13, 2010 Edition, Installation of Sprinkler Systems is hereby amended as follows:

Section 6.8.3 is hereby amended as follows:

6.8.3 Fire department connections (FDC) shall be of an approved type. The FDC shall contain a minimum of two 2 ½" inlets. The location shall be approved and be no more than 150 feet from a public hydrant. The size of piping and the number of inlets shall be approved by the chief. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red. When the fire sprinkler density design requires 500 gpm (including inside hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided. FDC may be located within 150 feet of a private fire hydrant when approved by the chief.

Section 8.3.3.1 is hereby amended as follows:

8.3.3.1. When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Sprinklers in light hazard occupancies shall be one of the following:

5. Quick-response type as defined in 3.6.4.7
6. Residential sprinklers in accordance with the requirements of 8.4.5
7. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
8. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 8.17.1.1.1 is hereby added as follows

8.17.1.1.1 Residential Waterflow Alarms. A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire

alarm or water-flow monitoring system where provided. Group R occupancies not requiring a fire alarm system by the California Fire Code shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 DBA above the average ambient sound or a minimum of 75 DBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Section 8.17.2.4.6 is hereby amended as follows:

8.17.2.4.6 Fire department connections shall be on the street side of buildings and shall be located and arranged so that they are immediately adjacent to the approved fire department access road and that hose lines can be readily and conveniently attached to the inlets without interference from nearby objects including buildings, fence, posts, or other fire department connections.

Section 11.1.1.2 is hereby added as follows:

11.1.1.2 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction/s in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the permit is issued. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the Fire Code Official:

1. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiplying the result by 0.433;
2. Use a maximum of 40 psi, if available;
3. Utilize the Orange County Fire Authority water-flow test form/directions to document a flow test conducted by the local water agency or a professional engineer licensed in the State of California. The result shall be adjusted in accordance with the graduated scaled found in the guideline.

Section 22.1.3 (43) is hereby amended as follows:

22.1.3 (43) Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in the flow tests shall be shown. Flow test shall be completed within six months of the plan submittal to the authority having jurisdiction.

NFPA 13R 2010 Edition Installation of Sprinkler System in Residential Occupancies up to and Including Four Stories in Height is hereby amended as follows:

Section 6.16.1 is hereby amended as follows:

6.16.1 A local water-flow alarms shall be provided on all sprinkler systems and shall be connected to the building fire alarm or water-flow monitoring system

where provided. Group R occupancies containing less than the number of stories, dwelling units or occupant load specified in Section 907.2.8 of the 2010 California Fire Code as requiring a fire alarm system shall be provided with a minimum of one approved interior alarm device in each unit. Sound levels in all sleeping areas shall be a minimum of 15 dBA above the average ambient sound or a minimum of 75 dBA with all intervening doors closed. Alarms shall be audible within all other living areas within each dwelling unit. When not connected to a fire alarm or water-flow monitoring system, audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

There shall also be a minimum of one exterior alarm indicating device, listed for outside service and audible from the access roadway that serves that building.

Section 6.6.6 is hereby amended as follows:

6.6.6 Sprinklers shall not be required in penthouse equipment rooms, elevator machine rooms, concealed spaces dedicated exclusively to containing only dwelling unit ventilation equipment, crawl spaces, floor/ceiling spaces, noncombustible elevator shafts where the elevator cars comply with ANSI A17.1, Safety Code for Elevators and Escalators, and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel fired equipment.

Section 6.6.9 is hereby added as follows:

6.6.9 Sprinklers shall not be required in attics that are not located over dwelling units. When attics are separated by unit, each unit's attic space may be protected per NFPA 13D Section 8.6.4.2. All other attics shall be protected per NFPA 13.

NFPA 13D 2010 Edition Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 4.1.5 is hereby added as follows:

4.1.5 Stock of Spare Sprinklers

Section 4.1.5.1 is hereby added as follows:

4.1.5.1. A supply of at least two sprinklers for each type shall be maintained on the premises so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

Section 4.1.5.2 is hereby added as follows:

4.1.5.2 The sprinklers shall correspond to the types and temperature ratings of the sprinklers in the property.

Section 4.1.5.3 is hereby added as follows:

4.1.5.3 The sprinklers shall be kept in a cabinet located where the temperature to which they are subjected will at no time exceed 100 °F (38°C).

Section 4.1.5.4 is hereby added as follows:

4.1.5.4 A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

Section 7.1.2 is hereby amended as follows:

Ordinance Number 1600

7.1.2 The system piping shall not have a separate control valve unless supervised by a central station, proprietary or remote station alarm service.

Section 7.3.1 is hereby deleted in its entirety and replaced as follows:

7.3.1 At least one water pressure gauge shall be installed on the riser assembly.

Section 7.6 is hereby deleted in its entirety and replaced as follows:

7.6 Alarms Exterior alarm indicating device shall be listed for outside service and audible from the street from which the house is addressed. Exterior audible devices shall be placed on the front or side of the structure and the location subject to final approval by the fire code official. Additional interior alarm devices shall be required to provide audibility throughout the structure. Sound levels in all sleeping areas with all intervening doors closed shall be a minimum of 15 dBA above the average ambient sound level but not less than 75 dBA. Audible devices shall be powered from an uninterruptible circuit (except for over-current protection) serving normally operated appliances in the residence.

Exception:

5. When an approved water flow monitoring system is installed, interior audible devices may be powered through the fire alarm control panel.
6. When smoke detectors specified under CBC Section 310.9 are used to sound an alarm upon waterflow switch activation.

Section 8.6.4.2 is hereby added as follows:

8.6.4.2 All attics shall be protected with an intermediate temperature quick response sprinkler which shall be located to protect attic penetrations created by the access scuttles or mechanical equipment

NFPA 14, 2007 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 6.4.5.4.1 is hereby deleted in its entirety and replaced as follows:

6.4.5.4.1 The fire department connection shall have a minimum of two 2 ½ inches, internal threaded (NHS) inlets. Additional inlets shall be provided on a 250 GPM per inlet ratio to meet the system demand. The inlets shall be provided with approved caps to protect the system from entry of debris. The location of the FDC shall be approved and be no more than 150 feet from a public hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red.

Section 7.3.1.1 is hereby deleted in its entirety and replaced as follows:

7.3.1.1 Hose Connection Height Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches, or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2010 Edition, Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 5.9.1.3 is hereby amended as follows:

5.9.1.3 The fire department connection shall be of an approved type and contain a minimum of two 2 ½ inch inlets. The location shall be approved and be no more than 150 feet from a public fire hydrant. If acceptable to the water authority, it may be installed on the backflow assembly. The supply pipe shall be painted OSHA safety red.

Section 5.9.1.3.1 is hereby added as follows:

5.9.1.3.1 When the sprinkler density design is 500 gpm (including the interior hose stream demand) or greater, or a standpipe system is included, four 2 ½" inlets shall be provided.

Section 5.9.1.3.2 is hereby added as follows:

5.9.1.3.2 The fire department connection (FDC) may be located within 150 feet of a private fire hydrant provided the FDC connects down-stream of an aboveground sprinkler system check valve.

Section 6.2.1.1 is hereby added as follows:

6.2.1.1 The closest upstream indicating valve to the riser shall be painted OSHA red.

Section 6.2.11 (5) is hereby deleted without replacement:

Section 6.2.11 (6) is hereby amended as follows:

6.2.11 (5) Control valves in a one-hour fire-rated room accessible from the exterior

Section 6.2.11 (7) is hereby deleted without replacement:

Section 6.3.3 is hereby added as follows:

6.3.3 All post indicator valves controlling fire suppression water supplies shall be painted OSHA red.

Section 10.1.6.3 is hereby added as follows:

10.1.6.3 All ferrous pipe shall be coated and wrapped. Joints shall be coated and wrapped after assembly. All fittings shall be protected with a loose 8-mil polyethylene tube. The ends of the tube shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception:

316 Stainless Steel pipe and fittings

Section 10.3.5.2 is hereby amended as follows:

10.3.5.2 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material, prior to poly-tube, and after installation.

Section 10.3.5.3 is hereby added as follows:

10.3.5.3 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.6.3.1 is hereby amended as follows:

10.6.3.1 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 18 inches, as measured from the interior of the exterior wall. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints or comply with 10.6.2.

Section 10.6.5 is hereby amended as follows:

10.6.5 Pipe Joints shall not be located under foundation footings. The pipe under the building or building foundation shall be 316 stainless steel and shall not contain mechanical joints.

NFPA 72, 2010 Edition National Fire Alarm Code

Section 14.2.1.2.3 is hereby amended as follows:

14.2.1.2.3 If a defect or malfunction is not corrected at the conclusion of system inspection, testing, or maintenance, the system owner or the owner' designated representative and fire code official shall be informed of the impairment in writing within 24 hours.

Section 23.8.2 Fire Alarm Control Units is amended as follows:

23.8.2.2 Except as permitted in 23.8.2.3, the fire alarm systems components shall be permitted to share control equipment or shall be able to operate as stand-alone subsystems, but in any case, they shall be arranged to function as a single system and send a single signal to a central, remote, or proprietary station.

Section 23.8.2.3 is hereby deleted without replacement:

Section 26.2.3.1 is hereby amended by modifying the start paragraph as follows:

26.2.3.1 Supervising station customers or clients and the fire code official shall be notified in writing within 7 days of any scheduled change in service that results in signals from their property being handled by a different supervising station facility.

Chapter 48 - Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities, and Production Locations

Chapter 48 (Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities, and Production Locations) is adopted in its entirety without amendments.

Chapter 49 - Requirements for Wildland-Urban Interface Fire Areas

Chapter 49 (Requirements for Wildland-Urban Interface Fire Areas) is adopted in its entirety with the following amendments:

Section 4906.3 Vegetation is hereby amended by adding Section "(5)" as follows:

(5) OCFA Vegetation Management Guideline.

Section 4908 Fuel Modification Requirements for New Construction is hereby added as follows:

4908 Fuel Modification Requirements for New Construction. All new buildings to be built or installed in hazardous fire areas shall comply with the following:

1. Preliminary fuel modification plans shall be submitted to and approved by the fire code official concurrent with the submittal for approval of any tentative map.
2. Final fuel modification plans shall be submitted to and approved by the fire code official prior to the issuance of a grading permit.
3. The fuel modification plans shall meet the criteria set forth in the Fuel Modification Section of the Orange County Fire Authority Vegetation Management Guidelines.

4. The fuel modification plan may be altered if conditions change. Any alterations to the fuel modification areas shall have prior approved by the fire code official.
5. All elements of the fuel modification plan shall be maintained in accordance with the approved plan and are subject to the enforcement process outlined in the Fire Code.

Section 4909 Explosives and Blasting is hereby added as follows:

4909 Explosives and Blasting. Explosives shall not be possessed, kept, stored, sold, offered for sale, given away, used, discharged, transported or disposed of within wildland-urban interface areas or hazardous fire areas except by permit from the fire code official.

Appendix B is adopted in its entirety with the following amendment:

Section B105.1 One- and two-family dwellings is hereby added as follows:

B105.1 One- and two-family dwellings. The minimum fire-flow and flow duration requirements for one- and two-family dwellings having a fire-flow calculation area that does not exceed 3,600 square feet (344.5m²) shall be 1,000 gallons per minute (3785.4 L/min) for 1 hour. Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5m²) shall not be less than that specified in Table B105.1.

Exception:

When the building is equipped with an approved automatic sprinkler system, the fire flow requirements of Table B105.1 are reduced by 50%, provided that the resulting fire flow is not less than 1,000 gallons per minute (3785.4 L/min) for 1 hour.

Appendix BB is adopted in its entirety without amendments:

Appendix C is adopted in its entirety without amendments:

Appendix CC is adopted in its entirety without amendments:

§ 9.60.100 Uniform Solar Energy Code Amendments.

The following amendments are made to the Uniform Solar Energy Code adopted pursuant to this chapter:

A. **CHAPTER 1 ADMINISTRATION** is hereby amended to read as follows:

Section 102.3.2 Penalties is hereby amended to read as follows:

102.3.2 Penalties. Any person, firm or corporation violating any provisions of this Code shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine of not more than one thousand dollars (\$1,000), or by imprisonment for not more than six (6) months, or by both fine and imprisonment.

§ 9.60.105 California Electrical Code Amendments.

The following amendments are made to the California Electrical Code, adapted pursuant to this chapter:

A. **Article 110 Requirements for Electrical Installations** is amended to read as follows:

Ordinance Number 1600

Section 110.5 Conductors is hereby amended by adding a second paragraph to read as follows:

Conductors shall be of copper. Copper wire shall be the preferred material used for wiring No. 6 and smaller in all installations. Consideration for use of aluminum wiring can be made by the building official for feeder lines only on an individual case basis where adequate safety measures can be ensured.

B. **Article 210 Branch Circuits** is amended to read as follows:

Section 210.23(A) 15- and 20-Ampere Branch Circuits is hereby amended to read as follows:

210.23(A)15- and 20-Ampere Branch Circuits. A 15 ampere branch circuit shall be permitted to supply only wall or ceiling lighting fixtures to an individual fixed appliance. A 20 ampere branch circuit shall be permitted to supply lighting outlets, receptacle outlets, fixed appliances or a combination of same. The total rating of fixed appliances supplied by such circuit shall not exceed 50% of the rating of the branch circuit. The rating of a single fixed appliance supplied by an individual branch circuit shall not exceed 80% of the rating of the circuit.

Exception:

The small appliance branch circuits required in a dwelling unit(s) by Section 210.11(C) shall supply only the receptacle outlets specified in that Section."

C. **Article 240 Overcurrent Protection** is amended to read as follows:

Section 240.24 Locations in or on premises is hereby amended by adding Subsection **(G) Prohibited Locations** to read as follows:

(G) Prohibited Locations. Panels and switchboards containing overcurrent devices shall not be located in any closet, cabinet, toilet room or room containing a lavatory.

D. **Article 300 Wiring Methods** is amended to read as follows:

Section 300.6 Protection Against Corrosion and Deterioration, subsection (A)(3) In Concrete or in Direct Contact with the Earth is hereby amended by adding the following paragraph to read as follows:

(A)(3) In Concrete or in Direct Contact with the Earth. All earth within the City of Seal Beach is corrosive, unless the applicant proves to the satisfaction of the building official the specific earth is not corrosive for the installation of the above noted electrical items in contact with or buried in the earth. Unless otherwise authorized by the building official, all such items embedded in the earth shall be protected by at least double, spiral wrapping, half overlapping with 10 mil plastic tape (total 40 mils cover), or approved equal.

§ 9.60.110 California Green Building Standards Code Amendments.

Section 202 is hereby amended to read as follows:

Sustainability. Consideration of present development and construction impacts on the community, the economy, and the environment without compromising the needs of the future.

Section 4.304.1 is hereby amended to read as follows:

Irrigation controllers. Automatic irrigation system controllers for landscaping provided and installed at the time of final inspection and shall comply with the

following:

1. Controllers shall be weather- or soil moisture-based irrigation controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.

2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

§ 9.60.115 Exception for "R Occupancy.

The following shall apply to "R" Occupancies with one thousand (1,000) square feet of floor area or less, containing not more than two (2) bedrooms having no natural gas fired appliances, having no fixed window security guards, and provided with a private security system for the community. In addition, this section shall apply only to planned adult communities, construction prior to 1966 in which each individual dwelling unit is equipped with an approved smoke detector device:

A. **Patio Covers.** Patio covers may be constructed that are open on one (1) side only. Said side may be provided with decorative pierced concrete block which is approximately fifty percent (50%) open and unobstructed.

B. **Repair Provisions to Non-conforming Existing Dwelling Units.**

1. Existing patio roof covers may be repaired or replaced with materials as originally constructed or reconstructed with other approved materials providing they meet the design requirements as specified in Chapter 15, 22 and 23 and Section 803, California Building Code, 2010 Edition.

2. Existing aluminum and glass window walls and/or decorative pierced concrete block with wall covering on inside may substantially remain as originally constructed but must not be altered during the repair process or said wall areas will be required to meet applicable requirements.

§ 9.60.120 Sandblasting.

A. **Permit Required.** No person shall engage in sandblasting the outside of any building or structure in the city without first obtaining a permit to do so from the building official.

B. Such permit is required for the purpose of placing the city on notice regarding intended sandblasting operations, thus making possible the inspection of sandblasting operations in the city so that sandblasting regulations enacted for the protection of the health and property of members of the public may effectively be enforced.

C. No sandblasting permit shall be issued to any person not licensed or otherwise prohibited by state law from engaging in sandblasting operations.

D. A separate permit shall be required for each separate premise, court or group of structures to be sandblasted. More than one actual building or structure may be included on a single permit if all said buildings or structures are on one lot or one contiguous parcel of land.

E. **Application for Permit.** Each permit application shall contain the following information:

1. The name and address of the person or company applying for the permit.

2. The name and address of the foreman or person who will be actually directing the job for the applicant.

3. The location of the job.

4. The building or structure or portion thereof to be sandblasted.

5. The estimated length of time of the job.

6. A statement of the amount of the applicant's public liability and property damage insurance, giving the name and address of the company issuing the policy.

7. Such other information as the building official shall reasonably require to aid proper inspection and enforcement of city sandblasting regulations.

F. Inspection Fee. No sandblasting permit shall be issued prior to the payment of an inspection fee set forth in the fee schedule. No checking fee or other type of additional fee shall be required.

G. Notice of Sandblasting. Any person conducting sandblasting in the city shall, not less than twenty-four (24) hours prior to said sandblasting, deliver to each residence or business establishment within 100 feet of all buildings or structures to be sandblasted, a written notice in a form provided by the building official.

H. Dry Sandblasting. No person shall engage in "dry" sandblasting in the city in the absence of written special permission from the building official. Said special permission to be granted only if the particular circumstances of the job make wet sandblasting impractical.

I. Hours. No person shall engage in sandblasting before 8:00 a.m. or after 5:00 p.m. of any day, or on Sunday or legal holidays, in any neighborhood that is exclusively a residential neighborhood or upon any structure which is within 100 feet of any inhabited single or multi-unit residential dwelling. All clean-up work must be done before 5:00 p.m. In commercial areas, sandblasting is to be done from 11:00 a.m. to 7:00 p.m. All clean-up must be done by and/or before 7:00 p.m.

J. Property Protection. No person shall engage in sandblasting, liquid washing, compressed air cleaning or steam cleaning of exterior surfaces of buildings without first protecting adjacent property, public streets and pedestrian walkway areas by erecting canvas or other suitable barriers sufficient to protect them from the sandblasting or blowing of and/or water.

§ 9.60.125 Nonsubdivision Development Standards.

A. Construction of Curbs, Gutters and Sidewalks.

1. Requirements. Any person constructing or arranging for the construction of any commercial building, industrial building, residential building or any other facility, or addition thereto, exceeding 400 square feet in floor area, who is not otherwise required to make the improvements enumerated herein, shall provide for the construction of concrete curbs, gutters, sidewalks and pavement on the one-half of the street and alley abutting the lot on which the building or facility is to be constructed in accordance with the standard specifications of the city engineer unless adequate concrete curbs, gutter, sidewalks and pavement already exist along all streets and alleys abutting the lot on which the building or facility is to be constructed, except as provided in

paragraph B below.

Curbs, gutters and sidewalks required to be constructed by this section shall be located within the street right-of-way at the locations and grades established by the city engineer.

2. Delay of Construction. Notwithstanding any other provision of this article, the city engineer may delay the construction of curbs, gutters and/or sidewalks and pavement upon determining that the street grade cannot be readily established or when on a block by block basis in the immediate vicinity of the proposed development appears to the engineer to be imminent, provided the property owner posts a cash bond with the city insuring the construction may be performed in a more efficient and expeditious manner.

3. Improvement Procedure.

a. Any person required to make improvements by the provisions of this section shall file with the city engineer a bond in such amount as the city engineer shall estimate and determine to be necessary to complete all of the improvements required.

b. Such bond may be either a cash bond or a bond executed by a company authorized to act as a surety in this state. The bond shall be payable to the city and be conditioned upon the faithful performance of any and all work required to be done and should the work not be done or completed within the time specified, the city may, at its option, cause the same to be done or completed, and the parties executing the bond shall be firmly bound under a continuing obligation for the payment of all necessary costs and expenses incurred in the construction thereof. The bond shall be executed by the owner of the lot as principal and, if a surety bond, shall also be executed by a corporation authorized to act as a surety under the laws of the State of California.

4. Approval and acceptance by building official. The building official shall deny final approval and acceptance on final public utility connections to any commercial building, industrial buildings, residential building, or any other facility until such concrete curbs and gutters, or concrete curbs, gutters, sidewalks and pavement exist or are constructed, or their construction is guaranteed by cash deposited with the city in a sum determined by the city engineer, based upon the number of lineal feet of concrete curbs, gutters, sidewalks and pavement to be installed.

Whenever the owner elects to deposit a cash bond, the city is authorized in the event of any default on his part to use any or all of the deposit money to cause all of the required work to be done or completed and for payment of all costs and expenses therefore. Any money remaining shall be refunded to the owner.

When a substantial portion of the required improvement has been completed to the satisfaction of the city engineer and the completion of the remaining improvements is delayed due to conditions beyond the owner's control, the city engineer may accept the completed portion and consent to a proportionate reduction of the surety bond in an amount estimated and determined by the city engineer to be adequate to assure the completion of the required improvement remaining to be made.

B. Existing Public Utilities.

1. Required. Any person constructing or arranging for the construction of any commercial building, industrial building, residential building, or addition thereto exceeding two thousand square feet in floor area, shall be required to replace existing public utilities facilities such as street lighting, water

and sewer lines, and related appurtenances serving the property if in the determination of the city engineer the existing public utilities facilities are insufficient to accommodate such construction.

C. Future Undergrounding of Utilities. Any person constructing or arranging for the construction of any commercial building, industrial building, residential building or any other facility, or addition thereto, exceeding 400 square feet in floor area or ground area, or any accessory building having an area greater than 400 square feet, shall provide for future underground power and telephone connections. Undergrounding facilities shall consist of conduits acceptable to the city engineer running from the power panel and/or telephone line hookup to the appropriate utility easement, alley, or street as determined by the city engineer.

D. Development Fee for Park and Recreation Facilities. Any person constructing or arranging for the construction of any residential dwelling unit shall, through the payment of a fee, provide at least in part for the park and recreational needs of the proposed development's inhabitants.

The amount of the park and recreation fee to be levied pursuant to this section shall be as adopted by the city council on a dwelling unit basis. The building official shall not issue a building permit until such fee has been paid to the city.

Provided, however, that the net increase in the number of dwelling units situated upon a lot shall be used in determining the fee to be levied under the provisions of this section, and provided further that this section shall not apply to any property the subdivision of which has caused either the dedication of parkland or the payment of a fee in lieu thereof.

§ 9.60.130 Plan Checks for Structures Housing X-Ray Equipment.

A. Definitions. The following definitions shall apply to the terms of this section:

1. "Health Officer" means the County Health Officer or such person's designee.
2. "X-ray Machine" means any radiation machine or device capable of producing ionizing radiation when associated control devices are operated.

B. Review and Approval.

1. Prior to the issuance of a building permit for the construction, conversion or alteration of a building or enclosure in which an x-ray machine is to be housed, the applicant shall receive approval from the Environmental Health Division of the Orange County Health Care Agency.

2. The health officer shall review the plans and shielding specifications required to be submitted pursuant to this chapter and shall either approve the plans and shielding specifications or indicate the modifications required to bring those plans and shielding specifications into compliance with the requirements of the Radiation Control Law, Division 20, Chapter 7.6, California Health and Safety Code, and any regulations enacted pursuant thereto.

§ 9.60.135 Repair and Reconstruction of Damaged Structures.

A. This section amends the California Building Standards Code as adopted by the City by establishing regulations for the expeditious repair of damaged structures. In the event that an amendment to the California Building

Standards Code results in conflict between this section and the California Building Standards Code, the text of this section shall govern. In accordance with California Health and Safety Code Section 17958.7, express findings that modifications to the California Building Standards Code are reasonably necessary because of local climatic, geological or topographical conditions are either already on file with the California Building Standards Commission, or will be filed prior to the effective date of the ordinance codified in this Chapter.

B. For the purposes of this section, the following definition applies and is hereby added to Section 3402.1, Definitions, of the 2007 California Building Code (CBC):

Substantial Structural Damage: a condition where:

1. In any story, the vertical elements of the lateral-force-resisting system, have suffered damage such that the lateral load-carrying capacity of the structure in any direction has been reduced by more than 20 percent from its pre-damaged condition, or

2. The capacity of any vertical gravity load-carrying component, or any group of such components, that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its pre-damaged condition, and the remaining capacity of such affected elements with respect to all dead and live loads is less than 75 percent of that required by the building code for new buildings of similar structure, purpose, and location.

C. For the purposes of this section, the following repair requirements are hereby added as a new Subsection 3403.5 Repairs, to Section 3403 Additions, Alterations or Repair of the 2007 California Building Code:

3403.5 Repairs. Repairs of structural elements shall comply with this section.

3403.5.1 Seismic evaluation and design. Seismic evaluation and design of an existing building and its components shall be based on the following criteria.

3403.5.1.1 Evaluation and design procedures. The seismic evaluation and design shall be based on the procedures specified in the building code, ASCE 31 *Seismic Evaluation of Existing Buildings* (for evaluation only) or ASCE 41 *Seismic Rehabilitation of Existing Buildings*. The procedures contained in Appendix A of the *International Existing Building Code* shall be permitted to be used as specified in Section 3403.5.1.3.

3403.5.1.2 CBC level seismic forces. When seismic forces are required to meet the building code level, they shall be one of the following:

1. 100% of the values in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor specified for structural systems classified as "Ordinary" unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as "Intermediate" or "Special".
2. Forces corresponding to BSE-1 and BSE-2 Earthquake Hazard Levels defined in ASCE 41. Where ASCE 41 is used, the corresponding performance levels shall be those shown in Table 3403.5.1.2.

**TABLE 3403.5.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS**

OCCUPANCY CATEGORY (BASED ON IBC TABLE 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31 AND WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life Safety (LS)	Collapse Prevention (CP)
II	Life Safety (LS)	Collapse Prevention (CP)
III	See note (a)	See note (a)
IV	Immediate Occupancy (IO)	Life Safety (LS)

Note (a): Performance Levels for Occupancy Category III shall be taken as halfway between the performance levels specified for Occupancy Category II and Occupancy Category IV.

3403.5.1.3 Reduced CBC level seismic forces. When seismic forces are permitted to meet reduced building code levels, they shall be one of the following:

1. 75% of the forces prescribed in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor as specified in Section 3403.5.1.2.
2. In accordance with the applicable chapters in Appendix A of the *International Existing Building Code* as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirements for reduced building code force levels.
 - 2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.
 - 2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.
 - 2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.
 - 2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.
 - 2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.
3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.2.
4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters S_x and S_{x1} shall not be taken less than 75% of the respective design spectral response acceleration parameters SDS and $SD1$ defined by the *International Building Code* and its reference standards.

3403.5.1.4 Wind Design. Wind design of existing buildings shall be based on the procedures specified in the building code.

3403.5.2 Repairs to damaged buildings. Repairs to damaged buildings shall comply with this section.

3403.5.2.1 Unsafe conditions. Regardless of the extent of structural damage, unsafe conditions shall be eliminated.

3403.5.2.2 Substantial structural damage to vertical elements of the lateral-force-resisting system. A building that has sustained substantial structural damage to the vertical elements of its lateral-force-resisting system shall be evaluated and repaired in accordance with the applicable provisions of Section 3403.5.2.2.1 through 3403.5.2.2.3.

3403.5.2.2.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the Building Official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of the building code. Wind forces for this evaluation shall be those prescribed in the building code. Seismic forces for this evaluation are permitted to be the reduced level seismic forces specified in Code Section 3403.5.1.3.

3403.5.2.2.2 Extent of repair for compliant buildings. If the evaluation establishes compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then repairs shall be permitted that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage.

3403.5.2.2.3 Extent of repair for non-compliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then the building shall be rehabilitated to comply with applicable provisions of the building code for load combinations including wind or seismic forces. The wind design level for the repair shall be as required by the building code in effect at the time of original construction unless the damage was caused by wind, in which case the design level shall be as required by the code in effect at the time of original construction or as required by the building code, whichever is greater. Seismic forces for this rehabilitation design shall be those required for the design of the pre-damaged building, but not less than the reduced level seismic forces specified in Section 3403.5.1.3. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3 Substantial structural damage to vertical load-carrying components. Vertical load-carrying components that have sustained substantial structural damage shall be rehabilitated to comply with the applicable provisions for dead and live loads in the building code. Undamaged vertical load-carrying components that receive dead or live loads from rehabilitated components shall also be rehabilitated to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3.1 Lateral force-resisting elements. Regardless of the level of damage to vertical elements of the lateral force-resisting system, if substantial structural damage to vertical load-carrying components was caused primarily by wind or seismic effects, then the building shall be evaluated in accordance with Section 3403.5.2.2.1 and, if non-compliant, rehabilitated in accordance with Section 3403.5.2.2.3.

3403.5.2.4 Less than substantial structural damage. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage. New structural members and connections used for this repair shall comply with the detailing provisions of the building code for new buildings of

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similar structure, purpose, and location.

3403.5.3 Referenced Standards.

Standard Reference Number	Title	Referenced in Code Section Number
ASCE 31-03	Seismic Evaluation of Existing Buildings	3403.5.1.1, Table 3403.5.1.2, 3403.5.1.3
ASCE 41-06	Seismic Rehabilitation of Existing Buildings	3403.5.1.1, 3403.5.1.2, Table 3403.5.1.2, 3403.5.1.3

§ 9.60.140 Safety Assessment Placards

A. The provisions of this chapter are applicable to all buildings and structures of all occupancies regulated by the City of Seal Beach. The City Council may extend the provisions as necessary.

B. For the purposes of this section, the following definition applies:

1. *Safety Assessment*: a visual, non-destructive examination of a building or structure for the purpose of determining the condition for continued occupancy.

C. Safety Assessment Placards.

1. The following Safety Assessment Placards shall be used to designate the condition for continued occupancy of buildings or structures.

a. **INSPECTED - Lawful Occupancy Permitted** shall be posted on any building or structure wherein no apparent structural hazard has been found and shall not mean that there is no damage to the building or structure.

b. **RESTRICTED USE** shall be posted on each damaged building or structure wherein the damage has resulted in some form of restriction to the continued occupancy. The Restricted Use placard shall contain a general description of the type of damage encountered and shall clearly and concisely note the restrictions on continued occupancy.

c. **UNSAFE - Do Not Enter or Occupy** shall be posted on each building or structure that has been damaged such that continued occupancy poses a threat to life, health, or safety. No person or persons shall enter a building or structure on which such a placard has been posted under any circumstance except safety assessment teams or persons authorized in writing by the Building Official. The "unsafe – Do Not Enter or Occupy" placard shall not to be used or construed to be a demolition order. The individual who posts such placard shall note thereon in general terms the type of damage encountered.

2. Every Safety Assessment Placard shall cite this section number, and include the City's name, address, and phone number.

3. Once a Safety Assessment Placard has been attached to a building or structure, it shall not be removed, altered or covered except by an authorized representative of the Building Official. It shall be unlawful for any person, firm, or corporation to alter, remove, cover, obscure, or deface a Safety Assessment Placard unless authorized pursuant to this section.

4. The form of Safety Assessment Placard shall be substantially the same as follows:



INSPECTED

LAWFUL OCCUPANCY PERMITTED

This structure has been inspected (as indicated below) and no apparent structural hazard has been found.

Date: _____

Time: _____

Inspected Exterior Only

(Caution: Aftershocks since inspection may increase damage and risk)

Inspected Exterior and Interior

Report any unsafe condition to local authorities; reinspection may be required.

This facility was inspected under emergency conditions by:

Inspector comments:

City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740
(562) 431-2527

Facility Name and Address:

Inspector ID/Agency:

Do Not Remove, Alter or Cover this Placard until Authorized by the Building Official
(Municipal Code Section 9.60.135)

(Intentionally Left Blank)



RESTRICTED USE

Caution: This structure has been inspected and found to be damaged as described below:

Date: _____

Time: _____

(Caution: Aftershocks since inspection may increase damage and risk)

Entry, occupancy, and lawful use are restricted as indicated below

This facility was inspected under emergency conditions by:

Do not enter the following areas:

City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740
(562) 431-2527

Brief entry allowed for access to contents:

Inspector ID/Agency: _____

Other restrictions:

Facility Name and Address: _____

Do Not Remove, Alter or Cover this Placard until Authorized by the Building Official (Municipal Code Section 9.60.135)



UNSAFE

DO NOT ENTER OR OCCUPY (THIS PLACARD IS NOT A DEMOLITION ORDER)

Caution: This structure has been inspected, found to be seriously damaged and is unsafe to occupy as described below:

Date: _____

Time: _____

This facility was inspected under emergency conditions by:

Do not enter, except as specifically authorized in writing by the City of Seal Beach. Entry may result in death or injury.

City of Seal Beach
211 Eighth Street
Seal Beach, CA 90740
(562) 431-2527

Facility Name and Address: _____

Inspector ID/Agency: _____

Do Not Remove, Alter or Cover this Placard until Authorized by the Building Official (Municipal Code Section 9.60.135)

Section 2. This Ordinance shall become effective January 1, 2011.

Section 3. In adopting the Codes as set forth in this Ordinance the City Council finds, determines and declares, pursuant to Health and Safety Code Section 17958.5, that the changes or modifications to the Codes, other than those that are administrative in nature, are reasonably necessary due to local climatic, geographic or topographical conditions in that:

A. Health and Safety Code Section 17958 mandates that the City of Seal Beach adopt ordinances and regulations imposing the same requirements as are contained in the regulations adopted by the State pursuant to Health and Safety Code Section 17922;

B. Health and Safety Code Section 17958.5 permits the City to make changes or modifications to the codes as are reasonably necessary because of local conditions;

C. Health and Safety Code Section 17958.5 requires that the City make findings that such changes are modifications are needed due to climatic, geographic, or topographic conditions;

D. The Fire Marshal and Building Official have recommended that changes and modifications be made to the 2010 Codes, and have advised that certain of said changes and modifications to the California Building Code, 2010 Edition, are reasonably necessary due to local conditions within the City of Seal Beach, and have further advised that the remainder of the said changes and modifications are of an administrative or procedural nature, or concern themselves with subjects not covered by the Codes, or are reasonably necessary to safeguard life and property within the City of Seal Beach as follows:

1. Climatic Conditions:

a. The City of Seal Beach is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 M.P.H. or greater are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires also disrupt utility services throughout the area.

Obstacles generated by strong winds, such as fallen trees, street lights and utility poles, and the requirement to climb 75 feet vertically up flights of stairs will greatly impact the response time to reach an incident scene. Additionally, there is a significant increase in the amount of wind force at 60 feet above the ground. Use of aerial type fire fighting apparatus above this height would place rescue personnel at increased risk of injury.

b. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County Fire Authority's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County.

c. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and, although the population continues to grow, the already-taxed water supply does not. California is projected to increase in population by

nearly 10 million over the next quarter of a century with 50 percent of that growth centered in Southern California. Due to storage capacities and consumption and a limited amount of rainfall, future water allocation is not fully dependable. This necessitates the need for additional on-site fire protection features. The shortage of water would also leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of available water to upper floors in a fire.

d. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.

Necessary Local Amendments: Therefore, the amendments to the California Building Code set forth in Section 9.60.065.A; Section 9.60.065.C; Section 9.60.065.D; Section 9.60.065.E; and Section 9.60.065.H, and the amendments to the California Residential Code set forth in Section 9.60.070.A; Section 9.60.070.B; and Section 9.60.070.C, and the amendments to the California Fire Code set forth in Section 9.60.095.C; Section 9.60.095.D; Section 9.60.095.F; Section 9.60.095.G; Section 9.60.095.H; Section 9.60.095.I; Section 9.60.095.K; Section 9.60.095.L; Section 9.60.095.O; Section 9.60.095.P; Section 9.60.095.R; Section 9.60.095.T; Section 9.60.095.U; and Section 9.60.095.V are necessary.

2. Topographical conditions:

a. The majority of Seal Beach is located within the alluvial plain that extends southward from the convergence of Coyote Creek and the San Gabriel River. The two channels drain from the northeast and north, respectively, and the combined flow reaches the sea at Alamitos Gap. Elevations within the City vary from sea level to 60 feet at Landing Hill. The Landing Hill area is part of the Newport-Inglewood Fault System.

b. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.

c. These topographical conditions combine to create a situation, which places fire department response time to fire occurrences at risk, and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

Necessary Local Amendments: Therefore, the amendments to the California Building Code set forth in Section 9.60.065.A; Section 9.60.065.D; Section 9.60.065.E; Section 9.60.065.F; Section 9.60.065.G; and Section 9.60.065.H, and the amendments to the California Residential Code set forth in Section 9.60.070.A; Section 9.60.070.B; and Section 9.60.070.C, and the amendments to the California Fire Code set forth in Section 9.60.095.C; Section 9.60.095.D; Section 9.60.095.F; Section 9.60.095.G; Section 9.60.095.H; Section 9.60.095.I; Section 9.60.095.K; Section 9.60.095.L; Section 9.60.095.O; Section 9.60.095.P; Section 9.60.095.Q; Section 9.60.095.R; Section 9.60.095.T; and Section 9.60.095.U are necessary.

3. Geological conditions:

a. The Orange County region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault, located within Orange County and traversing Seal Beach, was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area that ran from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the State of California, Department of Conservation.

b. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors of buildings. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. The State Department of Conservation noted, in their 1988 report (Planning Scenario on a Major Earthquake on the Newport Inglewood Fault Zone, page 59), "unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe."

c. Road circulation features located throughout the City also make amendments reasonably necessary. There are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design accompanied by occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable.

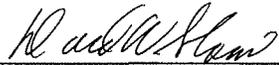
d. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes come in contact with these soils. Certain natural constituents in local soils are corrosive to gas piping. The City's drinking water is safe for municipal uses. Certain natural constituents in the ocean air and in the water, however, will react with ferrous piping.

e. Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in seismic zone described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) requirements for a given structure. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority, which provides fire protection and emergency response services to Seal Beach.

Necessary Local Amendments: Therefore, the amendments to the California Building Code set forth in Section 9.60.065.A; Section 9.60.065.C; Section 9.60.065.D; Section 9.60.065.E; Section 9.60.065.F; Section 9.60.065.G; Section 9.60.065.H; Section 9.60.065.I; and Section 9.60.065.J; and the amendments to the California Residential Code set forth in Section 9.60.070.A; Section 9.60.070.B, and Section 9.60.070.C; and the amendments to the California Plumbing Code set forth in Section 9.60.080.A; Section 9.60.080.B; and Section 9.60.080.C; and the amendments to the California Fire Code set forth in Section 9.60.095.C; Section 9.60.095.D; Section 9.60.095.F; Section 9.60.095.G; Section 9.60.095.H; Section 9.60.095.I; Section 9.60.095.K; Section 9.60.095.L; Section 9.60.095.M; Section 9.60.095.N; Section 9.60.095.O; Section 9.60.095.P; Section 9.60.095.Q; Section 9.60.095.R; Section 9.60.095.T; Section 9.60.095.U; and Section 9.60.095.V are necessary.

Section 4. If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this ordinance or any part thereof is for any reason held to be invalid, such invalidity shall not affect the validity of the remaining portions of this ordinance or any part hereof. The City Council of the City of Seal Beach hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase hereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared invalid.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Seal Beach at a regular meeting held on the 8th day of November, 2010.



Mayor

ATTEST:



City Clerk



STATE OF CALIFORNIA }
COUNTY OF ORANGE } SS
CITY OF SEAL BEACH }

I, Linda Devine, City Clerk of the City of Seal Beach, do hereby certify that the foregoing Ordinance was introduced for first reading at a regular meeting held on the 25th day of October, 2010 and was passed, approved and adopted by the City Council at a regular meeting held on the 8 day of November, 2010 by the following vote:

AYES: Council Members: Antis, Spitt, Miller, Shanks, Steen
NOES: Council Members: None
ABSENT: Council Members: None
ABSTAIN: Council Members: None

And do hereby further certify that Ordinance Number 1600 has been published pursuant to the Seal Beach City Charter and Resolution Number 2836.



City Clerk

