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APPROVED AS TO FORM AND LEGALITY

*Armadillo*

City Attorney

REVISED

**OAKLAND CITY COUNCIL**

ORDINANCE NO. \_\_\_\_\_ C.M.S.

INTRODUCED BY COUNCILMEMBER \_\_\_\_\_

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**ORDINANCE REPEALING CURRENT OAKLAND MUNICIPAL CODE CHAPTER 15.12, FIRE CODE, MAKING FINDINGS TO SUBSTANTIATE MODIFICATIONS TO CALIFORNIA BUILDING CODES AND STANDARDS DUE TO LOCAL CLIMATIC, GEOLOGICAL OR TOPOGRAPHICAL CONDITIONS, AND ADOPTING AND MAKING LOCAL AMENDMENTS TO THE 2013 EDITION OF THE CALIFORNIA MODEL BUILDING CODE, CALIFORNIA CODE OF REGULATION TITLE 24, PART 9, INCLUDING, BUT NOT LIMITED TO, NATIONAL FIRE PROTECTION ASSOCIATION AND OTHER REFERENCED STANDARDS AS ADOPTED BY THE CALIFORNIA STATE FIRE MARSHAL, AND RECODIFYING SAID CODE AT OAKLAND MUNICIPAL CODE CHAPTER 15.12 AS *THE OAKLAND FIRE CODE***

**WHEREAS**, the State of California adopts a new California Model Building Standards Code every three years which goes into effect throughout the State 180 days after publication. The California Model Building Standards Code is contained in Title 24 of the California Code of Regulations ("C.C.R."), and consists of several parts that are based upon model codes with amendments made by various State agencies. The following edition of the California Building Standards Code are the most current in publication:

- California Fire Code, 2013 Edition, C.C.R., Title 24, Part 9; will go into effect throughout California on January 1, 2014; and

**WHEREAS**, the Council of the City of Oakland does hereby find that there is a need to enforce the most current editions of the California Fire Code, with local amendments thereof, as recited herein for regulating and controlling the design, erection, construction, enlargement, installation, alteration, repair, relocation, removal, use and occupancy, demolition, conversion, height and area, location and maintenance, and quality of materials of and structures and plumbing, mechanical, electrical, and fire suppression systems and certain equipment within the corporate boundaries of the City of Oakland; and

**WHEREAS**, the Council of the City of Oakland further hereby finds that there is a need to provide for the issuance of permits and the collection of fees therefore and for penalties for the violation thereof, and for superseding other ordinances, in part or in whole, which are in conflict therewith; and,

conflict therewith; and,

**WHEREAS**, local jurisdictions are required to enforce the California Fire Code but may also enact more stringent standards when reasonably necessary because of local conditions caused by climate, geology or topography; and

**WHEREAS**, as in past State code adoption cycles, in this ordinance the City of Oakland repeals its existing Oakland Amendments to the 2010 Editions of the California Fire Code Codes ("2010 Fire Code Amendments") in their entirety and enacts new Oakland Fire Code Amendments of the 2013 Edition of the California Fire Code ("2013 Oakland Fire Code Amendments"); and

**WHEREAS**, the City Council of the City of Oakland further hereby determines that the adoption of local administrative and non-administrative amendments of the most current editions of the California Fire Code, which provide for certain changes, supplements, and deletions thereof as recited herein, will satisfy these needs by providing for minimum standards to safeguard life, limb, property, and public welfare; and

**WHEREAS**, California Health & Safety Code section 17958.7 provides that before making any changes or modifications to the California Building Standards Code and any other applicable provisions published by the State Building Standards Commission, the governing body must make an express finding that each such change or modification is reasonably necessary because of specified local conditions, and the findings must be filed with the State Building Standards Commission before the local changes or modifications can go into effect; and

**WHEREAS**, the City Council does herewith find that the City of Oakland has certain climatic, geologic, and topographical features that can have a deleterious effect on emergency services such as fire protection and emergency medical services, and,

**WHEREAS**, after due consideration, the City Council of the City of Oakland hereby finds that due to local climatic, geologic and topographic conditions as stated in this section, that modifications and changes to the current 2013 California Fire Code are reasonably necessary to provide sufficient and effective protection of life, health and property for the following reasons:

1. The City of Oakland is situated near several known major faults, each capable of generating earthquakes of significant magnitude. These include the South Hayward Fault, the North Hayward, the San Andreas, and the Rodgers Creek Faults. These faults are subject to becoming active at any time; the City of Oakland is particularly vulnerable to devastation should such an earthquake occur. The potential effects of earthquake activity include isolating the City of Oakland from the surrounding area and restricting or eliminating internal circulation due to the potential for collapsing of highway overpasses and underpasses, along with other bridges in the City, or a landslide, and the potential for vertical movement rendering surface travel unduly burdensome or impossible.
2. The City of Oakland is bisected by Interstate 80, 880 and 580. Interstates 80 and 880 are designated by the California Highway Patrol as approved transportation routes for highly toxic and radioactive materials. The potential for release or threatened release of a hazardous material along one of these routes is highly possible given the volume

transported daily. Incidents of this nature will normally require all available emergency response personnel to prevent injury and loss of life and to prevent, as far as practicable, property loss. Emergency personnel responding to such aforementioned incidents may be unduly impeded and delayed in accomplishing an emergency response. Potential risk to the protection of life and public safety and, in particular, residents and occupants in structures without the protection of automatic fire sprinklers.

3. The seasonal climatic conditions during late summer and early fall pose serious challenges to the Oakland Fire Department in controlling and fighting wild land urban interface fires. The hot, dry weather typical of this area in fire season coupled with strong Diablo Winds can result in wildfires that threaten the City of Oakland. Natural vegetation occurring in our region is among the most highly flammable in the world. While some code requirements, such as fire-resistive roof classification, have a direct bearing on fire survival in a wild land fire situation, others, such as residential fire sprinklers, may also have a positive effect. In dry climate on low humidity days, materials are much more easily ignited. More fires are likely to occur and any fire, once started, can expand rapidly. Residential fire sprinklers can arrest a fire starting within a structure before it spreads to adjacent brush and structures.
4. The topography of Oakland presents problems in delivery of emergency services, including fire protection. Hilly terrain has narrow, winding roads with limited access for emergency response and residential egress, preventing rapid access and orderly evacuation. Much of these hills are covered with highly non-fire-resistive natural vegetation. In addition to access and evacuation problems, the terrain makes delivery of water extremely difficult. Some hill areas are served by water pump systems subject to failure in fire, high winds, earthquake and other power failure situations. Due to the topography in much of the City of Oakland, roadway condition, angle of approach or departure, steeply sloping roadways and grades are common.
5. There is expansive soil in many areas of the Oakland Hills that retain ground water from severe rainstorms. This produces a condition wherein the moisture content of the soil is sufficient that roadways become damaged due to soil expansion and shrinkage. All weather, paved surfaces capable of supporting the imposed loads of fire apparatus are necessary to ensure access of emergency response personnel. These roadways, approach angles, steep slopes and grades can also make it difficult for fire apparatus and other emergency vehicles to access a site. It is therefore essential that these roadway accesses be provided with proper all-weather paved surfaces, angle of approach, grades and gate access.

Now, therefore, the Council of the City of Oakland does ordain as follows:

Section 1. Section 15.12 Repealed. Section 15.12 of the Oakland Municipal Code is repealed in its entirety.

Section 2. Section 15.12, Oakland Fire Code. Section 15.12, Fire Code, is reinstated in the Oakland Municipal Code as follows:

Section 15.12, Oakland Fire Code

15.12.010 2013 California Fire Code is Adopted and Amended

- A. The 2013 California Fire Code, including referenced National Fire Protection Association Standards and other standards as adopted by the California State Fire Marshal, is hereby adopted and made a part of this Chapter as though fully set forth herein, subject to the modifications thereto set forth in this Chapter.
- B. This Chapter shall be known as the "Oakland Fire Code" and shall be referred to in this Chapter as "this Chapter," "this Code" or "the Oakland Fire Code."
- C. To the extent permitted by law, the Fire Chief may, at his/her sole discretion, revise requirements set forth in the Oakland Fire Code in specific instances due to climatic, geographic or topographic conditions.
- D. A copy of this Code is on file in the office of the Fire Chief of the City of Oakland.

**15.12.020 Oakland Amendments to the 2013 California Fire Code.**

The following sections of the 2013 California Fire Code as adopted herein are hereby revised as noted by italicized terms including, but not limited to, *add*, *amend* or *delete*, as follows:

**CHAPTER 1 - DIVISION II ADMINISTRATION PART 1 - GENERAL PROVISIONS - *Amend this Chapter 1 as follows:***

***Amend:*** 101.1. Title This Section 15.12.020 of Oakland Municipal Code Chapter 15.12 shall be known as the "Oakland Amendments to the 2013 California Fire Code", may be cited as such and will be referred to herein as "this chapter," "this Code," or the "Oakland Fire Code."

Section 101 of the 2013 California Fire Code is amended as follows:

***Amend:*** 101.2. Scope. This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems; and
5. Conditions affecting the safety of fire fighters and emergency responders during emergency operations.

***Amend:*** 101.2.1. Appendices The following Appendices of the 2013 California Fire Code are adopted by the City of Oakland and made a part of the Oakland Fire Code.

Appendix Title

Appendix	Special Detailed Requirements Based on Use and Occupancy Chapter 4
Appendix B	Fire-Flow Requirements for Buildings
Appendix C	Fire Hydrant Locations and Distribution
Appendix D	Fire Apparatus Access Roads
Appendix E	Hazard Categories
Appendix F	Hazard Ranking
Appendix G	Cryogenic Fluids-Weight and Volume Equivalents
Appendix I	Fire Protection Systems- Noncompliant Conditions
Appendix K	Temporary Haunted Houses, Ghost Walks and similar Amusement Uses

***Amend: 101.2.2. General Provision.***

Where any section of the 2013 California Fire Code or any other referenced codes, regulations or standards are amended by this chapter, all provisions of such original codes, regulations or standards not so specifically amended shall remain in full force and effect. Notwithstanding the foregoing, in the event provisions set forth herein conflict with any section of the 2013 California Fire Code or any other referenced codes, regulations or standards, the provisions of this Code shall prevail and control. Further, in the event that provisions set forth in this code conflict with provisions the City Charter, the City Charter shall prevail and control.

Failure to comply with any of the provisions of this Code, including failure to provide, obtain or maintain valid permits, certifications, tests, listings, affixed labeling, inspection approvals, or other conditions of permit; failure to repair, demolish, remove, or rehabilitate unsafe materials, appliances, fixtures, equipment or other property; or failure to prevent, restrain, correct, or abate conditions unsafe or hazardous for egress or fire protection or health due to inadequate maintenance, excess loading, dilapidation, or abandonment shall be and is declared to be prima facie evidence of an existing and continuing hazard to life or limb, property or public welfare.

**Section 102. Applicability - *Amend this section 102 as follows:***

***Amend: 102.1. Construction and design provisions.*** The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.

2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code.
3. Existing structures, facilities and conditions when required in Chapter 11.
4. Existing structures, facilities and conditions which, in the opinion of the Fire code official, constitute a distinct hazard to life or property.

**Add: 5.** All materials, assemblies, appliances, fixtures, equipment, and installations thereof; all arrangements of occupancies, exits, aisles, stairs, and doors; all parapet walls, comices, spires, towers, tanks, statuary, signage, structural members, appendages, and appurtenances thereto in buildings and structures regulated by this Code shall be so arranged, assembled, installed, maintained and of sufficient size and so protected as to reduce and minimize all egress, fire, safety, and health hazards.

**Add: 6.** The quality of all materials, assemblies, appliances, fixtures, and equipment; methods of connection, assembly, and installation; allowable stress, strain, deflection, rate and volume and velocity of flow, pressure, temperature, and opacity; and assumed loads and capacities to be used in the design and construction of all buildings and structures, plumbing and mechanical installations, and electrical systems shall be consistent with requirements of this Code and nationally recognized standards of quality and generally recognized and well-established methods of testing, design, installation, and construction. Testing, listing, and affixed labeling shall be prima facie evidence of conformity with approved standards for safety to life and limb, property, and public welfare.

**Amend: 102.3.** Change of use or occupancy. No change shall be made in the use or occupancy of any structure that would place the structure in a different division of the same group or occupancy or in a different group of occupancies, unless such structure is made to comply with the requirements of this code and the California Building Code. Subject to the approval of the Fire code official, the use or occupancy of an existing structure shall be allowed to be changed and the structure is allowed to be occupied for purposes of other groups without conforming to all the requirements of this code and the California Building Code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

When a change of occupancy results in a structure being reclassified to a higher occupancy classification, an automatic fire extinguishing system and associated fire protection systems shall be provided in the building or tenant space, whichever is applicable, in accordance with Table 102.3. Tenant spaces shall be separated from the remaining tenant spaces based on the type of Occupancy/Construction for non-sprinklered construction and in accordance with the CBC.

Relative Hazard	Occupancy Classifications
1 (Highest Hazard)	H
2	I-2, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1
5 (Lowest Hazard)	F-2, S-2, U

\*Ref: 2009 IEBC Table 912.4.

**Amend: 102.8.** Subjects not regulated by this code. Where no applicable standards or requirements are set forth in this code, or are contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, compliance with applicable standards of the National Fire Protection Association or other nationally recognized fire safety standards, as approved, shall be deemed as prima facie evidence of compliance with the intent of this code. Nothing herein shall derogate from the authority of the Fire code official to determine compliance with codes or standards for those activities or installations within the Fire code official's jurisdiction or responsibility.

Further, unless expressly stated herein, this code is not intended to amend, repeal, or supersede provisions of any other codes, regulations, ordinances, or the Oakland City Charter, including, but not limited to, the demolition ordinance, earthquake damage abatement ordinance, dangerous building ordinance, creek protection ordinance, Planning Code and Building Maintenance Code.

**Section 105. Permits** - *Amend this Section 105 as follows:*

**Amend: 105.2. Application.** Application for a permit required by this code shall be made to the Fire code official in such form and detail as prescribed by the Fire code official. Applications for permits shall be accompanied by such plans as prescribed by the Fire code official. An application for a permit shall be accompanied by a fee established by resolution of the city council.

**Amend: 105.3.7. Information on the permit.** The Fire code official shall issue all permits required by this code on an approved form furnished for that purpose. The permit shall contain a general description of the operation or occupancy and its location and any other information required by the Fire code official. Issued permits shall bear the signature of the Fire code official or other approved legal authorization.

Every permit shall also contain an agreement as follows which shall be executed by the permit holder as a condition of issuance:

"I hereby agree to save, defend, indemnify and keep harmless the City of Oakland and its officials, officers, employees, representatives, agents and volunteers from all actions, claims, demands, litigation, or proceedings, including those for attorneys' fees, against the City in consequence of the granting of this permit or from the use or occupancy of the public right-of-way, public easement, or any sidewalk, street or sub-sidewalk or

otherwise by virtue thereof, and will in all things strictly comply with the conditions under which this permit is granted. I further certify that I am the owner of the property involved in this permit or that I am fully authorized by the owner to access the property and perform the work authorized by this permit."

**Amend: 105.6.8. Compressed Gases.** An operational permit is required for the storage, use, or handling, at normal temperatures and pressures (NTP), of compressed gases in excess of the amounts listed in Table 105.6.8

**Amend: 105.6.10. Cryogenic fluids.** An operational permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed in Table 105.6.10. Except where federal or state regulations apply and except for fuel systems of a vehicle a construction permit is required to install a cryogenic vessel or piping system for the storage or distribution of cryogenics. See also Chapter 55.

**Amend: 105.6.16. Flammable and Combustible Liquids.**

**Add: 12.** To store, handle or use class III-B liquids with a flashpoint of less than 500 degrees F. in excess of 110 gallons.

**Add: 13.** To install, alter, remove, test, abandon, place temporarily out of service or otherwise dispose of any flammable or combustible liquid tank.

**Amend: 105.6.25. Lumber Yards and Wood Working Plants.** To operate any wood working plant. See Chapter 28.

**Add: 105.6.48. Christmas Tree Lot.** To operate a Christmas Tree Sale Lot. See additional provisions in Section 806 of this code.

**Add: 105.6.49. Fire Alarm or Sprinkler Monitoring System.** No person shall install or cause to be installed any fire alarm signaling system or device designed to indicate a fire emergency without first obtaining a permit. Application and plans for such permit shall be made to the Fire code official in accordance with 105.4 of this code.

**Amend: 105.7.3. Compressed gases.** When the compressed gases in use or storage exceed the amounts listed in Table 105.6.8, a construction permit is required to install any piped distribution system for compressed gases, or to install a non-flammable medical gas manifold system, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a compressed gas system.

**Amend: 105.7.6 Fire alarm and detection systems or sprinkler monitoring system and related equipment.** A construction permit is required for installation of or modification to fire alarm and detection systems or sprinkler monitoring system and related equipment. Maintenance performed in accordance with this code is not considered a modification.



**Section 108. Board of Appeals** - *Amend this Section 108 as follows:*

***Amend:*** 108.1. Appeals. In order to hear and decide appeals of orders, decisions, or determinations made by the Fire Chief relative to the application and interpretation of the non-administrative (technical) requirements of this Code, the property owner may request an administrative hearing with a Hearing Examiner. The request shall be filed in writing with the Fire Chief and shall be accompanied with a fee as established in the Master Fee Schedule. The request for an administrative hearing shall contain the following information:

1. A brief statement setting forth the legal interest of the party or parties in the real property identified in the order, decision or determination made by the Fire Chief; and
2. A brief statement in ordinary and concise language of that (those) specific order(s), decision(s) or determination(s) protested; and
3. A brief statement in ordinary and concise language contending that issuance of the order, decision or determination was a result of error or abuse of discretion together with any material facts claimed to support such contention; and
4. A brief statement in ordinary and concise language of the relief sought and the reasons why it is claimed the protested order, decision or determination should be reversed, modified, or otherwise set aside; and
5. The signature of the property owner, and his or her mailing address; and
6. The verification (by declaration under penalty of perjury) of at least one person requesting a hearing as to the truth of the matters stated in the request for hearing; and

The written request for an administrative hearing with the accompanying fee shall be received by the Fire Chief within fourteen (14) calendar days from the date of the service of such order, decision or determination of the Fire Chief.

As soon as practicable after receiving the request for administrative hearing, the Fire Chief shall fix a date, time and place for the administrative hearing. Written notice of the time and place of the hearing shall be given to the appellant at least seven (7) calendar days prior to the date of the hearing.

The failure of the Fire Chief to serve any person required herein to be served shall not invalidate any proceedings hereunder as to any other person duly served or relieve any such person from any duty or obligation imposed by the provisions of this section.

Only those technical matters or issues specifically raised by the appellant in the Request for Administrative Hearing shall be considered in the administrative hearing.

***Amend: 108.3. Qualifications.*** The Hearing Examiner shall not be an employee of the City of Oakland and shall be qualified by experience and training regarding fire explosions, hazardous conditions or fire protection systems, and building construction and other matters pertaining to this Code.

***Add: 108.4. Limitations of Authority.*** The Hearing Examiner shall have no authority relative to interpretations of the administrative provisions of this Code and shall not be empowered to waive or otherwise set aside the non-administrative (technical) requirements of this Code.

***Add: 108.5. Effect of Hearing.*** Decisions of the Hearing Examiner in all instances shall be final and conclusive.

***Add: 108.6. Review of Administrative Determination.*** The limitation period provided pursuant to California Code of Civil Procedure Section 1094.6 shall apply to all petitions filed seeking judicial review of administrative determinations made by the Fire code official or the Hearing Examiner.

**Section 109. Violations - *Amend this Section 109 as follows:***

***Amend: 109.1. Unlawful acts.*** It shall be unlawful for a person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premise(s), or system regulated by this code, or cause a public nuisance, potential fire or health hazard, or cause same to be done, in conflict with or in violation of any of the provisions of this code

***Add: 109.1.2. Blight or Hazardous Condition.*** Any commercially or residentially zoned parcel, lot or premise on which flammable materials as defined by this Code are openly stored or abandoned, causing blight or hazardous conditions, so as to constitute a potential fire or health hazard shall constitute a public nuisance and shall be ordered cleaned by the issuance of an Administrative Citation to the property owner in accordance with Section 106.1 of this Code.

***Add: 109.1.3. Remuneration.*** In addition to the penalties provided by law, a violator shall be liable for such costs, expenses, disbursements, and attorneys' fees paid or incurred by the City or any of its officials, officers, representatives, employees; agents, volunteers, vendors, or third-party contractors in correction, abatement and prosecution of the violation.

***Add: 109.3.3.1. Prosecution of violations.*** Any violation of this Code is deemed a public nuisance and a misdemeanor, but may be cited or charged, at the election of the

enforcing officer or City Attorney or District Attorney, as infractions. Nothing in this section shall prevent any other remedy at law. Each person shall be guilty of a separate offense for each and every day during a portion of which a violation of any provision of this Code is committed, continued, or permitted by such person.

***Amend: 109.4.*** Violation penalties. A person violates a provision of this code by failing to comply with any of the requirements thereof or who erects, installs, alters, repairs, or does work in violation of the approved construction documents or direction of the Fire code official, or of a permit or certificate used under the provisions of this code, is guilty of a misdemeanor offense as set forth in the Oakland Municipal Code.

***Amend: 109.4 .1 Powers To Abate.*** The Fire Chief is authorized to abate a fire or life hazard when necessary to protect life or property. This may include, but is not limited to, confiscation of flammable liquids, fireworks, the removal of hazardous electrical wiring, temporary closure of commercial occupancies, extinguishing unsafe or illegal fires and any other similar hazards, determining no smoking areas, and ceasing operation of any type apparatus that poses an imminent danger to property or life.

***Add: 109.4.3 Cost Recovery.*** In addition to the enforcement and other proceedings referenced in Section 116 of this Code, the costs of any abatement action taken pursuant to this Code may be recovered by the City pursuant to the provisions of this section and section 114. After performing the abatement work on the property in question, the Fire Chief shall cause to be recorded with the County Recorder, a "prospective Notice of Special Assessment Lien." Such notice shall summarize the work performed, the cost and date of completion. The costs shall be imposed as a lien in conformance with Section 107 of this Code. The City may proceed to recover such costs in a civil lawsuit.

***Add: 109.4.3.1. Notice of Abatement Orders, Notices and Actions.*** If notice has not already been given pursuant to Section 103.4.2, the Office of the Fire code official ("Fire Department") shall personally serve, or shall send one copy of the official notice to abate by regular mail, postage prepaid, to the person owning the parcel, including undeveloped land, on which the fire or dangerous condition is located, or to any person in control of said parcel, as such person's name and address appear on the current County of Alameda's assessment roll. If such address is unknown to the Fire Department then notice shall be affected by physically posting such notice on the property itself. Service by mail shall be deemed completed at the time of deposit in the United States mail.

***Add: Section 114. Judgment and Liens***

***Add: 114.1 Authority to Lien.*** The cost incurred pursuant to Sections 103 and 106 of this Code in obtaining Real Property Ownership Reports and in razing or

demolishing any fire or securing or cleaning any parcel and abating its associated fire hazard, or instituting a fire watch by action of the Fire code official shall be a proper charge against the City Treasury and shall be paid from there. Re-inspections and administrative fees to ascertain Code compliance for overdue abatement of previously noticed or cited violations shall be charged against the owner. Fees shall be in the amount as currently described in the Master Fee Schedule. The Fire code official shall give the owner or other interested party of such premises a written notice and statement showing the itemized cost of such abatement, and requesting payment thereof. Alternatively, said charges may be directly collected in a civil lawsuit or by the filing and foreclosure of a lien.

**Add: 114.2 Notice of Hearing on Lien.** If the City chooses to pursue the cost recovery method outlined in Section 109.4.3. and the amount of such expenses as shown in such statement is not paid within ten (10) days after such notice, the Fire code official shall file with the City Administrator written notice of those persons against whose property the City intends to file a lien. Upon receipt of such notice, the City Administrator shall present same to the City Council, and the City Council shall forthwith, by resolution, fix a time and place for a public hearing on such notice. The Fire code official shall cause a copy of such notice to be served on the owner of the property not less than ten (10) days prior to the time fixed for such hearing. Mailing a copy of such notice to the owner of the property at the address listed in the most recent property ownership records provided to the City by the County Assessor as of the date the Fire code official causes notice to be mailed shall comprise proper service. Service shall be deemed complete at the time of deposit in the United States mail.

At the public hearing as scheduled above the City Council will hear all noticed or affected property owners who would be obligated to pay the abatement and related costs incurred by the City. The City Council shall confirm the appropriateness of persons to be held responsible for the noticed abatement charges and report to the Fire code official its final determinations of liability concerning the affected parties. Charges confirmed by the City Council and not paid within five (5) days of the public hearing date will be subject to lien and collection procedures as provided below.

The Fire code official shall record in the Office of the County Recorder of the County of Alameda, State of California, and a certificate substantially in the following form:

"NOTICE OF SPECIAL ASSESSMENT LIEN

"Pursuant to authority vested in me by the Fire Code of the City of Oakland, California, I did on the \_\_\_\_ day of \_\_\_\_, 20 \_\_\_\_, cause a condition to be abated or chargeable action to occur on the hereinafter-described real property at the expenses of the owner thereof, in the amount of \$\_\_\_\_, and that said amount has not been paid nor any part thereof, and the City of Oakland does hereby claim a

lien upon the hereinafter-described real property in said amount; the same shall be a lien upon the said real property until said sum, with interest thereon from the date of recordation of this lien in the Office of the County Recorder of the County of Alameda, State of California, and such other charges as may be applied from the City of Oakland Master Fee Schedule, has been paid in full. The real property hereinabove mentioned and upon which a lien is claimed is that certain parcel of land lying and being in the City of Oakland, County of Alameda, State of California, and particularly described as follows:

"Assessor's Parcel Number:

"Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Fire code official  
City of Oakland"

The same shall be a lien against the property described therein until the amount thereof, plus accrued interest, has been paid in full. The amount of such lien shall draw interest thereon at a rate as established in the City of Oakland Master Fee Schedule from and after the date of the recording of said notice of the contents thereof.

**Add: 114.3 Method of collection: Additional Amount of Costs to Tax Bill Procedure.**

With the confirmation of the report by the City Council, the nuisance abatement charges contained therein that remain unpaid by the owner of the subject property shall constitute a special assessment against said property as it has received the special benefit of City abatement services. Such charges shall be collected, along with City administrative and a reinspection fees at such time as is established by the County Assessor for inclusion on the next property tax roll.

The Fire code official shall turn over to the County Assessor for inclusion in the next property tax assessment the total sum of unpaid nuisance abatement charges consisting of the abatement costs, administrative and re-inspection fees, and interest from the date of recordation of the lien, at the rate established in the Master Fee Schedule.

Thereafter, said assessment may be collected at the same time and in the same manner as ordinary municipal taxes are collected and shall be subject to the same penalties and the same procedure of sale as provided for ordinary delinquent municipal taxes. The special assessment shall be on parity and the same priority as general property taxes.

**Add: 114.4 Judgment Liens.** A copy of every judgment imposing a fine or cost or both upon any owner of any real property for a violation of this Code thereon shall, upon the entry of judgment, be filed forthwith by the Fire code official in the Office of the Recorder of Alameda County. The County Recorder shall index it

immediately upon receiving it in the index of mechanics' liens. The fine, charges or administrative costs shall be a lien upon the real property from the time the certified copy of the judgment is filed in the Office of the Recorder, subject only to taxes, assessments, and water charges, and to mortgage and mechanics' liens existing on the real property prior to the filing.

***Add: Section 115. Oakland Municipal Code, Article 15, Chapter 15.64 Bedroom Window Security Bars And Grills***

***Add: Section 115.1. Administration And Enforcement of Oakland Municipal Code, Article 15, Chapter 15.64 Bedroom Window Security Bars And Grills.*** The City Administrator delegates to the Fire code official of the Fire Department the authority to enforce and administer the provisions of Oakland Municipal Code, Article 15, Chapter 2 15.64, entitled "Bedroom Window Security Bars and Grills." All City employees designated by the Fire code official are authorized to make necessary inspections and take any actions on behalf of the Fire code official as may be required to enforce and administer the provisions of Article 15 of the Oakland Municipal Code.

Article 15 of the Oakland Municipal Code will be administered and enforced in accordance with the powers vested in the Fire code official by applicable law, including but not limited to the 2010 California Fire Code and the provisions of Oakland Municipal Code, Chapter 1, Articles 3, 4, 6, 7, and 8, as amended by Ordinance No. 11989 C.M.S.

***Add: 115.2. Fire Hazard.*** Any residential or non-residential building or structure or portion thereof, device, apparatus, equipment, combustible waste or vegetation which, in the opinion of the Fire code official, is in such a condition as to cause a fire or explosion or provide a ready fuel to augment the spread and intensity of fire or explosion arising from any cause shall be considered Substandard and a Public Nuisance.

***Add: 115.3 Faulty Materials of Construction.*** The use of materials of construction, except those which are specifically allowed or approved by this Code and the Oakland Building Code, and which have not been adequately maintained in good and safe condition, shall cause a residential or non-residential building or structure to be Substandard and a Public Nuisance.

***Add: 115.4 Inadequate Exits.*** Except for those buildings or structures or portions thereof which have been provided with adequate exit facilities conforming to the provisions of this Code, residential and non-residential buildings or structures or portions thereof whose existing facilities were installed in violation of code

requirements in effect at the time of their construction or whose exit facilities have not been increased in number or width in relation to any increase in occupant load due to alterations, additions or change in use or occupancy subsequent to the time of construction shall be considered Substandard and a Public Nuisance.

Notwithstanding compliance with code requirements in effect at the time of their construction, residential and non-residential buildings or structures or portions thereof shall be considered Substandard and a Public Nuisance when the Fire code official or the Building Official finds that an unsafe condition exists through an improper location of or length of travel to required exits, or a lack of an adequate number of width of required exits, or when other conditions exist which are dangerous to human life including, but not limited to, lack of or unapproved or improperly installed or improperly maintained illumination of required exits, directional signage to required exits, door and window release and security devices, and other obstructions to or within the exiting path of travel or emergency escape.

**Add: 115.5 Inadequate Fire Protection or Firefighting Equipment.**

Residential and non-residential buildings or structures or portions thereof shall be considered Substandard and a Public Nuisance when they are not provided with the fire-resistive construction or fire-extinguishing systems or equipment required by this Code, except those buildings or structures or portions thereof which conformed with all applicable laws at the time of their construction and whose fire-resistive integrity and fire-extinguishing systems or equipment have been adequately maintained and improved in relation to any increase in occupant load, alteration or addition, or any change in occupancy.

**Add: Section 116. Declaration of Public Nuisance—Substandard**

Any violations of the Oakland Fire Code deemed to be substandard and a public nuisance by the Fire code official or Building Official shall be subject to the enforcement and other proceedings set forth in the Oakland Building Code, Oakland Municipal Code Chapter 15.08.

## **CHAPTER 2 - DEFINITIONS.**

**Section 202. General Definitions** – *Amend this Section 202 as follows*

**Add: ABANDONED:** Tanks out of service and not being monitored in accordance with this Article and the provisions of the California Health and Safety Code shall be considered abandoned.

**Add: CALIFORNIA FIRE CODE:** The International Building Code as amended and adopted by the State of California and is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 9; a portion of the

"California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code.

**Add: CALIFORNIA ELECTRIC CODE:** The National Electric Code as amended and adopted by the State of California and is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 3; a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code.

**Add: CALIFORNIA MECHANICAL CODE:** The International Mechanical Code as amended and adopted by the State of California and is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 4; a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code.

**Add: CALIFORNIA PLUMBING CODE:** The International Plumbing Code as amended and adopted by the State of California and is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 5; a portion of the "California Building Standards Code," as defined in the "California Building Standards Law" commencing with Section 18901 of the Health and Safety Code.

**Add: COMBINATION PERMIT:** A Combination Permit allows the performance of building electrical, plumbing, and mechanical work under a single permit and may be issued for certain types of work which the Building Official has identified as being appropriate for such consideration. Fees shall be assessed as established in the Master Fee Schedule.

**Add: CONTINUOUS GAS DETECTION SYSTEM:** An approved gas detection system where the analytical instrument is maintained in continuous operation and sampling is performed without interruption. Analysis is allowed to be performed on a cyclical basis at intervals not to exceed 5 minutes.

**Add: CORROSIVE LIQUID** is a liquid which, when in contact with living tissue, will cause destruction or irreversible alteration of such tissue by chemical action. Examples include acidic, alkaline or caustic materials. Such material will be considered prima facie corrosive when the Ph is 2 or less or 12.5 or more, except for foodstuffs or medicine. This includes materials classified by DOT and Title 22 as corrosives.

**Add: CURRENT CODE** shall mean the edition of the California Building Code published by the International Code Council as adopted by the City of Oakland under California Health and Safety Code Section 18941.5. The edition to be applied shall be that edition in effect at the time damage occurs.



**Add: DEPARTMENT HAVING JURISDICTION:** Wherever reference is made in this Code to "Department Having Jurisdiction," it shall mean the Oakland Fire Department, and its successor in Title.

**Add: ENGINEERING EVALUATION:** means an evaluation of a suspected damaged building or structure, performed under the direction of a fire protection engineer, structural engineer, civil engineer or architect retained by the owner of the building or structure. Engineering evaluations shall, at a minimum, contain recommendations for repair with an appropriate estimate of the construction cost for those repairs.

**Add: ESSENTIAL SERVICE FACILITY** shall mean that building or structure which has been designated by the City Council to house facilities that are necessary for emergency operations.

### **HIGHLY TOXIC.**

**Add: 4.** A chemical that has a health hazard ranking of 4 in accordance with NFPA Standard 704.

**Add: INDEX SHEET:** A sheet located within the 1st or 2nd sheet of the plan set that lists all drawings and sheet numbers and a description of each drawing that is part of the plan set or other submittal document.

**Add: JURISDICTION** means the City of Oakland.

**Add: LOCAL FIRE ALARM** shall mean a fire alarm system provided for notification and evacuation of occupants. It shall have more than one notification appliance on each and every floor. The system may notify a monitoring company at the discretion of the fire code official.

**Add: NON-PROFESSIONAL:** A person that is not licensed or certified by the State of California, but is not prohibited by state law from providing a certain service to others or performing certain work for oneself.

**Add: OAKLAND BUILDING CONSTRUCTION CODE:** The Oakland Building Construction Code is the compiled editions of the California Building Standards Codes, California Code of Regulations (CCR), Title 24, Part 2 (Building), Part 3 (Electrical), Part 4 (Mechanical), and Part 5 (Plumbing), and the Uniform Swimming Pool Spa and Hot Tub Code, with local amendments thereto as adopted by the Council of the City of Oakland.

**Add: READILY ACCESSIBLE:** Has the same definition as it is defined in the California Plumbing and Mechanical Codes.

**Add: REMOVAL.** means the removal of tanks abandoned or permanently out of service from the ground which may require removal of all levels of containment, foundations, structures, or similar items which would obstruct soil sampling or cleanup of contaminated soil.

**Add: REPLACEMENT VALUE** is the dollar value, as determined by the building official based upon the square footage and the guidelines used in establishing the valuation of new construction, of replacing the damaged structure with a new structure of the same size, construction material and occupancy on the same site.

**Add: SEALED (STAMPED):** Indicates the plan(s) is/are sealed, as required by California Business & Professions Code Sections 5536.1 and 5536.2, with originally applied ink applied to the print or copy of the plans or other submittal documents submitted with an application for permit. Information provided on the seal (stamp) shall be in accordance with California Business & Professions Code Section 5536.1 and Title 16, Section 136 of the California Code of Regulations.

**Add: SECONDARY CONTAINMENT** is that level of containment that is external to and separate from primary containment and is capable of safely and securely containing the material, without discharge, for a period of time reasonably necessary to ensure detection and remedy of the primary containment failure.

**Add: SEGREGATED** is storage in the same room or area, but physically separated by distance and independent secondary containment from incompatible materials.

**Add: SEMICONDUCTOR FABRICATION FACILITY OR COMPARABLE MANUFACTURING, RESEARCH AND DEVELOPMENT AREAS** is a building or portion of a building classified as a Group H Occupancy in which electrical circuits or similarly manufactured devices are created.

**Add: ~~Secondary Containment~~ SECONDARY CONTAINMENT.** Secondary containment is that level of containment that is external to and separate from primary containment and is capable of safely and securely containing the material, without discharge, for a period of time reasonably necessary to ensure detection and remedy of the primary containment failure.

**Add: SIGNED:** Indicates the originals of the indicated plan(s) have been "wet" signed (and sealed) and the image of such signing is apparent on the copies of the originals submitted for permit. Also refer to the definition of "wet" signed.

**Add: SPECULATIVE WAREHOUSING** is a building constructed without a specific use, occupancy hazard designation, or tenant. Buildings that do not have a designed fire sprinkler system for a specific use (occupancy) or storage commodity classification.

**Add: STORAGE OR USE FACILITY** is a building, portion of a building, or exterior area used for the storage, use, or handling of hazardous materials where the quantity of

hazardous materials is equal to or greater than the permit amounts specified in Appendix Chapter 1, Section 105.

**Add: STORAGE OR USE SYSTEM** is any one or combination of tanks, sumps, waste treatment facilities, pipes, vaults or other portable or fixed containers, and their secondary containment systems which are used, or designed to be used, for the storage, use, or handling of hazardous materials at a storage or use facility. For purposes of this code, a workstation having limited quantities of hazardous materials shall not be treated as a storage system.

**Add: TEMPORARY INSTALLATIONS** shall mean those that do not exceed one year.

## **TOXIC.**

**Add: 4.** A chemical that has a health hazard rating of 3 in accordance with NFPA Standard 704.

**Add: VALUE OF REPAIR** is the dollar value, as determined by the building official, of making the necessary repairs to a damaged structure.

**Add: WASTE OIL** is a Class III-B waste liquid resulting from the use of Class III-B combustible liquids such as waste motor oil, hydraulic oil, lubricating oil, brake fluids and transmission fluids.

**Add: "WET" SIGNED:** Indicates the plan(s) is/are signed with originally applied ink applied to the print or copy of the plans or other submittal documents submitted with an application for permit. Also refer to the definition of "signed."

**Add: WILDLAND — URBAN INTERFACE FIRE AREAS:** All of that area within the City as defined by the Fire code official of the City of Oakland, including, but not limited to, the area north and east of the following boundaries:

BEGINNING at the MacArthur Freeway at the San Leandro border to Foothill Boulevard; west on Foothill Boulevard to Stanley; west on Stanley to 98th Avenue; south on 98th Avenue to Steams Avenue; west on Steams to Burr Street; west on Burr Street to Thermal; west on Thermal to 8500 Thermal; south at 8500 Thermal to MacArthur Boulevard; west on MacArthur Boulevard to 82nd Avenue; north on 82nd Avenue to Utah Street; west on Utah Street to Partridge Avenue; south on Partridge Avenue to Outlook Avenue; west on Outlook Avenue to Seminary Avenue; south on Seminary Avenue to MacArthur Boulevard; west on MacArthur Boulevard to Buell Street; north on Buell Street to Tompkins Avenue; west on Tompkins Avenue to End; straight line from Tompkins Avenue to Wisconsin Street; west on Wisconsin Street to Carlsen Street; west on Carlsen Street to Maple Avenue; south on Maple Avenue to Morgan Avenue; west on Morgan Avenue to Bamer; south on Bamer to Morgan Avenue; west on Morgan Avenue to Coolidge Avenue; North on

Coolidge Avenue to Alida Street; west on Alida Street to Lincoln Avenue; south on Lincoln Avenue to Tiffin Road; west on Tiffin Road to Whittle Avenue; west on Whittle Avenue to Fruitvale Avenue (Dimond Park); follow the southern and western boundary of Dimond Park to El Centro Road; west on El Centro Road to Dolores; west on Dolores to Park Boulevard; north on Park Boulevard to Piedmont boundary; Piedmont boundary to Mt. View Cemetery; northern boundary of Mt. View Cemetery to Clarewood Drive; west on Clarewood Drive to Broadway Terrace; south on Broadway Terrace to Margarido Drive; west on Margarido Drive to Lawton; west on Lawton to Broadway; north on Broadway to Keith Avenue; west on Keith Avenue to College Avenue; and north on College Avenue to the corporate limits of the City of Berkeley.

**Amend: WORKSTATION:** A defined space or independent principal piece of equipment using hazardous materials where a specific function, laboratory procedure or research activity occurs. Approved or listed hazardous materials storage cabinets, flammable liquid storage cabinets or gas cabinets serving a workstation are included as part of the workstation. A workstation is allowed to contain ventilation equipment, fire protection devices, electrical devices, and other processing and scientific equipment.

#### CHAPTER 4 - EMERGENCY PLANNING AND PREPARDNESS

**TABLE 405.2** – *Amend this Table 405.2 as follows:*

#### FIRE AND EVACUATION DRILL, FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B <sup>a</sup>	Annually	Employees
Group E	See §3.13 Title 19, CCR	
Group I	See §3.09 Title 19, CCR	

Group R-1	See §3.09 Title 19, CCR	
Group R-2;	Quarterly	All occupants
High-rise Fires	See §3.09 Title 19, CCR	

- a. Group B Fires having an occupant load of 500 or more persons.
- b. Applicable to Group R-2 college and university Fires only.
- c. Applicable to high-rise office Fires only.

**Section 408. Use And Occupancy-Related Requirements.** - *Amend this section 408 as follows:*

***Amend:* 408.9 Group R-2 Occupancies.** Group R-2 occupancies, including College and Universities, shall comply with the requirements of Sections 408.9.1 through 408.9.4 and Sections 401 through 406.

***Add:* 408.9.5 First Emergency Evacuation Drill.** The first emergency evacuation drill of each school year shall be conducted within 10 days of the beginning of classes.

***Add:* 408.9.6 Time of Day.** Emergency evacuation drills shall be conducted at different hours of the day or evening, during the changing of classes, when the school is at assembly, during the recess or gymnastic periods, or during other times to avoid distinction between drills and actual fires. In Group R2 College and university buildings, one required drill shall be held during hours after sunset or before sunrise.

***Amend:* 408.11.1.2 Revisions.** The lease plans shall be revised annually or as often as necessary to keep them current.

## Chapter 5 - FIRE SERVICE FEATURES

### Section 503. Fire Apparatus Access Roads - *Amend this section 503 as follows:*

**Amend: 503.2.1. Dimensions.** Fire apparatus access roads shall meet the requirements outline in Tables land 2 and for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of 13 feet 6 inches (4,115 mm).

**Amend: 503.3. Marking, Fire Lanes.** Where necessary to maintain adequate emergency vehicle access to buildings or fire apparatus access roads, the Fire code official may establish designated "Fire Lanes." Designated Fire Lanes shall comply with section 503.3.1 and 503.3.2 with markings or signs containing the words "NO PARKING-FIRE LANE."

The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced when necessary to provide adequate visibility.

~~**Amend: 503.4. Obstruction of fire apparatus access road:** Fire apparatus access roads shall not be obstructed in any manner, which includes parking of vehicles. The minimum width and clearances established by Section 503.2.1 or as applicable, Appendix Section D105, shall be maintained at all times.~~

**Add: 503.6.1.** Where permitted, an automatic security gates that crosses fire department access roadways, shall be equipped with an approved infrared receiver and key override switch approved by the Fire code official.

**Add: 503.6.2.** Manual security gates shall be equipped with an approved key box.

### Section 504 - Access to Building Openings and Roofs – *Amend this section 504 as follows:*

**Add: 504.5. Access Control Devices.** When access control devices including bars, grates, gates, electric or magnetic locks or similar devices, which would inhibit rapid fire department emergency access to the Fire Department, are installed, such devices shall be approved by the Fire code official. All access control devices shall be provided with an approved means for deactivation or unlocking by the fire department. Access control devices shall also comply with Chapter 10 Egress.

**Add: Fire Standard. 504.6 Roof Guardrails at Interior Courts.** Roof openings into interior courts that are bounded on all sides by fire resistive construction shall be protected with guardrails. The top of the guardrail shall not be less than 42 inches in height above the adjacent roof surface that can be walked on. Intermediate rails shall be designed and spaced such that a 4-inch diameter sphere cannot pass through.

**Exception:** Where the roof opening is greater than 600 square feet in area.

**Section 506 - Key Boxes** - Amend this section 506 as follows:

**Add: 506.3** Emergency information boxes. When an occupancy contains storage of hazardous materials that exceed the exempt amounts listed in Chapter 50 of the California Fire Code, or the occupancy is required by the Fire code official to have available on site pre-fire plans, the Fire code official may require an approved emergency information box be installed on the premises for the storage of such information. The emergency information box shall be installed in an approved location and the enclosed information shall be updated, annually or as changes dictate, by the occupant.

**Section 507 - Fire Protection Water Supplies** – Amend this section 507 is as follows:

**Amend: 507.5.1** Distribution of fire hydrants. Fire hydrants shall be nominally spaced every 500 linear feet in residential areas comprised of single-family dwellings. In commercial or industrial areas, or in residential areas containing condominiums, townhouses, or apartments, fire hydrants shall be nominally spaced every 300 feet. The chief may require that fire hydrants be placed at closer intervals to conform to street intersections, unusual street curvatures, or fire-flow requirements. Divided streets shall have hydrants on both sides of the street and shall, where applicable, be installed in alternate or staggered positions so that hydrants will not be directly across from each other.

**Delete:** Exceptions:

**Add: 507.5.7** Hydrants. The chief is authorized to determine the types of hydrants acceptable for installation. In areas where public or private water mains are not available for the provision of required fire flow, the Fire code official may require that water supply for firefighting is provided in accordance with the most current addition of NFPA Standard #1142, (Standard on Water Supplies for Suburban and Rural Fire Fighting)

**Add: 507.5.8** Hydrant Identification. All fire hydrants shall be identified with a reflective, raised, blue pavement marker installed in the centerline of public and private roadways perpendicular to the location of the hydrant. Fire hydrants shall also be painted in accordance with the standard detail issued by the City of Oakland. Public and private hydrant shall be periodically painted to maintain rust protection and visibility.

**Sections 508 – Fire Command Center** – Amend this section 508 as follows:

**Amend: 508.1.3** Size. The fire command center shall be a minimum of 200 square feet (19 m<sup>2</sup>) in area with a minimum dimension of 10 feet (3048 mm).

**Exception:** In buildings four (4) or more stories in height, but not classified as a “high-rise” by the California Building Code, the fire command center shall be a minimum of 96 square feet (9 m<sup>2</sup>) with a minimum dimension of 8 feet (2438mm).

*Amend: 508.1.6 Ventilation.* The fire command center shall be provided with an independent ventilation or air-conditioning system.

*Add: Exception:* In buildings four (4) or more stories in height, but not classified as a high-rise by the California Building Code

## CHAPTER 6 BUILDING SERVICES AND SYSTEMS

### Section 603 Fuel Fire Appliances – *Amend this section 603 as follows:*

*Amend: 603.4 Portable Unvented Heaters.* Portable unvented fuel fired heating equipment shall be prohibited in occupancies in Groups A, E, I, R-1, R-2, R-2.1, R-3, R-3.1 and R-4. Use of portable unvented heaters in all other occupancy Groups and any outside location shall be approved by the Fire code official.

### Section 605 Electrical Equipment, Wiring, and Hazards - *Amend this section 605 as follows:*

*Add: 605.12 Immersion Heaters.* All electrical immersion heaters used in dip tanks, sinks, vats and similar operations shall be provided with approved over-temperature controls and low liquid level electrical disconnects. Manual reset of required protection devices shall be provided.

### Section 608 Stationary Storage Battery Systems – *Amend this section 608 as follows:*

*Add: 608.6.2.1 Failure of Ventilation System.* Failure of the ventilation system shall automatically disengage the charging system.

## CHAPTER 9 FIRE PROTECTION SYSTEMS

### Section 903 Automatic Sprinkler Systems - *Amend this section 903 as follows:*

*Amend: 903.2.* Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Exceptions:

1. Automatic fire sprinkler protection for fixed guideway transit systems shall be as per Section 903.2.17.
2. Canopies over motor vehicle fuel dispensing facilities when constructed in accordance with Section 406.7.2 of the 2013 California Building Code.
3. Temporary construction trailers, less than 1,650 sq ft, on-site less than one year and 20' from property lines, building, structures and combustibles.



4. The following detached Group U occupancies: Barns, fences more than 6 feet high, grain silos accessory to residential occupancies, green houses, gazebos or similar structures accessory to residential occupancies, livestock shelters, retaining walls, tool or storage sheds, stables, tanks, towers
5. Detached Group U occupancies housing dumpsters or refuse containers with floor areas of 500 sq. ft. or less are exempt from installation of automatic fire extinguishing systems.
6. Detached one-story Group U occupancies housing dumpsters or refuse containers with floor area up to 1500 sq ft are exempt from installation of automatic fire extinguishing systems provided all of the following requirements are met:
  - a. Building is constructed to Type IV, Type V 1-Hour, or a higher fire-resistive construction, and
  - b. Minimum five-foot setback to property line and ten-foot setback to any other building on the site is maintained.
7. Airport Control Towers (see 903.2.11.3 exception #1)
8. Parking shade structures or solar trellises when constructed of non-combustible materials, set back from property lines and separated from buildings in accordance with the California Building Code.

**Add: 903.2.1 Group A and B.** An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A and B occupancies.

**Add: 903.2.1.1 Group A-1.** An automatic sprinkler system shall be provided throughout Group A-1 occupancies.

**Add: 903.2.1.2 Group A-2.** An automatic sprinkler system shall be provided throughout Group A-2 occupancies.

**Add: 903.2.1.3 Group A-3.** An automatic sprinkler system shall be provided throughout Group A-3 occupancies.

**Add: 903.2.1.4 Group A-4.** An automatic sprinkler system shall be provided throughout Group A-4 occupancies.

**Add: 903.2.1.5 Group A-5.** An automatic sprinkler system shall be provided throughout Group A-5 occupancies.

**Add: 903.2.2 Ambulatory care facilities.** An automatic sprinkler system shall be provided throughout Ambulatory care facilities.

**Add: 903.2.3 Group E.** Except as provided for in Sections 903.2.3.1 for a new public school campus and 907.2.29 (fire alarm and detection) for modernization of an existing public school campus building(s), an automatic sprinkler system shall be provided for Group E occupancies.

**Add: 903.2.4 Group F.** An automatic sprinkler system shall be provided throughout all buildings containing Group F occupancies.

**Add: 903.2.5 Group H.** An automatic sprinkler system shall be provided throughout all buildings containing Group H occupancies.

**Add: 903.2.5.1 Pyroxylin plastics.** An automatic sprinkler system shall be provided throughout all buildings, portions thereof, where cellulose nitrate film or proxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45kg)

**Add: 903.2.6 Group I.** An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

**Add: 903.2.7 Group M.** An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy.

**903.2.8 Group R.** An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

**Add: 903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy.

**Add: 903.2.10 Group S-2.** An automatic sprinkler system shall be provided throughout buildings classified as parking garages in accordance with Section 406.4 of the California Building Code or where located beneath other groups.

**Add: 903.2.10.1 Commercial Parking Garages.** An automatic sprinkler system shall be provided throughout buildings used for the storage of commercial trucks, buses, and cars.

**Add: 903.2.11 Specific building areas and hazards.** In all occupancies, an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Sections 903.2.11.1 through 903.2.11.6.

**Add: 903.2.11.1 Stories without openings.** An automatic sprinkler system shall be installed throughout every story or basement without openings.

**Amend: 903.2.18 Group U private garages and carports accessory to Group R-3 occupancies.** Carports and attached garages, accessory to Group R-3 occupancies, shall be protected by residential fire sprinklers in accordance with this section. Residential fire sprinklers shall be connected to, and installed in accordance with, an automatic residential fire sprinkler system that complies with section R313 of the California Residential Code or with NFPA 13-D. Fire sprinklers shall be residential or quick response sprinklers, designed to provide a minimum density of .05 gpm/ft<sup>2</sup> over the area of the garage and/or carport, but not to exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions with respect to sprinkler placement.

**Deleted:** Exception

**Amend:** 903.2.20 Additions to Group A, B, E, F, H, I, L, M, R, S, and certain miscellaneous group U occupancies. For additions to existing Group A, B, E, F, H, I, L, M, R, S, and U occupancies not exempted in 903.2, an automatic fire extinguishing system (AFES) shall be required throughout the entire building when one of the following thresholds is exceeded. For purposes of floor area calculations, Group U (private garages or similar) occupancies shall be included in the floor area calculation.

1. The combined floor area of the existing building plus the addition exceeds 3,600 square feet.
2. The addition exceeds 500 square feet.
3. The addition increases the floor area of the existing building by 50%. The increase in floor area shall be calculated cumulatively from July 1, 1999.

Exception: The existing portion of a one or two story building with no basement does not require automatic fire extinguishing systems when the following conditions are met:

- (a) The addition is protected by an AFES.
- (b) The addition and the existing structure are separated with fire walls, have required protection, and fire rated openings and construction is in accordance with the California Building Code based on Type of Occupancy and Construction type.
- (c) Assembly, Education, Institutional and Multi-Family Residential occupancies install an underwriter laboratory certified and National Fire Protection Association Standard 72 compliant fire alarm system.

**Add:** 903.2.21 Additions to existing R-3 occupancies. For additions to R-3 occupancies, an automatic fire extinguishing system (AFES) shall be required throughout the entire building when one of the following thresholds is exceeded. For purposes of floor area calculations, Group U (private garages or similar) occupancies shall be included in the floor area calculation:

1. The combined floor area of the existing building plus the addition exceeds 3,600 square feet, or
2. The addition increases the floor area of the existing structure by 50%.

Exception: The entire residence including the addition does not require an AFES when the following conditions are met:

- (a) The approved addition is greater than 500 square feet and the cumulative floor area is 3,600 square feet or less and an approved local, hard wired or similarly configured, fire alarm and smoke detection system are installed throughout the existing structure and the addition

- (b) No Planning or Building Department variances or exceptions are needed to accommodate the addition.
- (c) Exception (a) may be used only once for the first addition or conversion of existing space to habitable space occurring after January 1, 2008.

**Add: 903.2.22 Repair/Retrofit.** All occupancies except Group U occupancies exempted in 903.2 damaged during a fire or natural disaster shall require an automatic fire-extinguishing system to be installed in the entire structure. Retrofit criteria shall be as follows:

1. All installations of automatic fire extinguishing systems and signaling devices shall comply with the then current code.
2. Any occupancy that has been damaged as a result of a fire or natural disaster, except as otherwise noted, shall be retrofitted with an automatic fire extinguishing system to the entire building and structure in accordance with the following criteria:
  - a. When the estimated value of repair is less than 50 percent (50%) of the replacement value of the structure, the damaged portion(s) may be restored to their pre-damaged condition.
  - b. When the estimated value of repair is 50 percent (50%) or more of the replacement value of the structure, the entire building shall be retrofitted with an automatic fire extinguishing system.

**Add: 903.2.23 Retrofit for Essential Services Facilities.** When the estimated value of repair contained in the engineering evaluation is more than thirty percent (30%) of the replacement value of the structure, the entire building shall be retrofitted with an automatic fire extinguishing system.

**Add: 903.2.23 Retrofit for Historic Buildings or Structures.** The minimum criteria for retrofit of Historic Buildings or Structures shall be in accordance with the California Code of Regulations and the State of California Historic Building Code, shall apply.

Where conflicts exist between the standards contained herein and the State of California Historic Building Code, the Historic Building Code shall govern.

**Amend: 903.3.1.2. NFPA 13R in Group R Occupancies.** Automatic sprinkler system in group R occupancies up to and including 4 stories in height shall be permitted to be installed throughout in accordance with NFPA 13R as amended in Chapter 80 and as follows.

The sprinkler system shall include protection in the following areas: garages, carports, bathrooms, concealed spaces, closets, water heater closets, laundry rooms, attic spaces, under walkways, or overhangs, balconies or decks greater than four feet in depth, at each floor under stair landing that is wholly or partially enclosed, and other areas where deemed necessary by the Fire code official and the Building Official to protect the

public health and safety.

**Amend: 903.3.1.3.1 NFPA 13D in Group R-3 Occupancies.** An automatic fire sprinkler system shall be installed in all Group R-3 occupancies including garages, detached garages over 500 square feet, and other attached rooms.

When an Automatic Fire Extinguishing System is required, the system in R-3 occupancies up to 12,000 square feet may be installed to a modified NFPA 13D standard as follows:

A modified NFPA 13D system shall include areas such as; garages, carports, bathrooms, concealed spaces, closets, water heater closets, laundry rooms and attic spaces, under walkways, overhangs or balconies over four feet in depth, at each floor under stair landing that is wholly or partially enclosed; and meet the following requirements:

1. A one-inch water meter or larger may be required to meet AFES hydraulic calculations.
2. For new residences over 5,000 square feet, hydraulic calculations shall be required for all sprinkler heads in the most remote fire area up to a maximum of four sprinkler heads. For new residences of less than 5,000 square feet, hydraulic calculations shall be required for all sprinkler heads in the most remote area up to a maximum of two sprinkler heads.
3. Five gallons per minute for domestic use shall be added at the domestic and fire water supply split point.
4. In residences with high, sloped, beamed, soffited, cathedral ceilings or smooth flat ceilings greater than nine feet, additional fire sprinkler head discharge calculations may be required.
5. Copper pipe shall not be used with steel or iron riser assemblies.
6. Each system shall have a single control valve arranged to shut off both the domestic and sprinkler systems.
7. In residential sprinkler projects, the Fire code official with the concurrence of the building official may grant alternate methods of construction.

Exceptions. This section does not apply to:

- (a) Any structure exempt from permit requirements per the currently adopted California Building Code or the California Fire Code is exempt from the requirements for fire sprinklers.
- (b) All exterior decks without roof covering adjacent to R-3 occupancies, unless otherwise required by the Fire code official or building official. This exemption shall not apply to R-3 occupancies in the Wildland Urban Interface Area.

**Add: 903.3.5.3** Underground water supply. The location of the fire department connection, post indicator valve and the routing of the water supply for multi-building facilities shall be evaluated on an individual basis.

**Add: 903.3.7** Fire department connections. A fire department connection shall be provided for all buildings, or when the Fire code official deems them necessary. The location of fire department connections shall be approved by the Fire code official.

**Add: 903.3.8** Floor control valves. Floor control valves and waterflow detection assemblies shall be installed at each floor. An exterior control valve shall be provided for all buildings except Group R, Division 3 occupancies.

**Exception:** Group R-2 without an interior hallway, R-3 and R-3.1.

**Add: 903.3.9** Underground corrosion protection. A corrosion protection plan, including details and specifications for all ferrous underground piping must be designed and provided by a qualified corrosion engineer.

**Exception:** underground piping systems with cathodic protection on all ferrous piping.

**Add: 903.3.10** Control Valves. Control valves and flow switches shall be installed on each floor. All control valves shall be monitored by a Central Station.

**Add: 903.3.11** Stages. All stages shall be provided with an automatic fire extinguishing system. Such systems shall be provided throughout the stage and in dressing rooms, workshops, storerooms and other accessory spaces contiguous to such stages.

**Add: 903.3.12** Stairs. An automatic sprinkler system shall be installed in enclosed usable space below or over a stairway in all occupancies.

**Add: 903.3.13** Speculative Warehousing. The sprinkler system shall be designed to discharge at the following rates:

1. Where clear ceiling heights are 20 feet or less, 0.33 gallons per minute, per square foot, over a minimum area of 3,000 square feet.
2. Where clear ceiling heights are between 20 and 30 feet, 0.495 gallons per minute, per square foot, over a minimum area of 3,000 square feet.
3. Where clear ceiling heights are over 30 feet, 0.60 gallons per minute, per square foot, over a minimum of 3,000 square feet.

**Add: 903.3.14** Modification to existing automatic fire extinguishing system (AFES). All changes or additions to any existing automatic fire sprinkler systems or underground fire lines must comply with all regulations within this section.

**Amend: 903.4.1** Monitoring. Alarm, supervisory and trouble signals shall be distinctly and descriptively different, transmitted to the control panel, local annunciator and automatically transmitted to an approved central station, remote supervising station, or

proprietary supervising station as defined in NFPA 72. When approved by the Fire code official, signals may sound an audible signal at a constantly attended location.

**Deleted:** Exceptions

**Amend: 903.4.2 Alarms.** Approved audible devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarms devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided inside each tenant space in a normally occupied area and on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall activate the building fire alarm system.

**Group R-3** occupancies shall have local alarms. Local alarms shall be of sufficient intensity to be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

1. An exterior alarm bell shall be installed on the front 1/3 of the building facing public or private street access.
2. Interior alarm devices (minimum DCBL rating of 88) may be recessed into the wall, centrally located between sleeping rooms in hallway.
3. Such alarms shall be audible in all sleeping rooms with doors closed.

**Add: 903.4.4 Central Station Monitoring.** An approved central alarm monitoring company shall mean approved by the State Fire code official or a nationally recognized testing laboratory. All alarm transmitting devices and systems shall be installed and maintained in accordance with nationally recognized standards.

Valve supervision, water-flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote station or proprietary supervising station as defined by national standards or, when approved by the building official with the concurrence of the Fire code official, sound an audible signal at a consistently attended location.

**Exceptions:**

- (a) Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be supervised.
- (b) Monitored systems are not required for Group R, Division 3 occupancies.

**Section 904 Alternative Automatic Fire-Extinguishing Systems – this section 904 is amended as follows:**

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

**Add: 904.11.7 Ventilating Hood and Duct Systems and Air Handlers.** All buildings

with an existing or new fire alarm/sprinkler monitoring control panel shall interconnect all hood and duct systems and air handlers over 2000 cfm to the alarm panel. The hood and duct shall report to a central station as a fire condition. Air handlers shall report as a supervisory or trouble condition when the building is provided with fire sprinklers. They shall report as an alarm in buildings without fire sprinklers.

**Section 905 Standpipes** *this section 906 is amended as follows:*

**Add: 905.1.1 Hose connections.** All Class I, II and III standpipe outlets in multi-storied buildings or buildings with basements shall be installed on intermediate landings between floors.

**Amend: 905.3.2 Group A.** Class I standpipes shall be provided in Group A buildings having an occupant load exceeding 1,000 persons.

Exceptions: deleted

**Section 907 Fire Alarm and Detection Systems** *this section 907 is amended as follows:*

**Amend: 907.1.3 Equipment.** Systems and their components shall be California State Fire code official listed and approved for the purpose for which they are installed. The building owner shall provide a serially numbered certificate from an approved nationally recognized testing laboratory for all fire alarm systems indicating that the system has been installed in accordance with the approved plans and specification and meets minimum NFPA Standards. A copy shall be provided to the fire code official's office at no cost to the city. Certification shall be required for all new systems to be installed after January 1, 1996. Existing systems that can no longer be serviced or maintained or those that are deemed problematic shall also be required to obtain this certification within 12 months of notification.

**Add: 907.1.3.1 Remote Annunciator Location.** All new or existing systems that require a new Fire Alarm Control Panel shall have a remote annunciator at the main entrance. It shall be visible to approaching emergency personnel.

**Amend: 907.2 Where required-new buildings and structures.** An approved fire alarm system installed in accordance with the provisions of this code and NFP A 72 shall be provided in new buildings and structures in accordance with Sections 907.2.] through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or water-flow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers or automatic fire alarm systems, a single fire alarm box shall be installed at a location approved by the enforcing agency.

*Exceptions:*

I. - deleted



**Add: 907.2.5.2** All new H occupancies, or existing H occupancies that require a new fire alarm control panel, and that have a local detection systems(s) shall interconnect, or otherwise configure, the system(s) to report to a Central Station as a fire condition or alarm condition. The report shall be in nomenclature easy to understand (e. g. Water, not H2O).

**Add: 907.2.13.3 Air Replenishment Systems** All high-rise buildings shall install an approved rescue air replenishment system or equivalent equipment or systems as determined by the Fire code official to provide a fresh air supply for firefighting self-contained breathing air tanks. Such system or equipment shall provide an adequate pressurized fresh air supply through a protected permanent piping system or other acceptable means to the Fire code official for the replenishment of portable life sustaining air equipment carried by fire department, rescue and other personnel in the performance of their duties. Location of access stations shall be provided on every third floor. Installation and maintenance of such air replenishment systems, shall be in accordance with the requirements of the Fire code official. Each property owner shall be responsible for maintaining such equipment or systems including annual air sampling and testing.

**Exception:** A dedicated fire service elevator is provided.

**Amend: 907.3 Fire safety functions.** Automatic fire detectors utilized for the purpose of performing fire safety functions shall be connected to the building's fire alarm control unit where a fire alarm or sprinkler monitoring system is installed. Detectors shall, upon actuation, perform the intended function and activate the alarm notification appliance or activate a visible and audible supervisory signal at a constantly attended location when approved by the Fire code official. In buildings not required to be equipped with a fire alarm or sprinkler monitoring system, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72.

**Amend: 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 or sprinkler monitoring is installed. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a central station or when approved by the Fire code official 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.

**Exceptions:**

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the building's notification appliances.
2. In occupancies, not required to be equipped with a fire alarm or sprinkler monitoring system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location and shall be identified as air duct detector supervisory.

**Amend: 907.5.2.3.4 Group R-2.** In Group R-2 occupancies required by Section 907 to have a fire alarm system, all dwelling units and sleeping units shall be provided with the capacity to support visible alarm notification appliances. Each dwelling unit and sleeping unit shall be pre-wired and the control unit/notification power supply shall have the current capacity to support the cumulative number of appliances.

**Amend: 907.6.2 Power Supply.** The primary and secondary power supply for the alarm system shall be provided in accordance with NFPA 72.

**Amend: 907.6.3 Zones.** Fire alarm and sprinkler monitoring systems shall be divided into zones where required by this section. For the purposes of annunciation and notification, zoning shall be in accordance with Fire Department Standard 25A.

**Amend: 907.6.5 Monitoring.** Fire alarm system shall transmit distinctly and descriptively different alarm, supervisory and trouble signals to an approved supervising station in accordance with NFPA 72 or when approved by the Fire code official, shall sound an audible signal at a constantly attended location.

**Section 914 Fire Protection Based On Special Detailed Requirements Of Use and Occupancy** – *this section 914 is amended as follows:*

**Add: 914.2.3 Emergency voice/alarm communication system.** Covered malls buildings shall be provided with an emergency voice/alarm communication system. Emergency voice/alarm communication system serving a mall, required or otherwise shall be accessible to the fire department. The system shall be provided in accordance with Section 907.5.2.2.

**CHAPTER 11 CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS**

**Section 1103 Fire Safety Requirements For Existing Buildings** - *this section 1103 is amended as follows:*

**Amend: 1103.7.6 Group R-2.** An automatic and manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-2 occupancies more than 2 stories in height or more than 16 dwelling or sleeping units.

Exceptions:

1. deleted

**CHAPTER 27 SEMICONDUCTOR FABRICATION**

**Section 2703 General Safety Provisions** - *this section 2703 is amended as follows:*

**Amend: 2703.13.2 Gas detection system operation.** The continuous gas detection system shall be capable of detecting the presence of a gas at or below the permissible exposure limit in occupiable areas. In unoccupied areas, the continuous gas detection system shall be capable of detecting the presence of gas at or below ½ IDLH (or 0.05

LC 50 if no established IDLH).

## CHAPTER 28 LUMBERYARDS AND WOODWORKING FACILITIES

Section 2807 Storage of Wood Chips, Logged Materials Associated with Timber and Lumber Production Facilities— *this section 2807 is amended as follows:*

Add: 2807.6 Fire Protection Water Supply Systems. An approved fire protection water supply and hydrant system suitable for the fire hazard involved shall be provided for open storage yards and processing areas. Hydrant systems shall be installed in accordance with NFPA 24

Section 2808 Storage And Processing of Wood Chips, Logged Material, Fines, Compost and Raw Product Associated with Yard Waste and Recycling Facilities – *this section 2808 is amended as follows.*

~~Add: 2807.6 Fire Protection Water Supply Systems. An approved fire protection water supply and hydrant system suitable for the fire hazard involved shall be provided for open storage yards and processing areas. Hydrant systems shall be installed in accordance with NFPA 24~~

Add: 2808.11 Fire Protection Water Supply Systems. An approved fire protection water supply and hydrant system suitable for the fire hazard involved shall be provided for open storage yards and processing areas. Hydrant systems shall be installed in accordance with NFPA 24.

## CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

Section 3304 PRECAUTIONS AGAINST FIRE - *this section 3304 is amended as follows:*

Add: 3304.8 Fire Walls. When walls are required to be of fire resistive construction, the wall construction shall be completed (with all openings protected) immediately after the occupancy is sufficiently weather-protected at the location of the wall(s).

Section 3311 MEANS OF EGRESS - *this section 3311 is amended as follows:*

Amend: 3311.1 Stairways Required. Each level above the first story in new multi-story buildings shall be provided with at least two usable exit stairways after the floor decking is installed. The stairways shall be continuous and discharge to grade level. Stairways serving more than two floor levels shall be enclosed (with openings adequately protected) after exterior walls/windows are in place. Exit stairs in new

and in existing, occupied buildings shall be lighted and maintained clear of debris and construction materials at all times.

**Exception:** For new multi-story buildings, one of the required exit stairs may be obstructed on not more than two contiguous floor levels for the purposes of stairway construction (i.e., installation of gypsum board, painting, flooring, etc.).

**Add:** Section 3311.1.1 **Required Means of Egress.** All new buildings under construction shall have a least one unobstructed means of egress. All means of egress shall be identified in the Fire Protection Plan.

## CHAPTER 49 - WILDLAND-URBAN INTERFACE AREAS

### Section 4902 Definitions - *Amend this section 4902 as follows*

**Amend:** **LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE** means those areas designated by the City of Oakland as Very High Fire Hazard Severity Zones in Oakland Municipal Code Chapter 15.12.

**Amend:** **WILDLAND-URBAN INTERFACE FIRE AREA** is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with Public Resources Code Sections 4201 through 4204 and Government Code Sections 51176 through 51189, and includes those areas designated by the City of Oakland as Very High Fire Hazard Severity Zones in Oakland Municipal Code, Chapter 15.12.

### Section 4903 Fire Protection Plans - *Amend this section 4903 as follows:*

**Add:** **4903.1 General.** When required by the Fire code official, a fire protection plan shall be prepared.

**Add:** **4903.2 Content.** The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, defensible space and vegetation management.

**Add:** **4903.3 Cost.** The cost of fire protection plan preparation and review shall be the responsibility of the applicant.

**Add:** **4903.4 Plan Retention.** The fire protection plan shall be retained by the Fire code official.

Section 4904 (Fire Hazard Severity Zones) of the 2013 California Fire Code is amended as follows

**Add: 3 General.** Very High Fire Hazard Severity Zones is all of that area within the City as defined by the Fire code official of the City of Oakland, including, but not limited to, the area north and east of the following boundaries:

**BEGINNING** at the MacArthur Freeway at the San Leandro boarder to Foothill Boulevard; west on Foothill Boulevard to Stanley; west on Stanley to 98th Avenue; south on 98th Avenue to Steams Avenue; west on Steams to Burr Street; west on Burr Street to Thermal; west on Thermal to 8500 Thermal; south at 8500 Thermal to MacArthur Boulevard; west on MacArthur Boulevard to 82nd Avenue; north on 82nd Avenue to Utah Street; west on Utah Street to Partridge Avenue; south on Partridge Avenue to Outlook Avenue; west on Outlook Avenue to Seminary Avenue; south on Seminary Avenue to MacArthur Boulevard; west on MacArthur Boulevard to Buell Street; north on Buell Street to Tompkins Avenue; west on Tompkins Avenue to End; straight line from Tompkins Avenue to Wisconsin Street; west on Wisconsin Street to Carlsen Street; west on Carlsen Street to Maple Avenue; south on Maple Avenue to Morgan Avenue; west on Morgan Avenue to Bamer; south on Bamer to Morgan Avenue; west on Morgan Avenue to Coolidge Avenue; North on Coolidge Avenue to Alida Street; west on Alida Street to Lincoln Avenue; south on Lincoln Avenue to Tiffin Road; west on Tiffin Road to Whittle Avenue; west on Whittle Avenue to Fruitvale Avenue (Dimond Park); follow the southern and western boundary of Dimond Park to El Centro Road; west on El Centro Road to Dolores; west on Dolores to Park Boulevard; north on Park Boulevard to Piedmont boundary; Piedmont boundary to Mt. View Cemetery; northern boundary of Mountain. View Cemetery to Clarewood Drive; west on Clarewood Drive to Broadway Terrace; south on Broadway Terrace to Margarido Drive; west on Margarido Drive to Lawton; west on Lawton to Broadway; north on Broadway to Keith Avenue; west on Keith Avenue to College Avenue; and north on College Avenue to the corporate limits of the City of Berkeley.

**Section 4906 Vegetation Management** - *this section 4906 is amended as follows:*

**Add: 4906.1.1** Scope, purpose and enforcement. Vegetation constituting a fire hazard shall be controlled according to Chapter 49 of this Code. At least one time annually the Fire code official shall cause a notice to be mailed to property owners advising them of potential conditions to be abated. Thereafter the Fire code official shall execute on-site inspections of properties within the Hazardous Fire Area Oakland for a determination of specific fire hazard conditions.

**Section 4907 Defensible Space** - *this section 4907 is amended as follows:*

**Add: 4907.1 Defensible Space.** Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining the Wildland-Urban Interface Fire Area and persons owning, leasing or controlling land adjacent to such buildings or structures, shall:

**Add: 4907.1.1** Maintain an effective defensible space by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet of structures.

**Exception:** Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.

**Add: 4907.1.2.** Maintain additional effective defensible space by removing brush, flammable vegetation and other combustible growth located 30 feet to 100 feet from such buildings or structures, when required by the Fire code official due to steepness of terrain or other conditions that would cause a defensible space of only 30 feet to be insufficient.

**Exception:** Grass and other vegetation located more than 30 feet from buildings or structures and less than 18 inches in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

**Add: 4907.1.3.** Remove portions of trees which extend within 10 feet of the outlet of a chimney.

**Add: 4907.1.4.** Maintain trees, adjacent to or overhanging a structure, free of deadwood; and

**Add: 4907.1.5.** Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

**Add: 4907.2 Corrective Actions.** The executive board is authorized to instruct the Fire code official to give notice to the owner of the property upon which conditions regulated by Section 4907.1 exist to correct such conditions. If the owner fails to correct such conditions, the executive body is authorized to cause the same to be done and make the expense of such correction a lien upon the property where such condition exists.

**Add: Section 4907.3. Access *is added as follows***

**Add: 4907.3.1 General.** Buildings and structures, or portions thereof, hereafter constructed or relocated into or within Wildland-Urban Interface Fire Areas shall be provided with fire apparatus access in accordance with this chapter.

**Add: 4907.3.2** Driveways. Driveways shall be provided when any portion of an exterior wall of the first story of a building is located more than 150 feet from a fire apparatus access road in accordance with 4907.3.2 .1 thm 4907.3.2 .8.

**Add: 4907.3.2 .1** Driveways shall be an all-weather surface and shall provide a minimum unobstructed width of 12 feet and a minimum unobstructed height of 13 feet 6 inches.

**Add: 4907.3.2 .2** Driveways in excess of 150 feet in length shall be provided with turnarounds.

**Add: 4907.3.2 .3** Driveways in excess of 200 feet in length and less than 20 feet in width shall be provided with tumouts in addition to turnarounds.

**Add: 4907.3.2 .4** A driveway shall not serve in excess of two dwelling units.

Exception: When such driveways meet the requirements for an access road in accordance with this chapter.

**Add: 4907.3.2 .5** Driveway turnarounds shall be in accordance with Fire Department standards.

**Add: 4907.3.2 .6** Driveways that connect with a road or roads at more than one point may be considered as having a turnaround if all changes of direction meet the radius requirements for driveway turnarounds.

**Add: 4907.3.2 .7** Driveway tumouts shall be an all-weather road surface at least 10 feet wide and 30 feet long. Driveway tumouts shall be located as required by the code official.

**Add: 4907.3.2 .8** Vehicle load limits shall be posted at both entrances to bridges on driveways and private roads. Design loads for bridges shall be established by the code official.

**Add: 4907.3** Fire Apparatus Access Roads. Fire apparatus access roads shall be all weather roads with a minimum width of 20 feet and a clear height of 13 feet 6 inches; and shall be designed in accordance with Fire Apparatus Access Roads Appendix D.

**Section 4908 Water Supply** *this new section 4908 is added as follows:*

**Add: 4908.1 General.** Buildings and structures, or portions thereof, hereafter constructed or relocated into or within Wildland-Urban Interface Fire Areas shall be provided with fire protection water supplies in accordance with this chapter.

**Exception:** Buildings containing only private garages, carports, sheds and agricultural buildings with a building area of not more than 500 square feet.

**Add: 4908.1.2 Water Sources.** The point at which a water source is available for use shall be located not more than 600 feet from all portions of the exterior walls of the building and be approved by the code official. The distance shall be measured along an unobstructed line of travel.

Water sources shall have a minimum usable water volume as determined by the adequate water supply needs in accordance with Section 4914.4. This water source shall be equipped with an approved hydrant. The water source shall be provided and maintained by a recognized water purveyor, mutual water company or water pumped from a well. The design, construction, location, water level maintenance, access, and access maintenance of manmade water sources shall be approved by the code official.

**Add: 4908.1.3 Hydrants.** All hydrants shall be designed and constructed in accordance with nationally recognized standards. The location and access shall be approved by the code official.

**Add: 4908.1.4 Adequate Water Supply.** Adequate fire protection water supplies shall be as follows:

- 1. One- And Two-Family Dwellings.** The required fire protection water supply for one-and two-family dwellings shall be in accordance with Appendix B. The water supply duration need not exceed 30 minutes.
- 2. Buildings Other Than One-And Two-Family Dwellings.** The water supply required for other than one-and two-family dwellings shall be in accordance with Appendix B.

**Exception:** The water supply duration need not exceed 2 hours.

**Add: 4908.1.5 Obstructions.** Access to all water sources required by this code shall be unobstructed at all times. The code official shall not be deterred or hindered from gaining immediate access to water source equipment, fire protection equipment or hydrants.

**Add: 4908.1.6 Identification.** Water sources, hydrants and fire protection equipment shall be clearly identified in a manner approved by the code official to identify location and to prevent obstruction by parking and other obstructions.



**Add: 4908.1.7 Testing And Maintenance.** Water sources, hydrants and other fire protection equipment required by this code shall be subject to periodic tests as required by the code official. All such equipment installed under the provisions of this code shall be maintained in an operative condition at all times and shall be repaired or replaced where defective. Additions, repairs, alterations and servicing of such fire protection equipment and resources shall be in accordance with approved standards.

**Add: 4908.1.8 Clearance of Fuel.** Defensible space shall be provided around water tank structures, water supply pumps and pump houses in accordance with Section 4907.

**Add: 4908.1.9 Standby Power.** Stationary water supply facilities within the Wildland-Urban Interface Fire Areas dependent on electrical power to meet adequate water supply demands shall provide standby power systems in accordance with the Electrical Code to ensure that an uninterrupted water supply is maintained. The standby power source shall be capable of providing power for a minimum of two hours.

**Exceptions:**

1. When approved by the Fire code official, a standby power supply is not required where the primary power service to the stationary water supply facility is underground.
2. A standby power supply is not required where the stationary water supply facility serves no more than one single-family dwelling.

**Section 4909. Automatic Fire Sprinkler System - this new section 4909 is added as follows:**

**Add: 4909.1 General.** Buildings and structures located in Very High Fire Severity Zones shall be provided with automatic fire sprinkler protection in accordance with this chapter.

**Add: 4909.2 New Facilities.** An approved automatic fire sprinkler system shall be provided throughout all new facilities located in the Wildland-Urban Interface Fire Areas

**Exception:** Accessory structures to single-family residences that are non-residential and that have a gross floor area of 500 square feet or less.

**Add: 4909.2.1 Existing Facilities.** An approved automatic fire sprinkler system shall be provided throughout all existing facilities/residential buildings located in the Wildland-Urban Interface Fire Areas when modifications are made that increase the gross floor area greater than 50% or when the modification exceeds 3,600 square feet, whichever is less.

**Exception:** One-time additions to existing occupancies made after January 1, 2008 that do not exceed 500 square feet in gross floor area.

**Section 4910. General Requirements For Suppression And Control - this new section 4910 is added as follows:**

**Section 4910. General Requirements For Suppression And Control – Add Section 4910 as follows:**

**Add: 4910 General**

**Add: 4910.1.1 Scope.** The provisions of this chapter establish general requirements applicable to new and existing properties located within the Wildland-Urban Interface Fire Areas.

**Add: 4910.1.2 Objective.** The objective of this Chapter is to provide necessary fire-protection measures to reduce the threat of wildfire in the Wildland-Urban Interface Fire Areas and improve the capability of controlling such fires.

**Add: 4910.2 Vegetation Control**

**Add: 4910.2.1 General.** Vegetation control shall comply with Sections 4910.2.2 through 4910.2.5.

**Add: 4910.2.2 Maintenance of Defensible Space**

**Add: 4910.2.2.1 General.** Defensible space required by Section 4910 shall be maintained in accordance with Section 4910.2.

**Add: 4910.2.2.2 Modified Area.** Non-fire-resistive vegetation or growth shall be kept clear of structures, in accordance with Section 4907, in such a manner as to provide a clear area for fire suppression operations.

**Add: 4910.2.2.3 Responsibility.** Persons owning, leasing, controlling, operating or maintaining structures are responsible for maintenance of defensible spaces. Maintenance of the defensible space shall include modifying or removing non-fire-resistive vegetation and keeping leaves, needles and other dead vegetative material regularly removed from roofs of structures.

**Add: 4910.2.2.4** Trees. Trees within the designated defensible space area shall be maintained in accordance with 4910.2.2.4.1 thru 4910.2.2.4.4

**Add: 4910.2.2.4 .1** Tree crowns extending to within 10 feet of any structure shall be pruned to maintain a minimum horizontal clearance of 10 feet.

**Add: 4910.2.2.4 .2** Portions of tree crowns that extend within 10 feet of the outlet of a chimney shall be pruned to maintain a minimum horizontal clearance of 10 feet.

**Add: 4910.2.2.4 .3** Trees within the defensible space shall be pruned to remove limbs located less than 6 feet above the ground surface.

**Add: 4910.2.2.4 .4** Deadwood and litter shall be regularly removed from trees.

**Add: 4910.3 Clearance of Brush or Vegetative Growth from Roadways.** The Fire code official is authorized to require areas within 10 feet on each side of portions of fire apparatus access roads and driveways to be cleared of non-fire-resistive vegetation growth.

**Exception:** Single specimens of trees, ornamental vegetative fuels or cultivated ground cover, such as green grass, ivy, succulents or similar plants used as ground cover, provided they do not form a means of readily transmitting fire.

**Add: 4910.3.1 Clearance of Brush and Vegetative Growth from Electrical Transmission and Distribution Lines.**

**Add: 4910.3.1.2 General.** Clearance of brush and vegetative growth from electrical transmission and distribution lines shall be in accordance with Section 4917.2.4.

**Exception:** Section 4917.2.4 does not authorize persons not having legal right of entry to enter on or damage the property of others without consent of the owner.

**Add: 4910.3.1.3 Support Clearance.** Persons owning, controlling, operating or maintaining electrical transmission or distribution lines shall provide a combustible free space consisting of a clearing not less than 10 feet in each direction from the outer circumference of such pole or tower during such periods of time as designated by the Fire code official.

Exception: Lines used exclusively as telephone, telegraph, messenger call, alarm transmission or other lines classed as communication circuits by a public utility.

**Add: 4910.2.4.3 Electrical Distribution and Transmission Line Clearances.**

**Add: 4910.2.4.3.1 General.** Clearances between vegetation and electrical lines shall be in accordance with 4717.2.4.3.

**Add: 4910.2.4.3.2 Trimming Clearance.** At the time of trimming, clearances not less than those established by Table 4910.2.4.3.2 shall be provided. The radial clearances shown below are minimum clearances that shall be established, at time of trimming, between the vegetation and the energized conductors and associated live parts.

*Add Table 4910.2.4.3.2 to read:*

**TABLE 4910.2.4.3.2  
MINIMUM CLEARANCES BETWEEN VEGETATION AND ELECTRICAL  
LINES  
AT TIME OF TRIMMING**

LINE VOLTAGE	MINIMUM RADIAL CLEARANCE FROM CONDUCTOR (feet)
2,400-72,000	4
72,001-110,000	6
110,001-300,000	10
300,001 or more	<u>15</u>

**Exception:** The Fire code official is authorized to establish minimum clearances different than those specified by Table 4910.2.4.3.2 when evidence substantiating such other clearances is submitted to and approved by the code official.

**Add:** 4910.2.4.3.3 **Minimum Clearance to Be Maintained.** Clearances not less than those established by Table 4910.2.4.3.2 shall be maintained during such periods of time as designated by the code official. The site-specific clearance achieved, at time of pruning, shall vary based on species growth rates, the utility company-specific trim cycle, the potential line sway due to wind, line sag due to electrical loading and ambient temperature and the tree's location in proximity to the high voltage lines.

**Exception:**

The code official is authorized to establish minimum clearances different than those specified by 4910.2.4.3.2 when evidence substantiating such other clearances is submitted to and approved by the code official.

*Add Table 4910.2.4.3.3 to read:*

**TABLE 4910.2.4.3.3, MINIMUM CLEARANCES BETWEEN VEGETATION AND ELECTRICAL LINES TO BE MAINTAINED**

<b>LINE VOLTAGE</b>	<b>MINIMUM CLEARANCE (inches)</b>
750-35,000	6
35,001-60,000	12
60,001-115,000	19
115,001-230,000	30.5
230,001-500,000	115

**Add: 4910.2.4.3.4 Electrical Power Line Emergencies.** During emergencies, the power utility shall perform the required work to the extent necessary to clear the hazard. An emergency can include situations such as trees falling into power lines, or trees in violation of Table 4910.2.4.3.3.

**Add: 4910.2.5 Correction of Condition.** The Fire code official is authorized to give notice to the owner of the property on which conditions regulated by Section 4717.2 exist to correct such conditions. If the owner fails to correct such conditions, the legislative body of the jurisdiction is authorized to cause the same to be done and make the expense of such correction a lien on the property where such condition exists.

**Add: 4910.3 Access Restrictions**

**Add: 4910.3.1 Restricted Entry To Public Lands.** The Fire code official is authorized to determine and publicly announce when Wildland-Urban Interface Fire Areas shall be closed to entry and when such areas shall again be opened to entry. Entry on and occupation of Wildland-Urban Interface Fire Areas, except public roadways, inhabited areas or established trails and campsites that have not been closed during such time when the Wildland-Urban Interface Fire Areas is closed to entry, is prohibited.

**Exceptions:**

1. Residents and owners of private property within Wildland-Urban Interface Fire Areas and their invitees and guests going to or being on their lands.
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 Wildland Firefighting Service.

**Add: 4910.3.2 Trespassing On Posted Private Property.**

**Add: 4910.3.2.1 General.** When the Fire code official determines that a specific area within a Wildland-Urban Interface Fire Areas 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 restricted or closed until changed conditions warrant termination of such restriction or closure. Such areas shall be posted in accordance with Section 4910.3.2.2.

**Add: 4910.3.2.2 Signs.** Approved signs prohibiting entry by unauthorized persons and referring to this code shall be placed on every closed area.

**Add: 4910.3.2.3 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; authorized persons engaged in the operation and maintenance of necessary utilities such as electrical power, gas, telephone, water and sewer; and local, state and federal public officers and their authorized agents acting in the course of duty.

**Add: 4910.3.3 Use of Fire Roads and Defensible Space.** Motorcycles, motor scooters and motor vehicles shall not be driven or parked on, and trespassing is prohibited on, fire roads or defensible space beyond the point where travel is restricted by a cable, gate or sign, without the permission of the property owners. Vehicles shall not be parked in a manner that obstructs the entrance to a fire road or defensible space.

Exception: Public officers acting within their scope of duty. Radio and television aerials, guy wires thereto, and other obstructions shall not be installed or maintained on fire roads or defensible spaces, unless located 16 feet (4877 nun) or more above such fire road or defensible space.

**Add: 4910.3.4 Use of Motorcycles, Motor Scooters, Ultra light Aircraft and Motor Vehicles.** Motorcycles, motor scooters, ultra-light aircraft and motor vehicles shall not be operated within Wildland-Urban Interface Fire Areas, without a permit by the code official, except on clearly established public or private roads. Permission from the property owner shall be presented when requesting a permit.

**Add: 4910.3.5 Tampering With Locks, Barricades, Signs and Address Markers.** Locks, barricades, seals, cables, signs and address markers installed within Wildland-Urban Interface Fire Areas, by or under the control of the code official, shall not be tampered with, mutilated, destroyed or removed. Gates, doors, barriers and locks installed by or under the control of the code official shall not be unlocked.

**Section 4911. Ignition Source - this new section 4911 is added as follows:**

**Add: 4911. Ignition Source Control**

**Add: 4911.1 General.** Ignition sources shall be in accordance with Section 4911.

**Add: 4911.2 Objective.** Regulations in this section are intended to provide the minimum requirements to prevent the occurrence of wildfires.

**Add: 4911.3 Clearance from Ignition Sources.** Clearance between ignition sources and grass, brush or other combustible materials shall be maintained a minimum of 30 feet

**Add: 4911.4 Smoking.** When required by the code official, signs shall be posted stating NO SMOKING. No person shall smoke within 15 feet of combustible materials or non-fire-resistive vegetation.

**Exception:** Places of habitation or in the boundaries of established smoking areas or campsites as designated by the code official.

**Add: 4911.4.1 Equipment and Devices Generating Heat, Sparks or Open Flames.** Equipment and devices generating heat, sparks or open flames capable of igniting nearby combustibles shall not be used in Wildland-Urban Interface Fire Areas without a permit from the code official.

**Exception:** Use of approved equipment in habituated premises or designated campsites that are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

**Add: 4911.4.2 Fireworks.** Fireworks shall not be used or possessed in Wildland-Urban Interface Fire Areas

**Add: 4911.4.3 Outdoor Fires.**

**Add: 4911.4.3.1 General.** No person shall build, ignite or maintain any outdoor fire of any kind for any purpose in or on any Wildland-Urban Interface Fire Areas, except by the authority of a written permit from the code official.

**Exception:** Outdoor fires within inhabited premises or designated campsites where such fires are in a permanent barbecue, portable barbecue, outdoor fireplace or grill and are a minimum of 30 feet from any combustible material or non-fire-resistive vegetation.

**Add: 4911.4.3.2 Permits.** Permits shall incorporate such terms and conditions that will reasonably safeguard public safety and property. Outdoor fires shall not be built, ignited or maintained in or on hazardous fire areas under the following conditions:

1. When high winds are blowing, or when a Red Flag weather condition has been officially declared.



2. When a person 17 years old 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.

**Add: 4911.4.5 Reckless Behavior.** The code official is authorized to stop any actions of a person or persons if the official determines that the action is reckless and could result in an ignition of fire or spread of fire.

**Add: 4911.4.6 Planting Vegetation Under Or Adjacent To Energized Electrical Lines.** No vegetation shall be planted under or adjacent to energized power lines that, at maturity, shall grow within 10 feet (3048 mm) of the energized conductors.

**Section 4912. Control of Storage** – *this new section 4912 is added as follows:*

**Add: 4912. Control of Storage**

**Add: 4912.1 General.** In addition to the requirements of the California Fire Code, storage and use of the materials shall be in accordance with Section 4912.2.

**Add: 4912.1.2 Combustible Materials.**

**Add: 4912.1.2.1 General.** Outside storage of combustible materials such as, but not limited to, wood, rubber tires, fire materials or paper products shall comply with the other applicable sections of this code and this section.

**Add: 4912.1.3 Individual Piles.** Individual piles shall not exceed 5,000 square feet of contiguous area. Piles shall not exceed 50,000 cubic feet in volume or 10 feet in height.

**Add: 4912.1.4 Separation.** A clear space of at least 40 feet shall be provided between piles. The clear space shall not contain combustible material or non-fire-resistive vegetation.

**Add: 4912.1.5 Storage of Firewood and Combustible Materials**

**Add: 4912.1.5.1 General.** Firewood and combustible material shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. When required by the code official, storage of firewood and combustible material stored in the defensible space shall be located a minimum of 20 feet from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet.

**Add: 4912.1.5.2 Storage for Off-Site Use.** Firewood and combustible materials not for consumption on the premises shall be stored so as to not pose a hazard.

**Section 4913. Dumping** *this new section 4913 is added as follows:*

**Add: 4913. Dumping**

**Add: 4913.1 Waste Material.** Waste material shall not be placed, deposited or dumped in Wildland-Urban Interface Fire Areas or in, on or along trails, roadways or highways or against structures.

**Exception:** Approved public and approved private dumping areas.

**Add: 4913.2 Ashes and Coals.** Ashes and coals shall not be placed, deposited or dumped in combustible containers in the Wildland-Urban Interface Fire Areas.

**Exceptions:**

1. In the hearth of an established fire pit, camp stove or fireplace.
2. In a noncombustible container with a tight fitting lid, which is kept or maintained in a safe location not less than 10 feet from non-fire-resistive vegetation or structures?
3. Where such ashes or coals are buried and covered with 1 foot of mineral earth not less than 25 feet from non-fire-resistive vegetation or structures.

**Section 4914. Protection of Pumps and Water Storage Facilities** – *this new section 4914 is added as follows:*

**Add: 4914. Protection of Pumps and Water Storage Facilities**

**Add: 4914.1 General.** The reliability of the water supply shall be in accordance with Section 4717.7.

**Add: 4914.1.2 Objective.** The intent of this section is to increase the reliability of water storage and pumping facilities and to protect such systems against loss from intrusion by fire.

**Add: 4914.1.3 Fuel Modification Area.** Water storage and pumping facilities shall be provided with a defensible space of not less than 30 feet clear of non-fire-resistive vegetation or growth around and adjacent to such facilities.

Persons owning, controlling, operating or maintaining water storage and pumping systems requiring this defensible space are responsible for clearing and removing non-fire-resistive vegetation and maintaining the defensible space on the property owned, leased or controlled by said person.

**Add: 4914.1.4 Trees.** Portions of trees that extend to within 30 feet of combustible portions of water storage and pumping facilities shall be removed.

**Add: 4914.1.5 Protection of Electrical Power Supplies.** When electrical pumps are used to provide the required water supply, such pumps shall be connected to a standby power source to automatically maintain electrical power in the event of power loss. The standby power source shall be capable of providing power for a minimum of two hours in accordance with the Electrical Code.

**Exception:** A standby power source is not required where the primary power services to pumps are underground as approved by the code official.

**Section 4915. Protection of Pumps and Water Storage Facilities** *Amend this section as follows:*

**Add: 4915. Land Use Limitations**

**Add: 4915.1 General.** Temporary fairs, carnivals, public exhibitions and similar uses must comply with all other provisions of this code in addition to enhanced ingress and egress requirements.

**Add: 4915.1.2 Objective.** The increased public use of land or structures in Very High Fire Hazard Severity Zone also increases the potential threat to life safety. The provisions of this section are intended to reduce that threat.

**Add: 4915.1.3 Permits.** Temporary fairs, carnivals, public exhibitions or similar uses shall not be allowed in a designated Very High Fire Hazard Severity Zone, except by permit from the code official. Permits shall incorporate such terms and conditions that will reasonably safeguard public safety and property.

## **CHAPTER 50 HAZARDOUS MATERIALS – GENERAL PROVISIONS**

**Section 5003 General Requirements** *this section 5003 is amended as follows:*

**Add: 5003.1.3.1 Toxic, Highly Toxic, Moderately Toxic Gases and Similarly Used or Handled Materials.** The storage, use and handling of toxic, highly toxic and moderately toxic gases in amounts exceeding Table 3704.2 or 3704.3 shall be in accordance with this chapter and Chapter 37. Any toxic, highly toxic or moderately toxic material that is used or handled as a gas or vapor shall be in accordance with the requirements for toxic, highly toxic or moderately toxic gases. **Add: 2703.1.5 Secondary Containment Requirements.** A containment system shall be required for all hazardous materials, which are liquids or solids at normal temperature, and pressure where a spill is determined to be a plausible event and where such an event would endanger, people, property or the environment. Construction shall be substantial, capable of safely and securely containing a sudden release without discharge. Design criteria shall be performance oriented and constructed of physically and chemically compatible materials to resist degradation and

provide structural and functional integrity for a period of time reasonably necessary to ensure detection, mitigation, and repair of the primary system. Monitoring of secondary containment shall be in accordance with Section 2704.2.2.5.

**Amend:** 2703-2-2-1- 5003.2.2.1 Design and Construction. Piping, tubing, valves, fittings and related components used for hazardous materials shall be in accordance with the following:

1. Piping, tubing, valves, fittings and related components shall be designed and fabricated from materials compatible with the material to be contained and shall be of adequate strength and durability to withstand the pressure, structural and seismic stress, and exposure to which they are subject.
2. Piping and tubing shall be identified in accordance with ASME A13.1 to indicate the material conveyed.
3. Readily accessible manual valves or automatic remotely activated fail-safe emergency shutoff valves shall be installed on supply piping and tubing at the following locations:
  - a. The point of use.
  - b. The tank, cylinder or bulk use.
4. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be identified and the location shall be clearly visible accessible and indicated by means of a sign.
5. Backflow prevention or check valves shall be provided when the backflow of hazardous materials could create a hazardous condition or cause the unauthorized discharge of hazardous materials.
6. Where gases or liquids having a hazard ranking of:
  - Health hazard Class 3 or 4,
  - Flammability Class 4, or
  - Reactivity Class 4,

as defined in the National Fire Protection Association Standard 704 is contained within pressurized piping above 15 pounds per square inch gauge (psig)(103 Kpa), an approved means of leak detection, emergency shutoff and excess flow control shall be provided, and:

- a) Where the piping originates from within a hazardous material storage room or area, the excess flow control shall be located within the storage room or area,
- b) Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical, and

**Exception:** Piping for inlet connections designed to prevent backflow.

- c) Piping for use in pressure relief devices.

7. Secondary containment or equivalent protection from spills shall be provided for piping for liquid hazardous materials and for highly toxic and toxic corrosive gases above threshold quantities listed in Tables 3704.2 and 3704.3. Secondary containment includes, but is not limited to double walled piping.

**Exceptions:**

1. Secondary containment is not required for toxic corrosive gases if the piping is constructed of inert materials.

2. Piping under sub-atmospheric conditions if the piping is equipped with an alarm and fail-safe-to-close valve activated by a loss of vacuum.

8. Expansion chambers shall be provided between valves whenever the regulated gas may be subjected to thermal expansion. Chambers shall be sized to provide protection for piping and instrumentation and to accommodate the expansion of regulated materials.

**Amend:** 5003.2.2.2 Additional Regulation for Supply Piping for Health Hazard Materials. Supply piping and tubing for gases and liquids having a health hazard ranking of 3 or 4 in accordance with ASME B31.3 and the following:

1. Piping and tubing utilized for the transmission of toxic, highly toxic, or highly volatile corrosive liquids and gases shall have welded or brazed connections throughout except for connections within an exhausted enclosure if the material is a gas, or an approved method of drainage or containment is provided for connections if the material is a liquid.

2. Piping and tubing shall not be located within corridors, within any portion of a means of egress required to be enclosed in fire-resistance-rated construction or in concealed spaces in areas not classified as Group H Occupancies.

**Add:** 5003.2.10 Fire Protection for Workstations. When the building is protected by an automatic fire protection system, an approved fire protection system in accordance with Section 2703.10 shall be provided for all combustible (plastic) workstations where hazardous materials are dispensed, stored or used.

*Exception:* Internal fire protection is not required for Biological Safety Cabinets that carry NSF/ANSI certification and where aggregate quantities of flammable liquids in use or storage within the cabinet do not exceed 500ml.

The chief may approve alternate automatic fire-extinguishing systems. Activation of such systems shall deactivate the related processing equipment. An alternative automatic fire-extinguishing system other than automatic fire sprinkler heads may be installed where:

1. In process equipment that operates at temperatures exceeding 932 degrees F (500 degrees C).
2. In exhaust ducts 10 inches (254 mm) or less in diameter for flammable gas storage cabinets that are part of a workstation.

Exception: Piping and tubing within the space defined by the walls of corridors and the floor or roof above or in concealed space above other occupancies when installed in accordance with Section 415.8.6.3 of the California Fire Code as required for Group H, Division 5 Occupancies.

3. All primary piping for toxic, highly toxic and moderately toxic gases shall pass a helium leak test of  $1 \times 10^{-9}$  cubic centimeters/second where practical, or shall pass testing in accordance with an approved, nationally recognized standard. Tests shall be conducted by a qualified "third party" not involved with the construction of the piping and control systems.

**Amend:** 5003.3.1 Unauthorized Discharges. When hazardous materials are released in quantities reportable under state, federal or local regulations or when there is release or a threatened release that presents a threat to health, property or the environment, the Fire Code Official shall be notified immediately in an approved manner and the following procedures required in accordance with Sections 2703.3.1.1 through 2703.3.1.4.

**Add:** 5003.5.2 Ventilation Ducting. Product conveying ducts for venting hazardous materials operations shall be labeled with the hazard class of the material being vented and the direction of flow.

**Add:** 5003.5.3 "H" Occupancies. In "H" occupancies, all piping and tubing may be required to be identified when there is any possibility of confusion with hazardous materials transport tubing or piping. Flow direction indicators are required.

**Amend:** 5003.5.1 Markings. Individual containers, cartons or packages shall be conspicuously marked or labeled in an approved manner. Rooms or cabinets containing compressed gases shall be conspicuously labeled: COMPRESSED GAS. Product conveying ducts for venting hazardous materials operations shall be labeled with the hazard class of the material being vented and the direction of flow.

**Add:** 5003.9.11 Monitoring. Liquid and solid hazardous materials storage or use systems must be monitored on a regular or continuous basis. A written monitoring plan must be submitted for approval by the chief and must be included in the Hazardous Materials Business Plan. Monitoring methods may include but are not limited to the following:

1. Visual inspection, no less than monthly (requires trained personnel and documentation).
2. Approved continuous leak detection and alarm system.

3. Any system which will provide continuous, reliable monitoring of the primary container(s) capable of alerting occupants to an alarm or trouble condition; all systems are subject to approval by the chief.

**Add: 5003.9.12 Spill Control for hazardous materials liquids.** Regardless of the exempt amounts and containment requirements in Chapter 50, all containers of liquid hazardous materials regulated by this or any other article shall be provided with an approved means to control spills. The spill control shall take into consideration the amount and hazard of the materials and the nature of the facility.

**Add: 5003.9.13 Secondary Containment requirements.** When deemed necessary to protect life safety, emergency responders, or the environment and regardless of the exempt amounts and secondary containment requirements in Chapter 50, the Fire code official, or his designee, may require containers of liquid, solid, or gaseous hazardous materials regulated by this or any other article to be provided with secondary containment in accordance with Section 5004.2.2.

If parts of this code differ in their requirements for secondary containment, the more stringent shall apply. The chief may require outside containment areas to be covered with a roof or canopy for protection from the environment.

**Section 5004 Storage - this section 5004 is amended as follows:**

**Amend: 5004.2.1 Spill control for hazardous materials liquids.** Rooms, buildings or areas used for the storage of hazardous materials in excess of their permit amount or fifty-five (55) gallons, whichever is less, shall be provided with spill control to prevent the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in outdoor locations shall be constructed to contain a spill from the largest single vessel by one of the following methods:

1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in outdoor locations.
2. Liquid-tight floors in indoor locations or similar areas in outdoor locations provided with liquid-tight raised or recessed sills or dikes.
3. Sumps and collection systems.
4. Other approved engineered systems.

Except for smfacing, the floors, sills, dikes, sumps and collection systems shall be constructed of noncombustible material, and the liquid-tight seal shall be compatible with the material stored. When liquid-tight sills or dikes are provided, they are not required at perimeter openings that are provided with an open-grate trench across the opening that connects to an approved collection system.

**Amend: 5004.2.2 Secondary containment for hazardous materials liquids and solids.** Buildings, rooms or areas used for the storage of hazardous materials liquids or

solids shall be provided with secondary containment in accordance with this section when the capacity of an individual vessel or the aggregate capacity of multiple vessels exceeds the following:

1. Liquids: Capacity of an individual vessel exceeds 55 gallons (208.2L) or the aggregate capacity of multiple vessels exceeds 1,000 gallons (3,785L); and
2. Solids: Capacity of an individual vessel exceeds 550 pounds (248.8 kg) or the aggregate capacity of multiple vessels exceeds 10,000 pounds (4,524.8 kg).

## **CHAPTER 56 EXPLOSIVES AND FIREWORKS**

Section 5601 General - *Amend this section 5601 as follows:*

**Amend: 5601.1** Scope. For explosives requirements, see Title 19 California Code of Regulations Chapter 10 and Section 5601.1.1 of this Chapter. For fireworks regulations and requirements, see Title 19 California Code of Regulations Chapter 6 and OMC Chapter 8.06.

### **Exceptions:**

1. The armed Forces of the United States, Coast Guard or National Guard.
2. Explosives in forms prescribed by the official United States Pharmacopoeia.
3. The possession, storage and use of small arms ammunition when packaged in accordance with DOT packaging requirements.
4. The use of explosive materials by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
5. Items preempted by federal regulations.

Section 5602 Local Restrictions – *this new section 5602 is added as follows:*

**Add: ~~3301-1-1~~ 5602.1** Explosives. The possession, manufacture, storage, sale, handling, and use of explosives are prohibited.

### **Exceptions:**

1. Possession, storage, handling and use of explosives for test and research purposes are allowed with permit and approval of the Fire Code Official.
2. Possession, storage, handling and use of squibs, explosive nuts or bolts and similar small quantity explosive devices are allowed with permit and approval of the Fire Code Official.

**Add: ~~3301-1-2~~ 5602.2** Fireworks. The possession, manufacture, storage, sale, handling, and use of fireworks, including those fireworks classified as Safe and Sane by the California State Fire Marshal, are prohibited.



**Exceptions:**

1. Storage, handling and use of fireworks and pyrotechnic special effects when used for public or proximate audience displays, motion picture, television, theatrical and group entertainment productions when handled and used by a licensed pyrotechnic operator in accordance with Title 19 of the California Code of Regulations and permitted in accordance with this Chapter.
2. Storage, handling and use of pyrotechnic special effects fireworks inside of occupancies equipped throughout with an approved fire sprinkler system, when used for proximate audience displays or special effects in theatrical, television, motion picture and group entertainment productions and when handled and used by a licensed pyrotechnic operator in accordance with Title 19 of the California Code of Regulations and permitted in accordance with this Chapter.

**Add: ~~3301.1-3~~ 5602.3 Model Rocketry.** The storage, handling, and use of model rockets shall be in accordance with Title 19 of the California Code of Regulations and as approved by the Fire Code Official.

**Add: ~~5601.1-3~~ 5602.4 Fireworks Display Permit.** No person shall store, handle or discharge fireworks and pyrotechnic special effects used for public or proximate audience displays, motion picture, television, theatrical and group entertainment productions outside or inside of buildings without first obtaining a permit from the Fire code official.

## **CHAPTER 57 FLAMMABLE AND COMBUSTIBLE LIQUIDS**

### **Section 5701 General - Amend this section 5701 as follows:**

**Add: 5701.4.1 Plans.** Plans shall be submitted with each application for a permit to store liquids outside of buildings in drums or tanks. The plans shall indicate the method of storage, quantities to be stored, distances from buildings and property lines, access ways, fire-protection facilities, and provisions for spill control and secondary containment.

All plans and specifications shall be prepared and wet stamped by a fire protection engineer, professional engineer, architect or similarly registered individual.

### **Section 5703 General Requirements - Amend this section 5703 as follows:**

**Add: 5703.6.12 Monitoring.** Flammable and combustible liquid storage or use systems must be monitored on a regular or continuous basis. A written monitoring plan must be submitted for approval by the chief and must be included in the Hazardous Materials Business Plan. Monitoring methods may include but are not limited to the following:

1. Visual inspection, no less than monthly.
2. Continuous leak detection and alarm system.
3. Any system which will provide continuous, reliable monitoring of the primary container(s) capable of alerting occupants to an alarm or trouble condition; all systems are subject to approval by the Fire code official.

**Section 5704 Storage** - Amend this section 5704 as follows:

**Add: 5704.2.7.5.9 Automatic Filling of Tanks.** Systems that automatically fill flammable or combustible liquid tanks shall be equipped with overfill protection, approved by the Fire code official that sends an alarm signal to a constantly attended location and immediately stops the filling of the tank. The alarm signal and automatic shutoff shall be tested on an annual basis and records of such testing shall be maintained on-site for a period of five (5) years.

**Section 5705 Dispensing, Use, Mixing, and Handling** - Amend this section 5705 as follows:

**Amend: 5705.3.7.5.3 Spill Control and Secondary Containment.** Spill control shall be provided in accordance with Section 5703.4 when flammable or combustible liquids are dispensed into containers or mixed or used in open containers or systems. Spill control and secondary containment shall be provided in accordance with Section 5703.4 when the capacity of an individual container exceeds 1.3 gallon (5L) or the aggregate capacity of multiple containers or tanks exceeds 5.3 gallons (20L).

**Amend: 5705.3.7.6.3 Spill Control and Secondary Containment.** Spill control shall be provided in accordance with Section 5703.4 when flammable or combustible liquids are dispensed, used or mixed. Spill control and secondary containment shall be provided in accordance with Section 5703.4 when the capacity of an individual container exceeds 55 gallons (208L) or the aggregate capacity of multiple containers or tanks exceeds 1,000 gallons (3785L).

**Chapter 60 - Highly Toxic and Toxic Compressed Gases**

**Section 6002 Definitions** - this section 6002 is amended as follows:

**Add: MODERATELY TOXIC GAS.** Moderately toxic gas is a chemical or substance that has a median lethal concentration (LC<sub>50</sub>) in air more than 2000 parts per million but not more than 5000 parts per million by volume of gas or vapor, when administered by continuous inhalation for an hour, or less if death occurs within one hour, to albino rats weighing between 200 and 300 grams each.

Maximum Threshold Quantity (Max TQ) is the maximum quantity of a moderately toxic or toxic gas, which may be stored in a single vessel before a more stringent

category of regulation is applied. The following equation shall be used to calculate the Max TQ:

$$\text{Max TQ (pounds)} = \text{LC}_{50} \text{ (ppm)} \times 2 \text{ lb.}$$

Gas Mixtures, the  $\text{LC}_{50}$  value for a gas mixture containing toxic, highly toxic or moderately toxic components shall be calculated using the formula in Appendix E, Section 103.1.3.1.

**Section 6004 Highly Toxic, Toxic and Moderately Toxic Gases Including Those Used as Refrigerants – this section 6004 is amended as follows:**

**Amend:** 6004.1 General. The storage and use of highly toxic and toxic compressed gases and those with health hazard rankings of 3 or 4 in accordance with NFPA 49 or NFPA704 shall comply with this section.

**Add:** 6004.1.1.4 Other areas of Group B, F, M, S or L occupancies. Storage, use, and handling of highly toxic and toxic compressed gases shall comply with the following:

1. When located inside, highly toxic and toxic compressed gases shall be permitted, stored or used only when located within approved gas cabinets, exhausted enclosures, or gas rooms. See also Sections 6004.1.2, 6004.1.3, and 6004.2.2.6.

**Exceptions:**

1.1 Cylinders of compressed gases with a health hazard ranking of 4 and with a capacity not exceeding 10 cubic feet at normal temperature and pressure (NTP) are allowed in gas cabinets or fume hoods.

1.2 Cylinders of compressed gases with a health hazard ranking of 3 and with a capacity not exceeding 20 cubic feet at normal temperature and pressure (NTP) are allowed in gas cabinets, fume hoods or approved tools designed for their use.

2. When located outside, and when approved by the Fire code official, highly toxic and toxic compressed gases shall be kept under a canopy in accordance with Section 6004.3.3.

**Add:** 6004.1.4 Automatic Shut-Off Valve. An automatic shut-off valve, which is of a fail-safe-to-close design, shall be provided to shut off the supply of highly toxic gases for any of the following:

1. Activation of a manual fire alarm system.
2. Activation of the gas detection system.
3. Failure of emergency power.
4. Failure of primary containment.

5. Seismic activity.
6. Failure of required ventilation.
7. Manual activation at an approved remote location.

**Add: 6004.1.5 Emergency Control Station.** Signals from emergency equipment used for highly toxic gases shall be transmitted to an emergency control station or other approved monitoring station, which is continually staffed by trained personnel.

**Add: 6004.1.6 Maximum Threshold Quantity.** Toxic gases stored or used in quantities exceeding the maximum threshold quantity in a single vessel per control area or outdoor control area shall comply with the additional requirements for highly toxic gases of Section 6004 of this code.

Moderately toxic gases stored or used in quantities exceeding the maximum threshold quantity. In a single vessel per control area or outdoor control area shall comply with the additional requirements for toxic gases of Section 6004 of this code.

**Add: 6004.1.7 Reduced Flow Valve.** All containers of materials other than lecture bottles containing Highly Toxic material and having a vapor pressure exceeding 29 psia shall be equipped with a reduced flow valve when available. If a reduced flow valve is not available, the container shall be used with a flow-limiting device. All flow limiting devices shall be part of the valve assembly and visible to the eye when possible; otherwise, they shall be installed as close as possible to the cylinder source.

**Add: 6004.1.8 Annual Maintenance.** All safety control systems at a facility shall be maintained in good working condition and tested not less frequently than annually. Maintenance and testing shall be performed by persons qualified to perform the maintenance and tests. Maintenance records and certifications shall be available to any representative of the Fire Department for inspection upon request.

**Add: 6004.1.9 Fire Extinguishing Systems.** Fires and covered exterior areas for storage and use areas of materials regulated by this Chapter shall be protected by an automatic fire sprinkler system in accordance with NFPA 13. The design of the sprinkler system for any room or area where highly toxic, toxic and moderately toxic gases are stored, handled or used shall be in accordance with Section 2704.5.

**Add: 6004.1.10 Local Gas Shut Off.** Manual activation controls shall be provided at locations near the point of use and near the source, as approved by the Fire code official. The Fire code official may require additional controls at other places,

including, but not limited to, the entry to the building, storage or use areas, and emergency control stations. Manual activated shut-off valves shall be of a "fail safe-to-close design."

**Add: 6004.1.11 Exhaust Ventilation Monitoring.** For highly toxic gases and toxic gases exceeding threshold quantities, a continuous monitoring system shall be provided to assure that the required exhaust ventilation rate is maintained. The monitoring system shall initiate a local alarm. The alarm shall be both visual and audible and shall be designed to provide warning both inside and outside of the interior storage, use, or handling area.

**Add: 6004.1.12 Emergency Response Plan.** If the preparation of an emergency response plan for the facility is not required by any other law, responsible persons shall prepare, or cause to be prepared, and filed with the Fire code official, a written emergency response plan. If the preparation of an emergency response plan is required by other law, a responsible person shall file a copy of the plan with the Fire code official.

**Add: 6004.1.13 Emergency Response Team.** Responsible persons shall be designated the on-site emergency response team and trained to be liaison personnel for the Fire Department. These persons shall aid the Fire Department in preplanning emergency responses, identifying locations where regulated materials are stored, handled and used, and be familiar with the chemical nature of such material. An adequate number of personnel for each work shift shall be designated.

**Add: 6004.1.14 Emergency Drills.** Emergency drills of the on-site emergency response team shall be conducted on a regular basis but not less than once every three months. Records of drills conducted shall be maintained.

**Add: 6004.1.15 Cylinder Leak Testing.** Cylinders shall be tested for leaks immediately upon delivery and again immediately prior to departure. Testing shall be approved by the Fire code official in accordance with appropriate nationally recognized industry standards and practices, if any. Appropriate remedial action shall be immediately undertaken when leaks are detected.

**Add: 6004.1.16 Inert Gas Purge System.** Gas systems shall be provided with dedicated inert gas purge systems. A dedicated inert gas purge system may be used to purge more than one gas, provided the gases are compatible. Purge gas systems inside buildings shall be located in an approved gas cabinet unless the system operates by vacuum demand.

**Add:** 6004.1.17 **Seismic Shutoff Valve.** An automatic seismic shut-off valve, which is of a fail safe-to-close design, shall be provided to shutoff the supply of highly toxic, toxic and moderately toxic gases with an LC<sub>50</sub> less than 3000 parts per million upon a seismic event within 5 seconds of a horizontal sinusoidal oscillation having a peak acceleration of 0.3G (1.47m/sec<sup>2</sup>) and a period of 0.4 seconds.

**Amend:** 6004.2 **Indoor Storage and Use.** The indoor storage or use of highly toxic and moderately toxic compressed gases shall be in accordance with Sections 6004.2.1 through 6004.2.2.10.3.3. The threshold quantity for highly toxic, toxic and moderately toxic gases for indoor storage and use are set forth in Table 6004.2.

**Add Table 6004.2 to read:**

Threshold Quantities for Highly Toxic, Toxic and Moderately Toxic Gases for Indoor Storage and Use	
Highly Toxic	0
Toxic	10 cubic feet
Moderately Toxic	20 cubic feet

**Amend:** 6004.2.1 **Applicability.** The applicability of regulations governing the indoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 6004.2.1.1 through 6004.2.1.3.

**Amend:** 6004.2.1.1 **Quantities Not Exceeding the Maximum Allowable Quantity per Control Area.** The indoor storage or use of highly toxic, and moderately toxic gases in amounts exceeding the threshold quantity per control area set forth in Table 6004.2 shall be in accordance with Sections 5001, 5003, 6001, 6004.1 and 6004.2.

**Amend:** 6004.2.2 **General Indoor Requirements.** The general requirements applicable to the indoor storage and use of highly toxic and toxic compressed gases shall be in accordance with Sections 6004.2.2.1 through 6004.2.2.10.3.

Moderately toxic gases with an LC<sub>50</sub> less than 3000 parts per million shall comply with the requirements for toxic gases in Sections 6004.2.2.1 through 6004.2.2.10.3

All other moderately toxic gases exceeding the threshold quantity shall comply with the requirements for toxic gases in Sections 6004.2.2.1 through 6004.2.2.7.

**Amend: 6004.2.2.7 Treatment Systems.** The exhaust ventilation from gas cabinets, exhausted enclosures, gas rooms and local exhaust systems required in Section 3704.2.2.4 and 3704.2.2.5 shall be directed to a treatment system. The treatment system shall be utilized to handle the accidental release of gas and to process exhaust ventilation. The treatment system shall be designed in accordance with Sections 3704.2.2.7.1 through 3704.2.2.7.5 and Section 505 of the California Mechanical Code.

**Exceptions:**

1. Highly toxic, toxic and moderately toxic gases storage. A treatment system is not required for cylinders, containers and tanks in storage when all of the following are provided:

- 1.1. Valve outlets are equipped with gas-tight outlet plug or caps.
- 1.2. Hand wheel-operated valves have handles secured to prevent movement.
- 1.3. Approved containment vessels or containment systems are provided in accordance with Section 3704.2.2.3.

**Amend: 6004.3 Outdoor Storage and Use.** The outdoor storage or use of highly toxic and moderately toxic compressed gases shall be in accordance with Sections 6004.3.1 through 6004.3.4. The threshold quantity for highly toxic, toxic and moderately toxic gases for outdoor storage and use are set forth in Table 6004.3.

**Add Table 6004.3 to read:**

Threshold Quantities for Highly Toxic, Toxic and Moderately Toxic Gases for Outdoor Storage and Use	
Highly Toxic	0
Toxic	10 cubic feet
Moderately Toxic	20 cubic feet

**Amend:** 6004.3.1 Applicability. The applicability of regulations governing the outdoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 6004.3.1.1 through 6004.3.1.3.

**Amend:** 6004.3.1.1 Quantities Not Exceeding the Maximum Allowable Quantity per Control Area. The outdoor storage or use of highly toxic and toxic gases in amounts exceeding the threshold quantity per control area set forth in Table 6004.3 shall be in accordance with Sections 5001, 5003, 6001, 6004.1, and 6004.3.

Moderately toxic gases with an LC<sub>50</sub> less than 3000 parts per million in amounts exceeding the threshold quantity in Table 6004.3 shall comply with the requirements for toxic gases in Sections 5001, 5003, 6001, 6004.1 and 6004.3.

Moderately toxic gases in amounts exceeding the threshold quantity in Table 6004.3 shall comply with the requirements for toxic gases in Sections 5001, 5003, 6001, 6004.1 and 6004.3.2.1 through 6004.3.2.5.

**Amend:** 6004.3.3 Outdoor Storage Weather Protection for Portable Tanks and Cylinders. Weather protection in accordance with Section 5004.13 and this section shall be provided for portable tanks and cylinders located outdoors and not within gas cabinets or exhausted enclosures. The storage area shall be equipped with an approved automatic sprinkler system in accordance with Section 903

## CHAPTER 80, REFERENCED STANDARDS

(a) The reference standards in Chapter 80 of the 2013 California Fire Code are amended as provided in this section.

**Amend:** (b) ~~NFPA 13-1013~~ is amended as follows:

**Amend:** 8.15.7.1. Sprinklers shall be installed under exterior roofs, canopies, balconies, decks, or similar projections exceeding 4 feet in depth.

**Delete** 8.16.1.5.1.1 – Deleted

**Amend:** 8.16.2.6.2 – Sprinkler drains shall discharge to the sanitary sewer, open planters having enough volume to contain the discharge, or bios well in accordance with OMC 13.16.

**Amend:** 8.17.2.4.6 – Fire department connection shall be located on each street of fire department access. When the fire department connection is located within 10 feet of the corner of a building adjacent to the fire department access, the fire department connection shall service both streets.

**Amend:** (c) ~~NFPA 13D-1013~~ is amended as follows:



**Amend:** 6.2. Water Supply Sources. When approved by the Fire code official and the requirements are met, the following water supply sources shall be considered to be acceptable by this standard.

1. A connection to a reliable waterworks system with or without an automatically operated pump
2. An elevated tank
3. A pressure tank designed to American Society of Mechanical Engineers (ASME) standards for the pressure vessel with a reliable pressure source.
4. A stored water source with an automatically operated pump.
5. A well with a pump sufficient capacity and pressure to meet the sprinkler system demand. The stored water requirement of 6.1.2 or 6.1.3 shall be permitted to be a combination of the water and the well (including the refill rate) plus the water in the holding tank if such tank can supply the sprinkler system.

**Amend:** 6.2.4 Where a water supply serves both domestic and fire sprinkler systems, 15 gpm shall be added to the sprinkler system demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

**Amend:** Figure A.6.2 (a, b, or c) is amended as follows:

Sprinkler control valve and mbber-faced check valve is not permitted and shall be replaced with a listed double check valve assembly as required by the 2013 California Plumbing Code, Chapter 6, Section 603

Figure A.6.3 (a, b, or c) Multipurpose Piping System is not permitted.

8.6.4 – *Deleted*

**Amend:** (d) NFPA 14-13 is amended as follows:

**Amend:** 6.3.7.1 System Water Supply valves, isolation control valves and other valves in fire mains shall be supervised in an approved manner in an open position by one of the following approved methods:

1. Where a building has a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:
  - (a) A central station, proprietary or remote supervising station.
  - (b) *deleted*
2. Where a building does not have a fire alarm system or a sprinkler monitoring

system installed, the valve shall be supervised by:

- (a) Locking the valves in the open position or
- (b) Sealing valves in an approved weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

(f) NFPA 24-~~10-13~~ is amended as follows:

Amend: 6.5.2.1 – *deleted*

*Add:* 10.6.3.1.1 Only ductile iron shall be installed within 5 feet of a foundation or a wall.

(h) NFPA 72-~~1013~~ is amended as follows: :

Amend: 23.8.5.1.2 – *Exception deleted*

(j) SFM is amended by adding:

*Add:* SFM- State Fire code official- Solar Photovoltaic Installation Guideline

Appendix D Fire Apparatus Access Roads is amended as follows::

*Add:* Appendix D **103.1.1 Fire Apparatus Access Standards**

Figure 1. Local Standards and Shared Access Facilities Design Standards

Figure 3A. Parking on One Side (No Turn-Out)

Figure 3B. Parking on One Side (With Turn-Out)

Figure 4. No Parking on Both Sides (Private Streets Only)

Figure 5. Fire Hydrant Spacing Dead-End Road

Figure 6. Fire Hydrant Spacing Through Road

Figure 7. Hammerhead Turnaround

Figure 8. "Y" Turnaround

Figure 9. "L" Turnaround

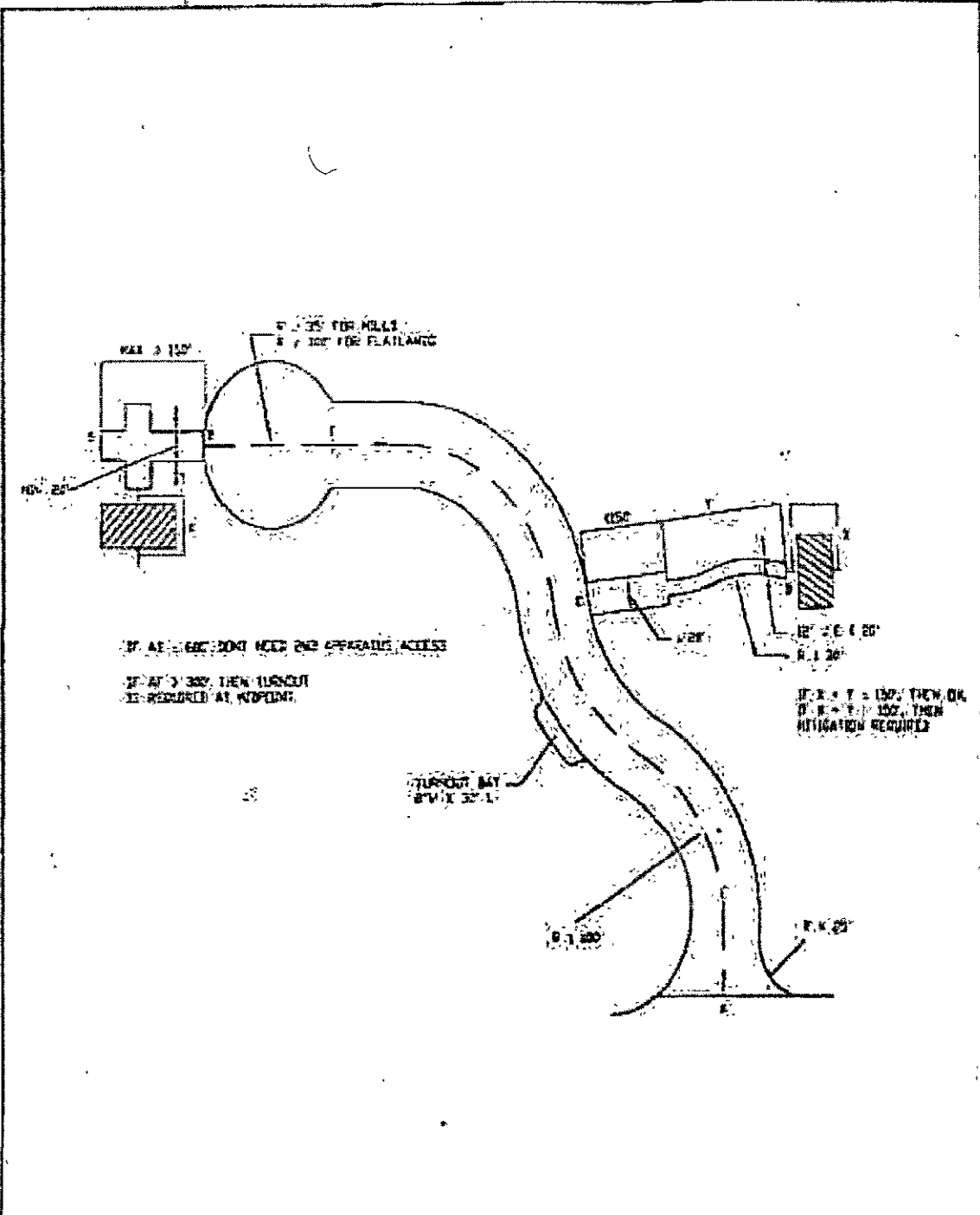
Figure 10. Maximum Run on Varying Slopes

Figure 11. Maximum Slopes on Varying Runs

**Section D103 - Minimum Specifications - *Figure D103.4 Dead-end Fire Apparatus Access Road Turnaround is amended as follows***


**Amend:** Table D103.4 Requirements for Dead-End Fire Apparatus Access Roads  
(Over 600 feet in residential, Special approval required.)

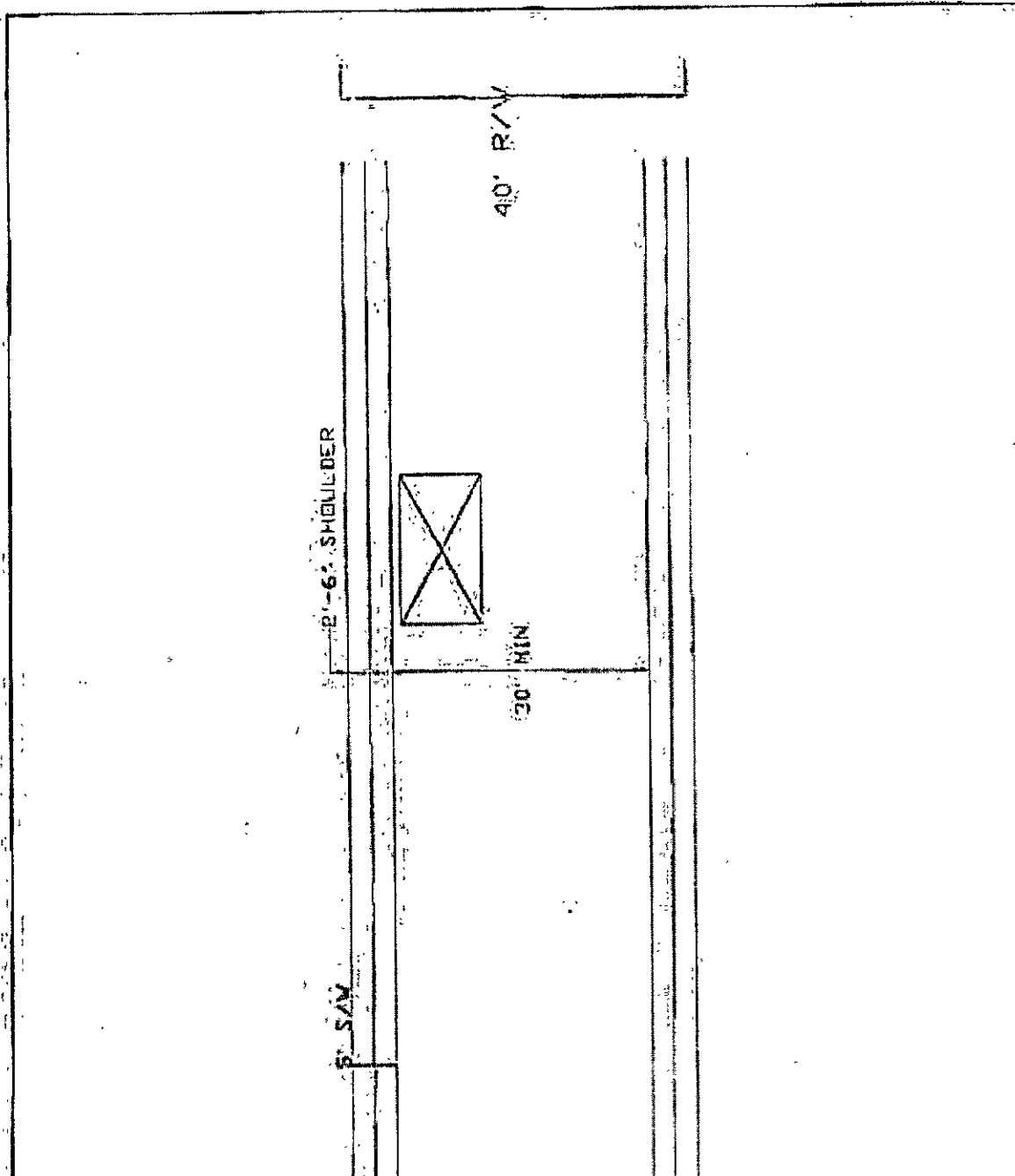
Over 500 feet, Special approval required.



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ADAPTED FROM 2007 CALIFORNIA FIRE CODE, APPENDIX D 103.1

CITY OF OAKLAND		FIRE PREVENTION BUREAU	
	FIRE APPARATUS ACCESS STANDARDS		
	EMERGENCY VEHICLE ACCESS EASEMENT		DEPUTY CHIEF    FIRE MARSHALL
	LOCAL STANDARDS AND SHARED ACCESS FACILITIES DESIGN STANDARDS		DATE: _____ REV: _____
			FIGURE 1



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CITY OF OAKLAND

FIRE PREVENTION BUREAU



FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT

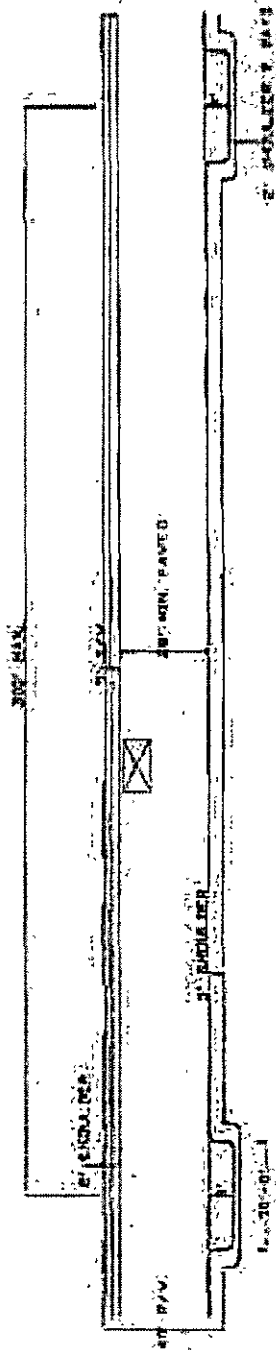
PARKING ON ONE SIDE (NO TURN-OUT)

DEPUTY CHIEF FIRE MARSHALL

DATE: \_\_\_\_\_

FIGURE 3A

REV: \_\_\_\_\_



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CITY OF OAKLAND

FIRE PREVENTION BUREAU

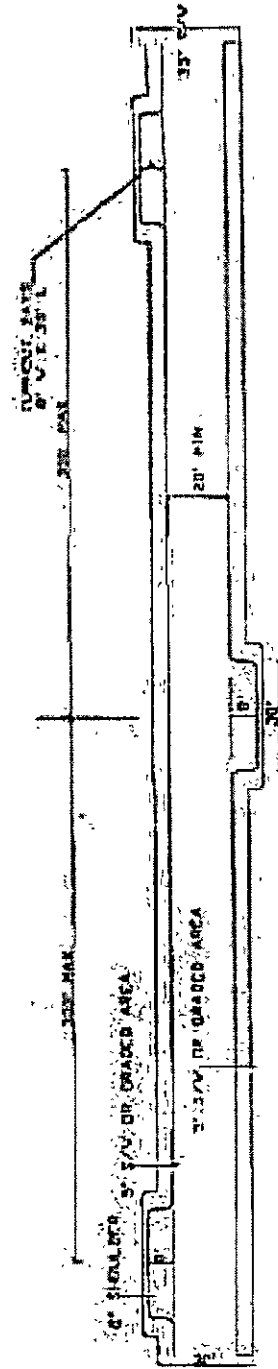


FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT

PARKING ON ONE SIDE (WITH TURNOUT)

DEPUTY CHIEF	FIRE MARSHALL
DATE: _____	FIG./REV. 10
REV. _____	



NOTE: A 3' S/W SHALL BE PLACED ON ONE SIDE OF THE STREET  
 OPPOSITE SIDE SHALL HAVE A 5' S/W OR 5' GRADED AREA  
 -ONLY APPROVED BY ENGINEER ON HILLSIDE AREAS; OTHERWISE,  
 20' MIN FOR PAVED ROADWAY

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ADAPTED FROM 2007 CALIFORNIA FIRE CODE - APPENDIX D 103.1

CITY OF OAKLAND

FIRE PREVENTION BUREAU



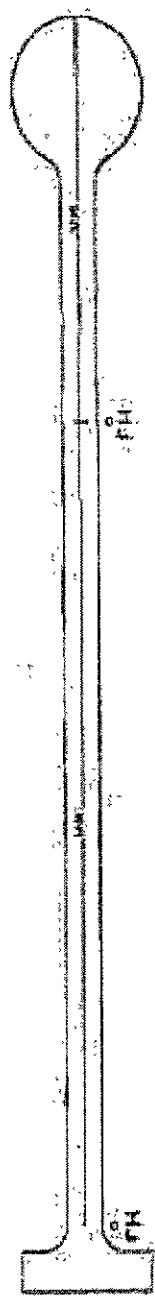
FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT  
 NO PARKING ON BOTH SIDES (PRIVATE  
 STREETS ONLY)

DEPUTY CHIEF: FIRE MARSHALL

DATE: \_\_\_\_\_  
 REV: \_\_\_\_\_

FIGURE 4



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 ADAPTED FROM 2007 CALIFORNIA FIRE CODE- APPENDIX D 103.1

CITY OF OAKLAND

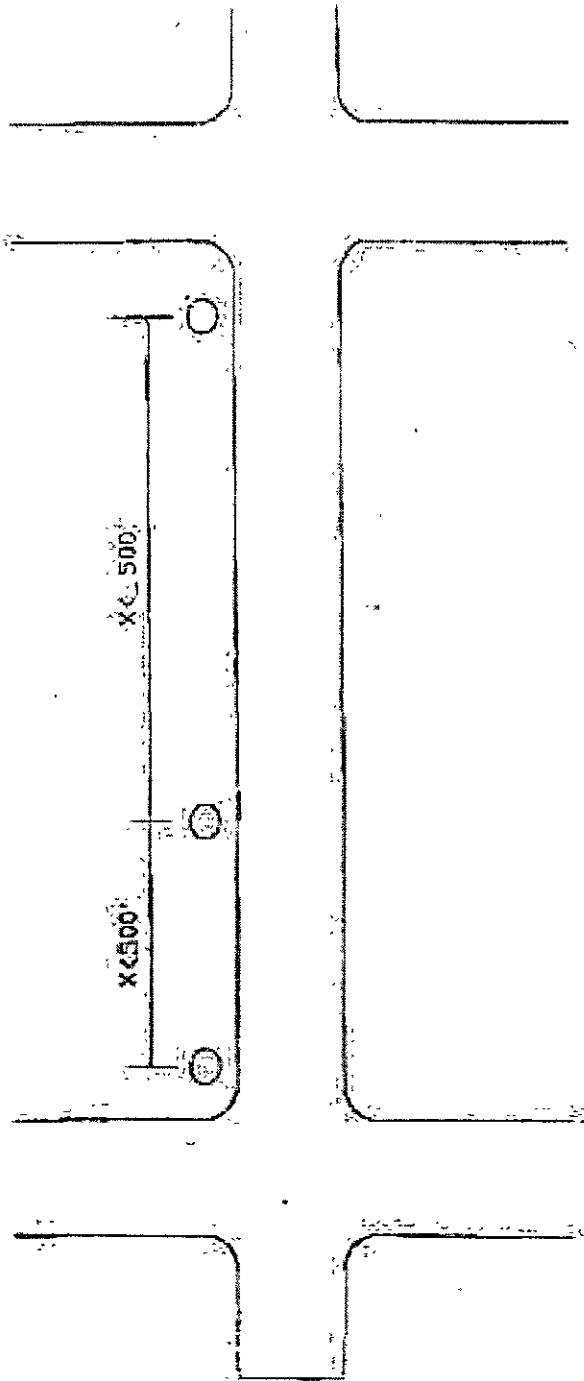
FIRE PREVENTION BUREAU



FIRE APPARATUS ACCESS STANDARDS  
 EMERGENCY VEHICLE ACCESS EASEMENT  
 FIRE HYDRANT SPACING DEAD-END ROAD

DEPUTY CHIEF	FIRE MARSHALL
DATE: _____	FIGURE 5
REV _____	





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CITY OF OAKLAND

FIRE PREVENTION BUREAU

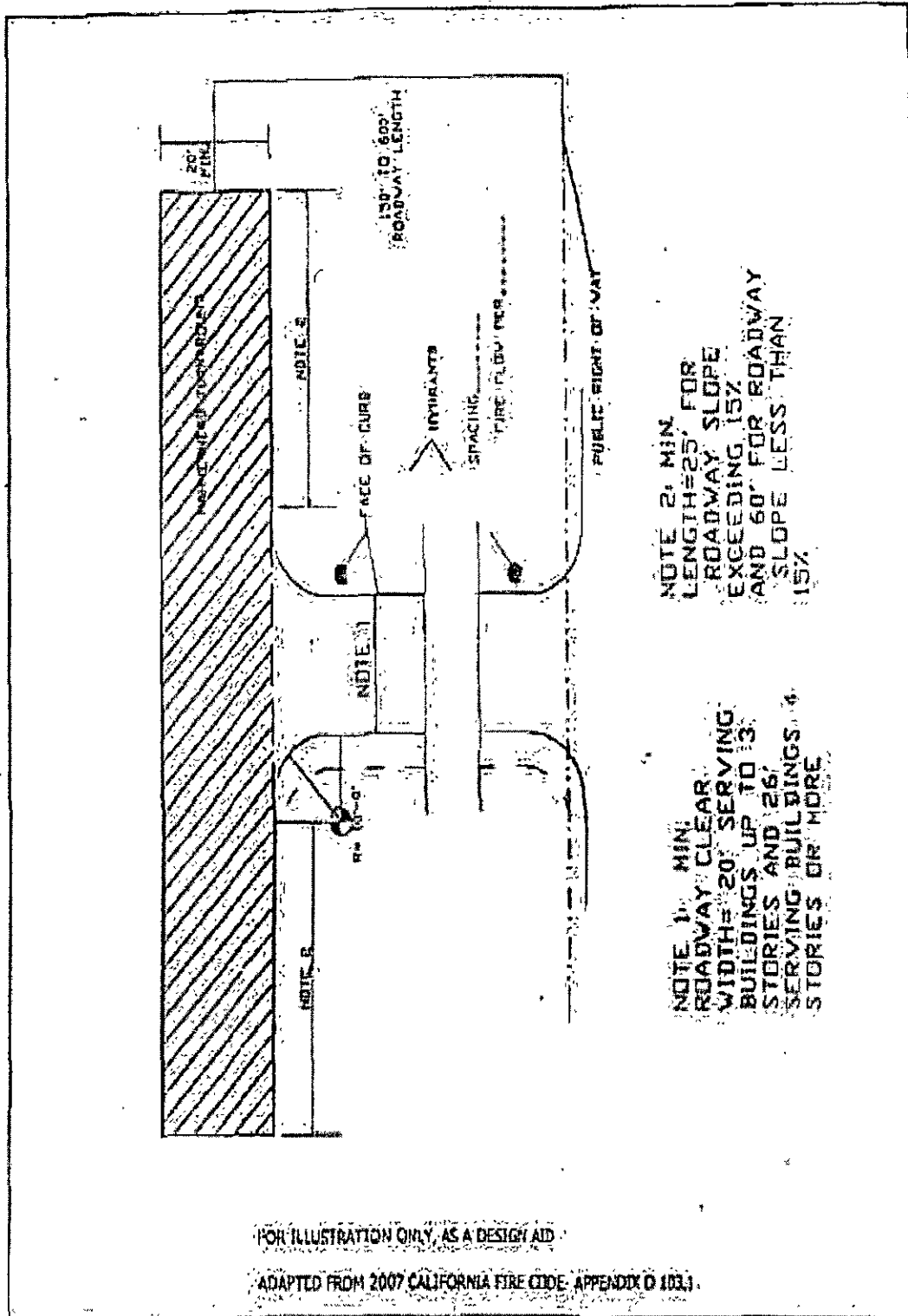


FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT

FIRE HYDRANT SPACING THROUGH ROAD

DEPUTY CHIEF	FIRE MARSHALL
DATE: _____	FIGURE 6
REV: _____	



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CITY OF OAKLAND

FIRE PREVENTION BUREAU

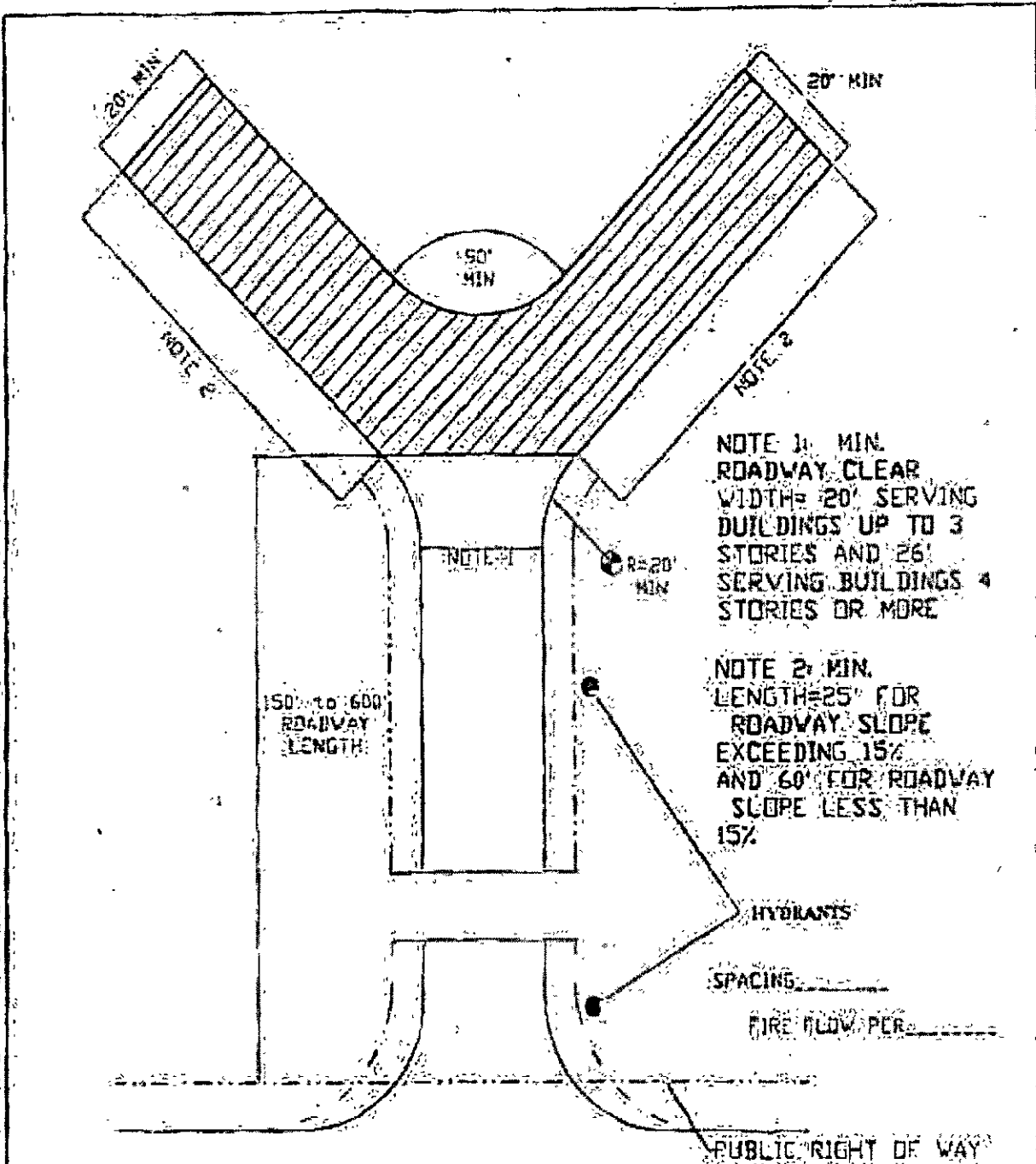
FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT

HAMMERHEAD TURNAROUND



DEPUTY CHIEF	FIRE MARSHALL
DATE: _____	FIGURE 7
REV: _____	



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CITY OF OAKLAND

FIRE PREVENTION BUREAU

FIRE APPARATUS ACCESS STANDARDS

EMERGENCY VEHICLE ACCESS EASEMENT



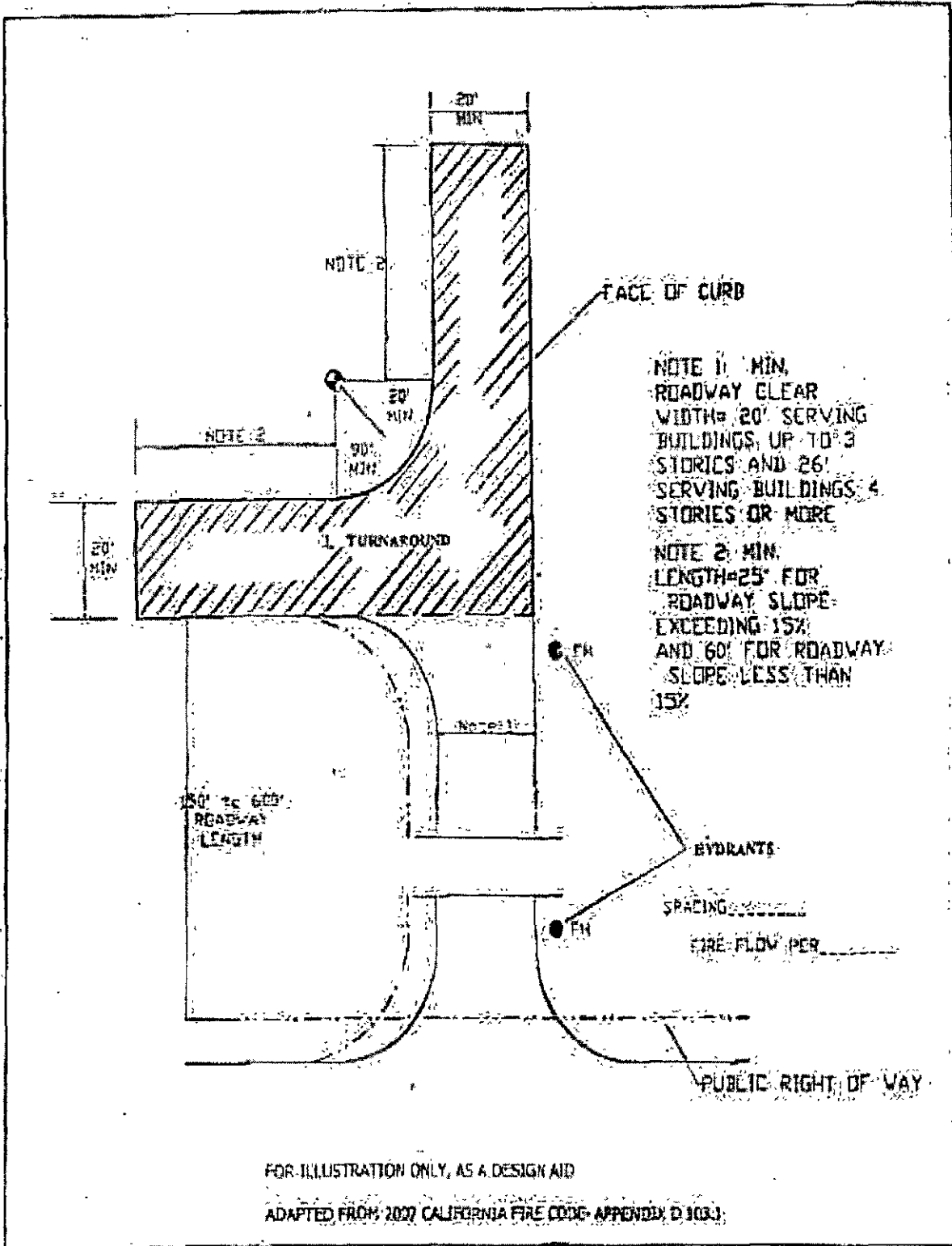
"Y" TURNAROUND


DEPUTY CHIEF FIRE MARSHALL

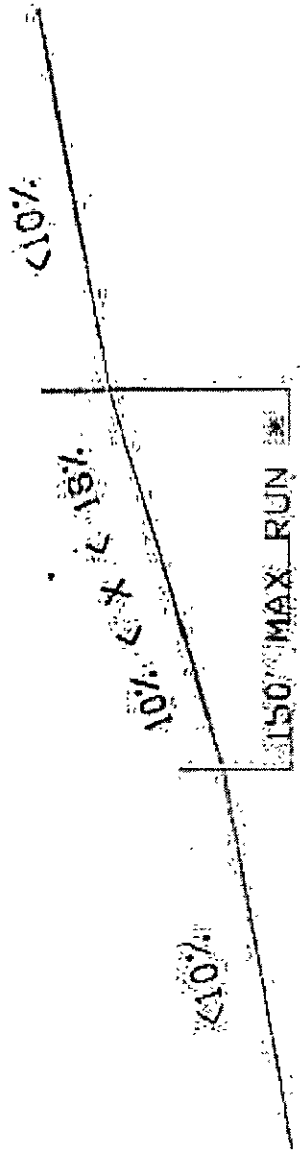
DATE: \_\_\_\_\_

FIGURE B

REV \_\_\_\_\_



CITY OF OAKLAND	FIRE PREVENTION BUREAU						
FIRE APPARATUS ACCESS STANDARDS							
EMERGENCY VEHICLE ACCESS EASEMENT							
	<table border="1" style="width: 100%;"> <tr> <td data-bbox="1055 1785 1218 1837">DEPUTY CHIEF</td> <td data-bbox="1218 1785 1380 1837">FIRE MARSHAL</td> </tr> <tr> <td data-bbox="1055 1837 1218 1890">DATE: _____</td> <td data-bbox="1218 1837 1380 1890">FIGURE 9</td> </tr> <tr> <td data-bbox="1055 1890 1218 1984">REV: _____</td> <td></td> </tr> </table>	DEPUTY CHIEF	FIRE MARSHAL	DATE: _____	FIGURE 9	REV: _____	
DEPUTY CHIEF	FIRE MARSHAL						
DATE: _____	FIGURE 9						
REV: _____							
"L" TURNAROUND							



LONGER RUN MAY BE ALLOWED IF RESPONSE TIME IS WITHIN 4 MINUTES AND THE FOLLOWING MITIGATION MEASURES ARE EMPLOYED AS REQUIRED: FIRE SPRINKLERS, VEGETATION MANAGEMENT, CLASS A ROOF AND/OR 1-HOUR SIDING

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ADAPTED FROM 2007 CALIFORNIA FIRE CODE- APPENDIX D 103.1

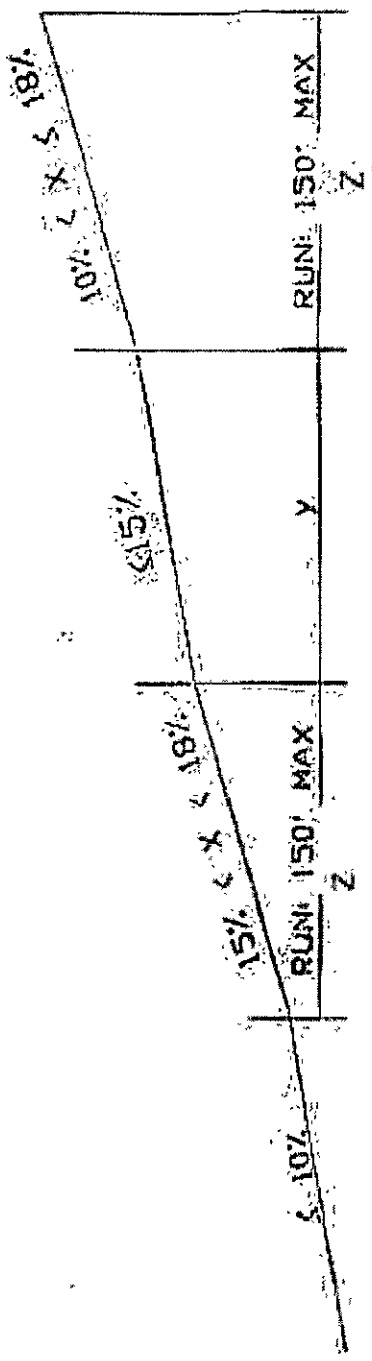
CITY OF OAKLAND

FIRE PREVENTION BUREAU



FIRE APPARATUS ACCESS STANDARDS  
 EMERGENCY VEHICLE ACCESS EASEMENT  
 MAXIMUM RUN ON VARYING SLOPES

DEPUTY CHIEF	FIRE MARSHALL
DATE: _____	FIGURE 30
REV: _____	



IF Y > 300' EACH Z < 150'  
 IF Y < 300' SUM Z < 150'

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 ADAPTED FROM 2007 CALIFORNIA FIRE CODE, APPENDIX D 107.1

CITY OF OAKLAND

FIRE PREVENTION BUREAU



FIRE APPARATUS ACCESS STANDARDS  
 EMERGENCY VEHICLE ACCESS EASEMENT  
 MAXIMUM SLOPES ON VARYING RUNS

DEPUTY CHIEF FIRE MARSHALL

DATE: \_\_\_\_\_

FIGURE 11

REV \_\_\_\_\_

**Add: Table D 103.5. Design Requirements for Local Streets and Shared Access Facilities (SAF)**

	Local Public and Private Streets (A)	Shared Access Facilities (SAF) (B)	Street + SAF (C)	Secondary Access Required (D)
1. Length (for dead-end streets)	< 600 ft (AB in Fig. 1) If > 600 ft, mitigation, reqd. (see item 10a)	≤ 150 ft (CD in Fig. 1) If > 150 ft, mitigation, reqd. (see item 10a)	< 600 ft (AD in Fig. 1) If > 600 ft, mitigation, reqd. (see item 10a)	Street > 600 ft SAF > 600 ft Street + SAF > 600 ft Loop roads and streets with dead-end fingers shall be evaluated on a case by case basis.
2. Width	See Table 2	≥ 20 Ft clear for SAF length > 150ft	-	Minimum 20 ft clear
3. Road Radius	> 100 ft to centerline of street	≥ 30 ft to inner curve	-	Minimum 30 ft to inner curve
4.	25 ft	20 ft	-	20 ft
5. Turnaround (35 ft radius, hammerhead, "Y" or "L") Design Criteria: hill area-fire engine flatlands-fire truck or fire engine	> 150 ft street length circular (if there are no R/W restrictions) hammerhead optional (if R/W restrictions exist)	> 150 ft SAF length a. circular b. hammerhead c. "Y" d. "L" Items a, b, c, & d at applicants option	> 150 ft total length (turnaround either on street or PAE) Same as SAF for turnaround in SAF. Same as street for turnaround in street	N/A
6. Access length to buildings (x+y in Fig. 1)	≤ 150 ft. If > 150 ft, mitigation, reqd. (see item 10b)	≤ 150 ft If > 150 ft, mitigation reqd. (see item 10b)	N/A	N/A
7. Turnouts (8 ft W × 30 ft L)	When required, see Table 2	Same as public and private streets	Same as public and private streets	Required 300 ft on center max., staggered both sides
8. Retaining Walls	8 ft max. wall ht. Within private R/W can be combustible to 3 ft. Within public R/W must	8 ft max. wall ht. If ht. > 5 ft, use noncombustible materials. Walls < 5 ft. can be heavy timber	See Columns (A) & (B)	Same as SAF

	be noncombustible	construction per UBC		
9. Road Grades	Slope ≤ 10% (unlimited length) 10% - 18% slope up to 150 ft. If 10% - 18% slope > 150 ft then mitigation Required (see item 10c) or response time ≤ 4 minutes must be demonstrated.	10% - 18% slope up to 300 ft max. If 300-600 ft., then mitigation required (see item 10c)  < 10% slope, 300-600 ft length.	N/A	10%-18% for 300 ft. max. If < 10%, then no length limit (see item 10C for required road surface)
10. Mitigation measures a. Length to end of road	If > 600 ft., then secondary access/egress required.	If 300-600 ft. length, then 20 ft width; turnaround; hydrant required.  If 150-300 ft. length, then fire sprinkler; fire resistive constr.*; vegetation mgnt.*; hydrant required (* these are available as mitigations only when area is outside of Wildfire Prevention Assessment District — WPAD)	If > 600 ft., then secondary access required.	If a secondary access in required, 600 ft. max. distance from any parcel to through street shall be provided (see Fig. 10)
b. Length to the farthest part of the building.	If > 150 ft. from street then fire sprinkler or 20 ft. width + turnaround + hydrant required.	20 ft. width + turnaround + hydrant required.	N/A	N/A
c. Road grade	Fire sprinkler and hydrant (spacing per Fire code official)	Fire sprinkler and hydrant (spacing per Fire code official)	Fire sprinkler and hydrant (spacing per Fire code official)	If < 10%, then all-weather surface is required. If > 10%, then asphalt or concrete pavement is required.

**Section D107. One- Or Two-Family Residential Developments.** - Deleted in its entirety.

**Section 3. CEQA**

The City Council finds under Title 14 of the California Code of Regulations, Section



15061(b)(3), that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a Project which has the potential for causing a significant effect on the environment. The Council therefore directs that a Notice of Exemption be filed with the Alameda County Clerk in accordance with the CEQA Guidelines.

**Section 4. EFFECTIVE DATE**

This ordinance shall take effect and be enforced beginning January 1, 2014, or on the date the ordinance is filed with the California Building Standards Commission, whichever date is later, and shall be the governing codes of the City of Oakland.

**Section 5. SEVERABILITY**

If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held by a court of competent jurisdiction to be invalid, such a decision shall not affect the validity of the remaining portions of this ordinance. Such section, subsection, sentence, clause or phrase, instead, shall be superseded and replaced by the corresponding provisions, if any exist, of Title 24 of the California Code of Regulations. The City Council of the City of Oakland hereby declares that it would have passed this ordinance and each section or subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

**Section 6. IMPLEMENTATION DATE**

Notwithstanding the foregoing, the City of Oakland will not implement any provisions of this ordinance until it is filed with the California Building Standards Commission.

\* \* \*

IN COUNCIL, OAKLAND, CALIFORNIA \_\_\_\_\_

PASSED BY THE FOLLOWING VOTE:

AYES- BROOKS, GALLO, KAPLAN, KALB, MCELHANEY, REID, SHAFF, and PRESIDENT KERNIGHAN

NOES-

ABSENT -

ABSTENSION -

ATTEST: \_\_\_\_\_

LaTonda Simmons  
City Clerk and Clerk of the Council  
of the City of Oakland, California