

BUILDING STANDARDS COMMISSION

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



November 22, 2013

Mark Numainville
City Clerk
City of Berkeley
2180 Milvia Street
Berkeley, CA 94704

RE: Ordinance 7,158-N.S.

Dear Mr. Numainville:

This letter is to advise you of our determination regarding the referenced ordinance with express findings received from your agency on July 9, 2013.

Our review finds the submittal to contain one ordinance modifying provisions of the 2010 California Building Standards Code in Title 24, California Code of Regulations (code), and express findings complying with Health and Safety Code §§17958.7 and 18941.5. The code modifications are accepted for filing and are enforceable. This letter attests only to the satisfaction of the cited law for filing of local code amendment supported by an express finding with the Commission. The Commission is not authorized by law to evaluate the merit of the code modification or the express finding.

Local modifications to the code are specific to a particular edition of the code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the code is published.

On a related matter, should your city receive and ratify Fire Protection District ordinances making modifications to the code, be advised that Health and Safety Code §13869.7(c) requires such ratified ordinances and express findings to be filed with the Department of Housing and Community Development, Division of Codes and Standards, State Housing Law Program, rather than this Commission. Also, ordinances making modifications to the energy efficiency standards of the code may require approval from the California Energy Commission pursuant to Public Resources Code §25402.1(h)(2).

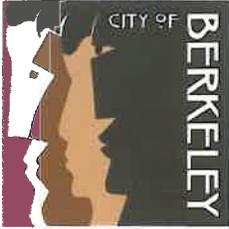
If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,

A handwritten signature in blue ink that reads "Enrique M. Rodriguez".

Enrique M. Rodriguez
Associate Construction Analyst

cc: Chron
Local Filings



City Clerk Department

July 2, 2013

Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833

RE: City of Berkeley, Adoption of the Building Code Ordinance

To Whom It May Concern:

Enclosed, please find certified copies of Ordinance No. 7,158-N.S. Berkeley Building Code, adopted by the City Council on November 9, 2010, and Resolution No. 65,083-N.S. Findings of Facts, adopted by the City Council on October 26, 2010.

It was recently brought to our attention that these documents have not been received by the Commission, and therefore we are submitting at this time. If you have any questions or concerns, please contact the City Clerk Department at (510) 981-6908.

Sincerely,

Mark Numainville, CMC
City Clerk

Enclosures:

1. Resolution No. 65,083-N.S.
2. Ordinance No. 7,158-N.S.

cc: Alex Roshal, Building and Safety Manager

RECEIVED
CITY OF BERKELEY
BUILDING STANDARDS COMMISSION
JUL 9 11:31 AM

ORDINANCE NO. 7,158-N.S.

REPEALING AND REENACTING BERKELEY MUNICIPAL CODE CHAPTERS 19.28 (CALIFORNIA BUILDING CODE) INCLUDING APPENDIX J, 19.30 (ELECTRICAL CODE), 19.32 (MECHANICAL CODE); REPEALING 19.36 (PLUMBING CODE) AND REENACTING AS CHAPTER 19.34; AND ADOPTING 19.29 (RESIDENTIAL BUILDING CODE), 19.36 (ENERGY CODE) AND 19.37 (GREEN BUILDING STANDARDS CODE)

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Chapter 19.28, is hereby repealed and reenacted to read as follows:

Chapter 19.28

BERKELEY BUILDING CODE*

Sections:

- 19.28.010 Adoption of the California Building Code**
- Article 1. Scope and Administrative Provisions**
- 19.28.020 Adoption of Chapter 1 Scope and Administration**
- Article 2. Restrictions in Fire Zones**
- 19.28.030 Chapter 7A Materials and Construction Methods for Exterior Wildlife Exposure**
- Article 3. Wood Burning Appliances**
- 19.28.040 Wood Burning Appliances**
- Article 4. Construction in the Right of Way**
- 19.28.050 Projection into Public Right of Way - Revocation and Removal Indemnification and Hold Harmless**
- Article 5. Existing Buildings**
- 19.28.060 Adoption of Certain Chapters of the 2006 International Existing Building Code by Reference**
- Article 6. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster**
- 19.28.070 Adoption and Intent. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster.**
- Article 7. Amendments to Structural Standards**
- 19.28.080 Technical Amendments to Structural Standards**

Notes:

* See Ch. 1.24 for abatement of nuisances by City.

Section 19.28.010 Adoption of the California Building Code.

A. The California Building Code, 2010 edition, as adopted in Title 24 Part 2 of the California Code of Regulations, including Appendix J, is hereby adopted and made a

part of this Chapter as though fully set forth herein, subject to the modifications thereto which are set forth in this Chapter. One copy of this Code is on file in the office of the City Clerk of the City of Berkeley.

B. This chapter shall be known as the "Berkeley Building Code" and shall be referred to in this Chapter as "this code." Article 1 provides for the local administration of all California Codes.

C. This chapter will become effective on January 1, 2011, and shall not apply to any building permit submitted by December 31, 2010.

Article 1. Administrative Provisions and Definitions

Section 19.28.020 Adoption of Chapter 1 Scope and Administration

Chapter 1 of the 2010 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

CHAPTER 1 SCOPE AND ADMINISTRATION SECTION 101 – GENERAL

101.1 Title. These regulations shall be known as the Berkeley Building Code, hereinafter referred to as "this code."

101.4 Referenced codes. Other codes listed in Chapter 1, Division II Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Gas. The provisions of the Berkeley Mechanical Code, based on the 2010 California Mechanical Code, and the Berkeley Plumbing Code, based upon the 2010 California Plumbing Code, shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and th installation and operation of residential and commercial gas appliances and related accessories.

101.4.2 Mechanical. The provisions of the Berkeley Mechanical Code, based upon the 2010 California Mechanical Code as amended herein, shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

101.4.3 Plumbing. The provisions of the Berkeley Plumbing Code, based upon the 2010 California Plumbing Code as amended

herein, shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the Berkeley Plumbing Code shall apply to private sewage disposal systems.

101.4.4 Electrical. The provisions of the Berkeley Electrical Code, based on the 2010 California Electrical Code as amended herein, shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

101.4.5 Property maintenance. The provisions of the Berkeley Housing Code, based upon the 1997 Uniform Housing code as amended in Chapter 19.40 shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

101.4.6 Fire prevention. The provisions of the Berkeley Fire Code shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.7 Energy. The provisions of the California Energy Code, Title 24, Part 6, Berkeley Municipal Code Section 19.16 and Chapter 19.72 shall apply to matters governing the design and construction of buildings for energy efficiency.

SECTION 103 – DIVISION OF BUILDING AND SAFETY

103.1 Creation of enforcement agency. The Division of Building and Safety is hereby created and the official in charge thereof shall be known as the building official.

103.2 Appointment. The building official shall be appointed by the City Manager.

SECTION 104 – DUTIES AND POWERS OF BUILDING OFFICIAL

104.7 Division records. The building official shall keep official records of applications received, permits and certificates issues, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

SECTION 105 - PERMITS

105.3.2 Expiration of application. An application for a permit for any proposed work shall expire 180 days after the date of filing, unless it can be demonstrated by the applicant that such application has been pursued in good faith or a permit has been issued; except that the Permit Service Center Coordinator is authorized to grant one or more extensions of time for additional periods not exceeding a 180 days per extension. The extension shall be requested in writing and justifiable cause demonstrated. Prior to the application being deemed abandoned, further extensions of time for a period of one year may be granted by the Permit Service Center Coordinator on a case-by- case basis if demonstrated in writing by the applicant that such application has been pursued in good faith.

105.5 Expiration of Permit. Permits issued by the building official shall expire one year from the date of issuance. Prior to expiration of the permit, the building official may grant an extension of time of one year to complete the work, upon receipt of a written request from the permit holder. On a case-by-case basis, permits may be extended more than once when accompanied by a written request demonstrating good cause for the request. Written requests for time extensions shall be accompanied by the payment of a fee set by resolution of the City Council.

When a permit is expired and a new permit is required to complete the work, a new permit application and plans shall be filed describing the remaining work to be done. If a site visit or other review is required to determine the extent of the remaining work, a fee may be charged to make such determination.

105.7 Placement of permit. The building permit or copy shall be posted on the site of the work in a location that is visible from the street until the completion of the project.

SECTION 109 – FEES

109.1 Payment of fees. Except when fees are deferred, a permit shall not be valid until the fees as set forth by resolution of City Council have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

109.2 Schedule of permit fees. On building, structures, electrical, gas, mechanical, and plumbing or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the fee as set forth by resolution of the City Council. Fees for permits and inspections and other related services under this Code shall be assessed and paid as set forth by resolution of the City Council. Unless waived or deferred as provided by local regulations, a plan review fee and other fees as specified in the resolution shall be paid at the time of submitting any documents for review and additional fees as specified in the resolution shall be paid at issuance of the permit.

109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing permit system before obtaining the necessary permit shall be subject to a fee as set forth by resolution of the City Council equal to and in addition to the permit fees.

109.7 Re-inspection fees. A re-inspection fee, as set forth by resolution of the City Council, may be assessed for each inspection or re-inspection when such portion of work for which inspection is called for under Section 110 is not complete or when corrections called for are not made.

This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection, or when the inspection record card is not available on the work site, the approved plans are not readily available to the inspector, or for failure to provide access, on the date for which inspection is requested, or for deviating from plans requiring the approval of the building official or when corrections required by the inspector are not made.

To obtain a re-inspection, the applicant shall pay the re-inspection fee as set forth by resolution of the City Council. In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

SECTION 112 – SERVICE UTILITIES

112.4 Authority to Connect Utilities. Clearance for connection of one utility, either gas or electrical, will be withheld until final building, electrical, plumbing, heating and/or air conditioning inspections are made and approval has been given for any new building or change in occupancy classification to an existing building (as defined in Section 301 of the Berkeley Building Code) for which connection to such utilities is sought, unless approval has been first obtained from the Building Official, as provided by a Temporary Certificate of Occupancy or Final Certificate of Occupancy.

112.5 Unsafe service utilities. Unsafe service utilities are hereby declared to be public nuisances and shall be abated, repaired, rehabilitated, demolished or removed in accordance with the procedures set forth in Chapter 19.40 of the BMC for residential buildings and Berkeley Building Code for all other buildings, or any alternate procedure that may be adopted by the City of Berkeley. In addition, the City Attorney may pursue other appropriate action to prevent, restrain, correct or abate the violation as provided for in the BMC. Remedies under this section are cumulative.

When service utilities are maintained in violation of this code and in violation of a notice issued pursuant to the provisions of this section, the Building Official shall institute appropriate action to prevent, restrain, correct or abate the violation.

112.6 Authority to disconnect utilities in emergencies. The Building Official or his or her authorized representative shall have the authority to disconnect electrical power or other energy service supplied to the building, structure or building service equipment therein regulated by this code in case of emergency where necessary to eliminate an immediate hazard to life or property. The Building Official or his or her authorized representative shall, whenever possible, notify the serving utility, the owner and occupants of the building, structure or electrical system or equipment of the decision to disconnect prior to taking such action, and shall notify the serving utility, owner and occupant of the building, structure or building service equipment, in writing, of the disconnection as soon as possible thereafter.

112.7 Authority to condemn electrical system and equipment. Whenever the Building Official determines that an electrical system or electrical equipment regulated by this code is hazardous to life, health or property, the Building Official may order in writing that such electrical system or equipment either be removed or restored to a safe condition. The written notice shall fix a reasonable time limit for compliance with such order. Persons shall not use or maintain defective electrical systems or equipment after receiving such notice except as may be provided therein.

When equipment or an installation is to be disconnected, a written notice of such disconnection and the reasons therefore shall be given within 24 hours of the order to disconnect to the serving utility, the owner and occupants of the building, structure or premises.

When equipment or an installation is maintained in violation of this code and in violation of a notice issued pursuant to the provisions of this section, the Building Official shall institute appropriate action to prevent, restrain, correct or abate the violation.

Unsafe electrical systems or equipment are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in Chapter 19.40 of the BMC for residential buildings and Berkeley Building Code for all other buildings, or any alternate procedure that may be adopted by the City of Berkeley. In addition, the City Attorney may pursue other appropriate action

to prevent, restrain, correct or abate the violation as provided for in the BMC. Remedies under this section are cumulative.

112.8 Connection after order to Disconnect. Persons shall not make connections from to a service utility system or equipment that has been disconnected or ordered to be disconnected by the Building Official, or the use of which has been ordered to be discontinued by the Building Official, until the Building Official authorizes the reconnection and use of the electrical system or equipment.

SECTION 113 – BOARD OF APPEALS

113.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals consisting of the Housing Advisory Commission pursuant to Section 19.44.020 of the Berkeley Housing Code. The Building Official may convene and consult with an advisory panel of qualified individuals. This advisory panel is intended to help the Building Official in formulating and making staff recommendations to the Housing Advisory Commission. The advisory panel may provide written and/or oral presentations to the Housing Advisory Commission as needed.

113.3 Qualifications. The board of appeals shall consist of members meeting the qualifications required for the Housing Advisory Commission. The advisory panel shall consist of individuals found by the Building Official to be qualified by experience and training in the specific area of the appeal who are not employees of the jurisdiction.

SECTION 114 – VIOLATIONS

114.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law. Violations of this Code are misdemeanors; but may be cited or charged, at the election of the enforcing officer, Building Official, or City Attorney, as infractions, subject to an election by the defendant under Penal Code Subsection 17(d). Nothing in this Section shall prevent any other remedy afforded by law.

SECTION 116 - UNSAFE STRUCTURES AND EQUIPMENT

116.1 Conditions. Structures or existing equipment that are or hereafter become structurally unsafe, insanitary or deficient because of inadequate means of egress facilities, in adequate light and ventilation, or which

constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

All such unsafe buildings, equipment, structures or appendages are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in Chapters 1.24, 19.28, 19.40 and 19.44 of the BMC as applicable. As an alternative, the building official, or other employee or official of this jurisdiction as designated by the City Council, may institute any other appropriate action to prevent, restrain, correct or abate the violation.

116.6 Safety Assessment Placards.

116.6.1 Intent. This section establishes standard placards to be used to indicate the condition of a structure for occupancy after a natural disaster and a rapid visual inspection by authorized personnel. The Building Official and his or her authorized representatives post the appropriate placard at each entry point to a building or structure upon completion of a safety assessment.

116.6.2 Application of Provisions. The provisions of this section are applicable to all building and structure of all occupancies regulated by the City of Berkeley. The Council may extend the provisions as necessary.

116.6.3 Definitions.

116.6.3.1 "Safety Assessment" is a visual, non-destructive examination of a building or structure for the purpose of determining the condition for continued occupancy.

116.6.3.2 Placards. Following are titles and descriptions of the official jurisdiction placards to be used to designate the condition of a building structure for continued occupancy, partial or conditional occupancy, or unsafe to enter. Copies of placards are on file in the Building and Safety Division of the Planning and Development Department.

INSPECTED – Lawful Occupancy Permitted is to be posted on any building or structure wherein no apparent hazard has been found. This placard is not intended to mean that there is no damage to the building or structure.

RESTRICTED USE is to be posted on each building or structure that has been damaged wherein the damage has resulted in some form of restriction to be the continued occupancy. The individual who posts this placard will note in general terms the type of damage encountered and will clearly and concisely note the restrictions on continued occupancy.

UNSAFE – Do Not Enter or Occupy is to be posted on each building or structure that has been damaged such that continued occupancy poses a threat to life safety. Building or structures posted with this placard shall not be entered under any circumstances except as authorized in writing by the building official, or his or her authorized representative. Safety assessment teams shall be authorized to enter these building at any time. This placard is not to be used or considered as a demolition order. The individual who posts this placard will note in general terms the type of damage encountered.

116.6.4 Content of placard. The BMC Section number and the words "City of Berkeley" shall be permanently affixed to each placard.

116.6.5 Unlawful to remove. Once a placard has been attached to a building or structure, it is not to be removed, altered or covered until done so by an authorized representative of the Building Official. It shall be unlawful for any person, firm or corporation to alter, remove, cover or deface a placard unless authorized pursuant to this section. (Ord. 7076-NS § 1, 4/21/2009; Ord. 7005-NS § 1, 11/27/2007)

Article 2. Restrictions in Fire Zones

Section 19.28.030 CBC Chapter 7A Materials and Construction Methods for Exterior Wildlife Exposure.

701A – SCOPE, PURPOSE AND APPLICATION

701A.1 Scope. This chapter applies to building materials, systems and or assemblies used in the exterior design and construction of new buildings and structures, additions, alterations, repairs and re-roofs located within a Wildland-Urban Interface Fire Area as defined in Section 702A.

701A.2 Purpose. The purpose of this Chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any building or structure in the Wildland-Urban Interface Fire Area to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

701A.3 Application. New buildings located in any Fire Hazard Severity Zone or new buildings and structures, additions, alterations, repairs and re-roofs located in any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this Chapter.

Exceptions:

1. Buildings or structures of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building or property lines.

701A.3.1 Application date and where required. Buildings for which an application for a building permit is submitted on or after July 1, 2008 located in any Fire Hazard Severity Zone or buildings and structures, additions, alterations, repairs and re-roofs for which an application for a building permit is submitted on or after July 1, 2008 located in the Wildland Interface Fire Area shall comply with all sections of this Chapter.

702A – DEFINITIONS

For the purposes of this Chapter, certain terms are defined below:

FIRE ZONE ONE shall encompass the entire City of Berkeley except for Fire Zones Two and Three.

FIRE ZONE TWO encompasses those areas designated as Combined Hillside District in the Official Zoning map of the City of Berkeley and those areas designated as Very High in the official Fire Hazard Severity Zones (FHSZ) map of The Department of Forestry and Fire Protection (CAL FIRE), as they may be amended from time to time. The following properties, not part of the Combined Hillside District, are included in Fire Zone Two under the Very High designation of the FHSZ map: The eastern section of the University of California, Berkeley main campus, block number 2042 (Alameda County Accessory's parcel numbering (APN) system), to the east city line and all of the Clark-Kerr campus, block number 7690, to the east city line. All of block number 7680 in the City of Berkeley and portions of block number 1702 in the City of Berkeley. See Exhibit A for the specific parcels by Assessor's Parcel Number and addresses.

FIRE ZONE 3 encompasses those areas designated as Environmental Safety – Residential Districts on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area and where a local agency, city, county, city and county, or district is responsible for fire protection. Fire Zones 2 and 3 are designated as Local Agency High Fire Hazard Severity Zone.

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code

Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Fire Zones 2 and 3 are designated as Wildland-Urban Interface Fire Area.

705A – ROOFING

705A.1 General. Roofs shall be a Class A minimum and shall comply with the requirements of Chapter 7A and Chapter 15. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wooden shakes and shingles are prohibited roof coverings regardless of the assembly rating of the roof system.

Exception: Replacement of less than 50% of the roof area within a 5 year period.

705A.5 Spark Arrestors. All chimneys of fireplaces, stoves, barbecues or heating appliances using solid fuel shall be provided with an approved spark arrestor whenever modification has been made to any of these appliances, or whenever a structure is re-roofed. The net free area of the spark arrestor shall be not less than four times the net free area of the outlet of the chimney. The spark arrestor shall have heat and corrosion resistance equivalent to twelve-gauge wire, nineteen gauge galvanized wire, or twenty-four-gauge stainless steel. Openings shall not permit the passage of spheres having a diameter larger than one-half inch and shall not block the passage of spheres having a diameter of less than three-eighths inch. The arrestor shall be securely attached to the chimney or stovepipe and shall be adequately supported. The use of bands, mollies, masonry anchors or mortar ties are recommended depending upon the individual need.

707A – EXTERIOR COVERING

707A.3.2 Replacement of Exterior Wall Covering. Materials for replacement of existing exterior wall covering shall meet or exceed the standards set forth in this Chapter.

Exception: Where less than 50% of any wall surface is being replaced or repaired, and the matching of the new plane to the existing plane on that wall is not possible.

711A – UNDERGROUND UTILITY CONNECTIONS

711A.1 Underground utility connections. For new construction, provisions shall be made for the undergrounding of all utilities serving the property, including but not limited to electrical, telephone and cable television, by the installation of appropriately sized underground conduits extending from the street property

712A – ADDITIONAL REQUIREMENTS IN FIRE ZONE THREE

712A.1 General. In addition to meeting the other requirements of this Chapter, buildings or structures hereinafter erected, constructed, moved, altered, added, or repaired within

Fire Zone Three shall comply with the following requirements for buildings and structures.

712A.2 Fire Warning System. All residential units shall be equipped with a Fire Warning System as specified by the residential smoke detector requirements of the current edition of the California Building Code and with an audible exterior alarm. The exterior alarm must meet the requirements of NFPA 72 or equivalent and generate 45 decibels ten feet from the alarm, or more.

712A.3 Automatic Fire Sprinklers, Berkeley Fire Code Section 903.2.21. Any new construction or new additions to existing structures requiring a permit determined to be \$100,000 or more in construction costs shall be required to install automatic fire sprinklers throughout the existing structure.

712A.4 Utilities. Utilities, pipes, furnaces, water heaters or other mechanical devices located in an exposed underfloor area of a building or structure shall be enclosed with material as required for exterior one hour fire resistive construction. Adequate covered access openings for servicing and ventilation of such facilities shall be provided as required by appropriate codes.

712A.5 Control of brush or vegetation. Brush and vegetation shall be controlled as required in the Berkeley Fire Code.

712A.6 Special Conditions. The following additional conditions must be met:

1. Public access roads and fire trails. No person(s) shall use any public access road or fire trail for the storage of any construction material, stationary construction equipment, construction office, portable refuse container, or earth from any grading or excavating.
2. Water Service. The water service to the site shall be installed with a ¾" hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft ¾" hose available.

Exhibit A
Parcels in Addition to the Combined Hillside District

The following additional parcels by Assessor's Parcel Number and address are included in Fire Zone Two:

Parcel Number (APN)	Address
048-7680-001-02	3 Tanglewood Road
048-7680-002-01	5 Tanglewood Road
048-7680-031-00	7 Tanglewood Road
048-7680-019-00	11 Tanglewood Road
048-7680-014-00	19 Tanglewood Road
048-7680-032-01	25 Tanglewood Road
048-7680-027-00	29 Tanglewood Road

054-1702-067-00	10 Tanglewood Road
054-1702-068-00	18 Tanglewood Road
054-1702-069-00	22 Tanglewood Road
054-1702-070-00	28 Tanglewood Road
054-1702-063-00	2701 Belrose Avenue
054-1702-076-00	2715 Belrose Avenue
054-1702-075-00	2721 Belrose Avenue
054-1702-074-00	2729 Belrose Avenue
054-1702-073-00	2737 Belrose Avenue
054-1702-112-00	2801 Claremont Boulevard
054-1702-123-01	2811 Claremont Boulevard
054-1702-122-00	2815 Claremont Boulevard
054-1702-120-01	2821 Claremont Boulevard
054-1702-114-01	2816 Claremont Avenue
054-1702-115-00	2820 Claremont Avenue
054-1702-072-00	3005 Garber Street
054-1702-071-00	3015 Garber Street
054-1702-113-00	3020 Garber Street
054-1702-116-00	3017 Avalon Avenue

Article 3. Wood Burning Appliances

Section 19.28.040 Wood Burning Appliances:

3111 Wood Burning Appliances.

- A. The purpose of this section is to reduce the health risks caused by wood smoke under the climatic conditions applicable to Berkeley.
- B. For purposes of this section the following terms shall be defined as set forth below.
 - 1. "EPA" means the United States Environmental Protection Agency.
 - 2. "EPA Certified" means any wood heater that is labeled "EPA Certified" in accordance with the standards in Title 40, Part 60, Subpart AAA, of the Code of Federal Regulations or equivalent, in effect at the time the wood heater is installed.
 - 3. "Pellet heater" means wood heaters that burn pellet fuel exclusively and are either EPA-certified or exempted under EPA requirements set forth in Part 60 Title 40, Subpart AAA, of the Code of Federal Regulations, February 26, 1988.

4. "Wood-burning" means an appliance that burns wood or any wood-based solid fuel, including but not limited to wood pellets.

5. "Wood burning cooking device" means any wood-burning device that is designed or primarily used for cooking.

6. "Wood-burning fireplace" means any permanently-installed masonry or factory-built wood-burning appliance, either open or with doors in front of the combustion chamber, which is neither a wood heater as defined in 40 CFR 60.531 nor designed and used for cooking.

C. No wood-burning fireplace or wood heater as defined in 40 CFR 60.531, that is not EPA certified or exempted by under EPA requirements may be installed in any occupancy.

Exception: Existing masonry fireplaces may be repaired in accordance with the applicable codes in effect at the time of the proposed repair or reconstruction. For purposes of this exception, the term repair includes resurfacing the combustion chamber, but does not include replacing any other part of the combustion chamber.

D. Wood burning cooking devices are not prohibited by this section.

E. Any person planning to install a wood-burning fireplace or heating stove must submit verifiable documentation to the City showing that the appliance conforms to the requirements of this section.

Article 4. Projection into Public Right of Way

Section 19.28.050 Encroachments into the Public Right of Way – Revocation, Removal, Indemnification and Hold Harmless.

3202 – ENCROACHMENTS

3202.5 Projection into Public Right of Way – Revocation, Removal, Indemnification and Hold Harmless.

Any permits granted pursuant to this Code which allow any projection upon, over, or under the public right of way may be revoked by the City at any time. Upon such revocation, the permittee or his or her successor(s) or assignee(s) shall forthwith remove such projection at his or her cost and expense and without any cost or expense whatsoever to the City.

Any person who is granted a permit pursuant to the provisions of this Code which allows a projection upon, over or under the public right of way shall by the issuance of such permit thereby indemnify and hold harmless

the City of Berkeley, its officers and employees of and from any and all liabilities, claims, demands, actions or causes of action for injury or injuries to any person or persons or death or deaths of any person or persons or damage to property arising out of or occasioned in any way by the issuance of said permit, the work performed pursuant to such permit, or the existence of such projection. The obligation of such indemnification and hold harmless provision shall be applicable to the successor(s) and assignee(s) of the permittee.

Article 5. Existing Buildings

Section 19.28.060 Adoption of Certain Chapters of the 2006 International Existing Building Code by reference

3401.5 Adoption of Certain Chapters of the 2006 International Existing Building Code by reference.

When seismic retrofit is not otherwise required by this code, the following Chapters of the 2006 International Existing Building Code (IEBC) published by the International Code Council contained in the Appendix A are hereby adopted by reference as applicable to the types of buildings as designated therein as though fully set forth herein:

Chapter 2, Earthquake Hazard Reduction in Existing Reinforced Concrete and Reinforced Masonry Wall Buildings with Flexible Diaphragms,

Chapter 4, Earthquake Hazard Reduction in Existing Wood-frame Residential Buildings with Soft, Weak or Open-front walls, and

Chapter 5, Earthquake Hazard Reduction in Existing Concrete Buildings and Concrete with Masonry Infill Buildings.

Article 6. Repairs to Existing Buildings and Structures

Section 19.28.070 Adoption and Intent. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster.

3405.6 Repair and Reconstruction

3405.6.1 Repairs. Repairs of structural elements shall comply with this section.

3403.5.1.1 Seismic evaluation and design. Seismic evaluation and design of an existing building and its components shall be based on the following criteria.

3403.5.1.1.1 Evaluation and design procedures. The seismic evaluation and design shall be based on the procedures specified in the building code, ASCE 31 Seismic Evaluation of Existing Buildings (for evaluation only) or ASCE 41 Seismic Rehabilitation of Existing Buildings. The procedures contained in Appendix A of the International Existing Building Code shall be permitted to be used as specified in Section 3403.5.1.1.3.

3403.5.1.1.2 CBC level seismic forces. When seismic forces are required to meet the building code level, they shall be one of the following:

1. 100 percent of the values in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor specified for structural systems classified as "Ordinary" unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as "Intermediate" or "Special".
2. Forces corresponding to BSE-1 and BSE-2 Earthquake Hazard Levels defined in ASCE 41. Where ASCE 41 is used, the corresponding performance levels shall be those shown in Table 3403.5.1.1.2.

**Table 3403.5.1.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS**

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

3403.5.1.1.3 Reduced CBC level seismic forces. When seismic forces are permitted to meet reduced building code levels, they shall be one of the following:

1. 75 percent of the forces prescribed in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor as specified in Section 3403.5.1.1.2.

2. In accordance with the applicable chapters in Appendix A of the International Existing Building Code as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirements for reduced building code force levels.

2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.

2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.

2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.

2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.

2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.

3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.

4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters S_x and S_{x1} shall not be taken less than 75 percent of the respective design spectral response acceleration parameters SDS and $SD1$ defined by the International Building Code and its reference standards.

3403.5.1.2 Wind Design. Wind design of existing buildings shall be based on the procedures specified in the building code.

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

Article 7. Technical Amendments to Structural Standards

Section 19.28.080 Various Technical Amendments to Structural Standards.

1613.8 ASCE 7, Section 12.8.7. ASCE 7, Section 12.8.7 Equation 12.8-16 shall be:

$$\frac{P_x I}{V_x h_{xx} C_d} \quad (12.8-16)$$

1704.4 Concrete Construction. The special inspections and verifications for concrete construction shall be as required by this section and TABLE 1704.4.

Exceptions: Special inspections shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, f_c , no greater than 2,500 pound per square inch (psi) (17.2 Mpa).

1908.1.8 ACI 318, section 22.10 Plain concrete in structures assigned to seismic design category C, D, E or F.

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

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

Exception:

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

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

Exception:

In detached one and two-family dwellings three stories or less in height and constructed with stud bearing walls, plain concrete footings with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.

TABLE 2308.12.4
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E

(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line^a)

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

CONDITIO N	SHEATHING TYPE ^b	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS} > 1.00$
One Story	S-W	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches

- a. Minimum length of panel bracing of one face of the wall for S-W sheathing h/w ratio shall not exceed 2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.
- b. S-W = wood structural panels and diagonal wood sheathing.

Section 2. That Chapter 19.29 is added to the Berkeley Municipal Code to read as follows:

Chapter 19.29

BERKELEY RESIDENTIAL CODE

Sections:

- 19.29.010 Adoption of California Residential Code.**
- 19.29.020 Title.**
- 19.29.030 Administrative provisions.**
- 19.29.040 Section R327 Materials and Construction Methods for Exterior Wildlife Exposure**
- 19.29.050 Technical Amendments to Structural Standards**

Section 19.29.010 Adoption of California Residential Code.

All of the provisions of the California Residential Code, 2010 Edition, (CRC) California Code of Regulations, Title 24, Part 2.5, is hereby adopted and made a part of this Chapter as though fully set forth herein, subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.29.020 Title.

This code shall be known as the "Berkeley Residential Code" and may be cited as "this code."

Section 19.29.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Chapter 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any CRC administrative provisions that may conflict.

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

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARRIER UNDERLAYMENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k		Weathering ^a	Frost line depth ^b	Termite ^c					
ZERO	85	NO	D ₂ or E	NEGLECTIBLE	N/A	VERY HEAVY	See footnote 'm'	NO	See Footnote 'l'	ZERO	57.2 ^o F

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

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2.(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. *Temperatures* shall be permitted to reflect local climates or local weather experience as determined by the Building Official.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice

damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3.(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°)" at www.ncdc.noaa.gov/fpsf.html.
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°F)" at www.ncdc.noaa.gov/fpsf.html.
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- l. Flood Hazard Data for the City of Berkeley:
Date of Jurisdiction's Entry into the NFIP: December 7, 1973;
Date of adoption of the first code or ordinance for management of flood hazards: Ordinance No. 5085-N.S., July 25, 1978;
Date of Flood Insurance study: Aug 3, 2009;
Panel numbers and dates of all currently effective maps adopted by the AHJ (Ordinance 7108-NS 9/29/09):
 - FEMA's "Use of Digital Flood Hazard Data" establishes that paper and digital maps are equivalent. Policy and related information are available at <http://www.fema.gov/library/viewRecord.do?id=3235>. The policy implements section 107 of Public Law 108-264, 118 Stat. 724 (2004)
 - Panel 13 (not available in printed form)
 - Panel 14 of 725, Map Number 06001C0014G, August 3, 2009
 - Panel 18 of 725, Map Number 06001C0018G, August 3, 2009
 - Panel 19 of 725, Map Number 06001C0019G, August 3, 2009
 - Panel 38 (not available in printed form)
 - Panel 51 (not available in printed form)
 - Panel 52 of 725, Map Number 06001C0052G, August 3, 2009
 - Panel 53 (not available in printed form)
 - Panel 54 of 725, Map Number 06001C0054G, August 3, 2009
 - Panel 56 of 725, Map Number 06001C0056G, August 3, 2009
 - Panel 57 of 725, Map Number 06001C0057G, August 3, 2009
 - Panel 80 of 725, Map Number 06001C0080G, August 3, 2009
- m. Heating Load Calculation Data for the City of Berkeley:
 - 33 degrees F "Winter Median of Extremes"
 - 37 degrees F "Design Drybulb (0.2%)
 - 40 degrees F "Design Drybulb (0.6%)

Section 19.29.040 CRC Section R327 Materials and Construction Methods for Exterior Wildlife Exposure.

R327.1 – SCOPE, PURPOSE AND APPLICATION

R327.1.1 Scope. This Chapter applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings and structures, additions, alterations, repairs and re-roofs located within a Wildland-Urban Interface Fire Area as defined in Section R327.2.

R327.1.2 Purpose. The purpose of this Chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any building or structure in the Wildland-Urban Interface Fire Area to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

R327.1.3 Application. New buildings located in any Fire Hazard Severity Zone or new buildings and structures, additions, alterations, repairs and re-roofs located in any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this Chapter.

Exceptions:

1. Buildings or structures of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building or property lines.

R327.1.3.1 Application date and where required. Buildings for which an application for a building permit is submitted on or after July 1, 2008 located in any Fire Hazard Severity Zone or buildings and structures, additions, alterations, repairs and re-roofs for which an application for a building permit is submitted on or after July 1, 2008 located in the Wildland Interface Fire Area shall comply with all sections of this Chapter.

R327.2 – DEFINITIONS

For the purposes of this Chapter, certain terms are defined below:

FIRE ZONE ONE shall encompass the entire City of Berkeley except for Fire Zones Two and Three.

FIRE ZONE TWO encompasses those areas designated as Combined Hillside District in the Official Zoning map of the City of Berkeley and those areas designated as Very High in the official Fire Hazard Severity Zones (FHSZ) map of The Department of Forestry and Fire Protection (CAL FIRE), as they may be amended from time to time. The following properties, not part of the Combined Hillside District, are included in Fire Zone Two under the Very High designation of the FHSZ map: The eastern section of the University of California, Berkeley main campus, block number 2042 (Alameda County Accessory's parcel numbering (APN) system), to the east city line and all of the

Clark-Kerr campus, block number 7690, to the east city line. All of block number 7680 in the City of Berkeley and portions of block number 1702 in the City of Berkeley. See Exhibit A for the specific parcels by Assessor's Parcel Number and addresses.

FIRE ZONE 3 encompasses those areas designated as Environmental Safety – Residential Districts on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area and where a local agency, city, county, city and county, or district is responsible for fire protection. Fire Zones 2 and 3 are designated as Local Agency High Fire Hazard Severity Zone.

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Fire Zones 2 and 3 are designated as Wildland-Urban Interface Fire Area.

R327.5 – ROOFING

R327.5.1 General. Roofs shall be a Class A minimum and shall comply with the requirements of Sections R327 and R902. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wooden shakes and shingles are prohibited roof coverings regardless of the assembly rating of the roof system.

Exception: Replacement of less than 50% of the roof area within a 5 year period.

R327.5.5 Spark Arrestors. All chimneys of fireplaces, stoves, barbecues or heating appliances using solid fuel shall be provided with an approved spark arrestor whenever modification has been made to any of these appliances, or whenever a structure is re-roofed. The net free area of the spark arrestor shall be not less than four times the net free area of the outlet of the chimney. The spark arrestor shall have heat and corrosion resistance equivalent to twelve-gauge wire, nineteen gauge galvanized wire, or twenty-four-gauge stainless steel. Openings shall not permit the passage of spheres having a diameter larger than one-half inch and shall not block the passage of spheres having a diameter of less than three-eighths inch. The arrestor shall be securely attached to the chimney or stovepipe and shall be adequately supported. The use of bands, mollies, masonry anchors or mortar ties are recommended depending upon the individual need.

R327.7 – EXTERIOR COVERING

R327.7.3.2 Replacement of Exterior Wall Covering. Materials for replacement of existing exterior wall covering shall meet or exceed the standards set forth in this chapter.

Exception: Where less than 50% of any wall surface is being replaced or repaired, and the matching of the new plane to the existing plane on that wall is not possible.

R327.11 – UNDERGROUND UTILITY CONNECTIONS

R327.11.1 Underground utility connections. For new construction, provisions shall be made for the undergrounding of all utilities serving the property, including but not limited to electrical, telephone and cable television, by the installation of appropriately sized underground conduits extending from the street property

R327.12 – ADDITIONAL REQUIREMENTS IN FIRE ZONE THREE

R327.12.1 General. In addition to meeting the other requirements of this Chapter, buildings or structures hereinafter erected, constructed, moved, altered, added, or repaired within Fire Zone Three shall comply with the following requirements for buildings and structures.

R327.12.2 Fire Warning System. All residential units shall be equipped with a Fire Warning System as specified by the residential smoke detector requirements of the current edition of the California Building Code and with an audible exterior alarm. The exterior alarm must meet the requirements of NFPA 72 or equivalent and generate 45 decibels ten feet from the alarm, or more.

R327.12.3 Automatic Fire Sprinklers, Berkeley Fire Code Section 903.2.21. Any new construction or new additions to existing structures requiring a permit determined to be \$100,000 or more in construction costs shall be required to install automatic fire sprinklers throughout the existing structure.

R327.12.4 Utilities. Utilities, pipes, furnaces, water heaters or other mechanical devices located in an exposed underfloor area of a building or structure shall be enclosed with material as required for exterior one hour fire resistive construction. Adequate covered access openings for servicing and ventilation of such facilities shall be provided as required by appropriate codes.

R327.12.5 Control of brush or vegetation. Brush and vegetation shall be controlled as required in the Berkeley Fire Code.

R327.12.6 Special Conditions. The following additional conditions must be met:

1. Public access roads and fire trails. No person(s) shall use any public access road or fire trail for the storage of any construction material, stationary

construction equipment, construction office, portable refuse container, or earth from any grading or excavating.

2. **Water Service.** The water service to the site shall be installed with a ¾" hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft ¾" hose available.

Exhibit A

Parcels in Addition to the Combined Hillside District

The following additional parcels by Assessor's Parcel Number and address are included in Fire Zone Two:

Parcel Number (APN)	Address
048-7680-001-02	3 Tanglewood Road
048-7680-002-01	5 Tanglewood Road
048-7680-031-00	7 Tanglewood Road
048-7680-019-00	11 Tanglewood Road
048-7680-014-00	19 Tanglewood Road
048-7680-032-01	25 Tanglewood Road
048-7680-027-00	29 Tanglewood Road
054-1702-067-00	10 Tanglewood Road
054-1702-068-00	18 Tanglewood Road
054-1702-069-00	22 Tanglewood Road
054-1702-070-00	28 Tanglewood Road
054-1702-063-00	2701 Belrose Avenue
054-1702-076-00	2715 Belrose Avenue
054-1702-075-00	2721 Belrose Avenue
054-1702-074-00	2729 Belrose Avenue
054-1702-073-00	2737 Belrose Avenue
054-1702-112-00	2801 Claremont Boulevard
054-1702-123-01	2811 Claremont Boulevard
054-1702-122-00	2815 Claremont Boulevard
054-1702-120-01	2821 Claremont Boulevard
054-1702-114-01	2816 Claremont Avenue
054-1702-115-00	2820 Claremont Avenue
054-1702-072-00	3005 Garber Street
054-1702-071-00	3015 Garber Street
054-1702-113-00	3020 Garber Street
054-1702-116-00	3017 Avalon Avenue

Section 19.29.050 Technical Amendments to Structural Standards

R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D0, D1 and D2, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars not smaller than No. 4 bars. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D0, D1 and D2 where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D0, D1 and D2 where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

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

Exception: In detached one- and two-family dwellings which are three stories or less in height and constructed with stud bearing walls, isolated plain concrete footings supporting columns or pedestals are permitted.

R404.1.4.2 Concrete foundation walls. In buildings assigned to Seismic Design Category D₀, D₁ or D₂, as established in Table R301.2(1), concrete foundation walls that support light-frame walls shall comply with ACI 318.

R404.1.4.1 Masonry foundation walls. Masonry foundation walls in buildings assigned to Seismic Design Category D₀, D₁ or D₂, as established in Table R301.2(1), shall comply with TMS 402/ACI 530/ASCE 5.

Table R602.10.1.2(2)

d. In Seismic Design Categories D₀, D₁, and D₂, Method GB is not permitted and the use of Method PCP is limited to one-story single family dwellings and accessory structures.

TABLE R602.10.1.2(2)^{a,b,c,d}

R602.10.2.1.1 Limits on methods GB and PCP. In Seismic Design Categories D₀, D₁, and D₂, Method GB is not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other types of braced wall panel sheathing. In

Seismic Design Categories D₀, D₁, and D₂, the use of Method PCP is limited to one-story single family dwellings and accessory structures.

Section 3. That Berkeley Municipal Code Chapter 19.30 is hereby repealed and reenacted to read as follows:

Chapter 19.30

BERKELEY ELECTRICAL CODE

Sections:

- 19.30.010** Adoption of California Electrical Code.
- 19.30.020** Title.
- 19.30.030** Administrative provisions.

Section 19.30.010 Adoption of California Electrical Code.

The California Electrical Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 3 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.30.020 Title.

This code shall be known as the "Berkeley Electrical Code" and may be cited as "this code."

Section 19.30.030 Administrative provisions.

Administrative provisions. All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any administrative provisions contained in Article 89 General Code Provisions that may conflict.

Section 4. That Berkeley Municipal Code Chapter 19.32 is hereby repealed and reenacted to read as follows:

Chapter 19.32

BERKELEY MECHANICAL CODE

Sections:

- 19.32.010** Adoption of the California Mechanical Code.
- 19.32.020** Title.
- 19.32.030** Administrative provisions.

Section 19.32.010 Adoption of the California Mechanical Code.

The California Mechanical Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 4 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.32.020 Title.

This Code shall be known as the "Berkeley Mechanical Code" and may be cited as "this Code."

Section 19.32.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.32, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General code Provisions that may conflict.

For regulations governing wood burning appliances, see BMC 19.28.060.

Section 5. That Berkeley Municipal Code Chapter 19.36 is hereby repealed and reenacted as Chapter 19.34 to read as follows:

Chapter 19.34

BERKELEY PLUMBING CODE

Sections:

- | | |
|------------------|--|
| 19.34.010 | Adoption of the California Plumbing Code. |
| 19.34.020 | Title. |
| 19.34.030 | Administrative provisions. |
| 19.34.040 | Minimum Plumbing Fixtures. |

Section 19.34.010 Adoption of the California Plumbing Code.

The California Plumbing Code, 2010 Edition, as adopted California Code of Regulations, Title 24, Part 5 including Appendices A, B, C, D and I, is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. One copy of this Code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.36.020 Title.

This Code shall be known as the "Berkeley Plumbing Code" and may be cited as "this Code."

Section 19.34.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General Code Provisions that may conflict.

Section 19.34.040 CPC Table 4-1 Minimum Plumbing Fixture Facilities

Footnote 15: For smaller type Public and Professional Offices such as banks, dental offices, law offices, real estate offices, architectural offices, engineering offices, and similar uses, including restaurants classified as Group B occupancies. A public area in these establishments may use the requirement for Retail or Wholesale Stores.

Section 6. That Berkeley Municipal Code Chapter 19.36 is hereby added to read as follows:

Chapter 19.36

BERKELEY ENERGY CODE*

Sections:

- 19.36.010 Adoption of the California Energy Code.**
- 19.36.020 Title.**
- 19.36.030 Administrative provisions.**

Section 19.36.010 Adoption of the California Energy Code.

The California Energy Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 6 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.32.020 Title.

This Code shall be known as the "Berkeley Energy Code" and may be cited as "this Code."

Section 19.32.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General code Provisions that may conflict.

For regulations governing wood burning appliances, see BMC 19.28.060.

Section 7. That Chapter 19.37 is added to the Berkeley Municipal Code to read as follows:

Chapter 19.37

BERKELEY GREEN CODE

Sections:

- 19.37.010 Adoption of California Green Building Standards Code.**
- 19.37.020 Title.**
- 19.37.030 Administrative provisions.**
- 19.37.040 Chapter 4. Residential Mandatory Measures**
 - Division 4.4 Material Conservation and Resource Efficiency**
- 19.37.050 Chapter 5. Nonresidential Mandatory Measures**
 - Division 5.4 Material Conservation and Resource Efficiency**

Section 19.37.010 Adoption of California Green Building Standards Code.

The California Green Building Standards Code, 2010 Edition, California Code of Regulations, Title 24, Part 11, is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter.

Section 19.37.020 Title.

This code shall be known as the "Berkeley Green Code" and may be cited as "this code."

Section 19.37.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any California Green Building Standards Code administrative provisions that may conflict. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.37.040 Chapter 4. Residential Mandatory Measures

Division 4.4 Material Conservation and Resource Efficiency

Section 4.408 Construction Waste Reduction, Disposal and Recycling

Recycle and/or salvage for reuse construction and demolition debris in accordance with Berkeley Municipal Code Chapter 19.24.

Section 19.37.050 Chapter 5. Nonresidential Mandatory Measures **Division 5.4 Material Conservation and Resource Efficiency**

Section 5.408 Construction Waste Reduction, Disposal and Recycling

Recycle and/or salvage for reuse construction and demolition debris in accordance with Berkeley Municipal Code Chapter 19.24

Section 8. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on October 26, 2010, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington, Wozniak and Bates.

Noes: None.

Absent: None.

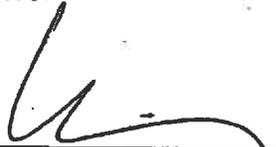
At a regular meeting of the Council of the City of Berkeley held on November 9, 2010, this Ordinance was adopted by the following vote:

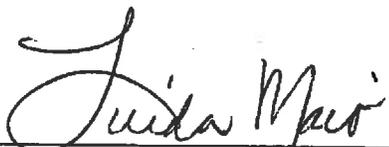
Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington and Wozniak.

Noes: None.

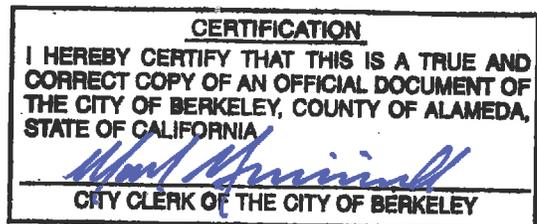
Absent: Bates.

ATTEST:


Deanna Despain, CMC, City Clerk


Linda Maio, Mayor pro tempore

Date signed: 15 Nov 10



RESOLUTION NO. 65,083-N.S.

ADOPTING FINDINGS AS TO LOCAL CLIMATIC, GEOLOGICAL AND TOPOGRAPHICAL CONDITIONS RENDERING REASONABLY NECESSARY VARIOUS ENUMERATED LOCAL BUILDING STANDARDS THAT ARE MORE STRINGENT THAN THOSE MANDATED BY THE CALIFORNIA BUILDING CODE

BE IT RESOLVED by the City Council of the City of Berkeley as follows:

WHEREAS, the City is proposing to adopt various enumerated changes and modifications to the California Building Code, as set forth below; and

WHEREAS, Health & Safety Code §17958 allows the City to make modifications or changes to the California Building Code and other regulations adopted pursuant to Health & Safety Code §17921(a) which result in more stringent local requirements; and

WHEREAS, Health & Safety Code §17958, §17958.5 and §17958.7 require that such changes be supported by findings made by the governing body that such more stringent local requirements are necessary because of "local climatic, geological, or topographical conditions"; and

WHEREAS, such findings must be made available as a public record and a copy thereof with each such modification or change shall be filed with the California Building Standards Commission:

NOW THEREFORE, BE IT RESOLVED by the City Council that it finds that each of the various proposed changes or modifications to the California Building Code which are listed enumerated below are reasonably necessary because of local conditions in the area encompassed by the City of Berkeley, as set forth below:

A. LOCAL CONDITIONS

1. Climatic Conditions.

a. Discussion.

The City of Berkeley is located at the geographic center of the Bay Area. The western limits are defined by the Bay at near sea level and the eastern limits by the abruptly rising Berkeley Hills to 1,200 feet. The eastern limit faces open parklands and open space (covered with vegetative fuel loading) to the east and is exposed to a unique danger from wild land fires during periods of hot, dry weather in the summer months. Many of the Berkeley homes in this area have wood shake and shingle roofs and are surrounded by brush type vegetation. The situation is made even worse by the negative effects of high wind conditions during the fire season. During May to October, critical climatic fire conditions occur where the temperature is greater than 80°F, the wind speed is greater than 15 mph, fuel moisture is less than or equal to 10.0 percent, wind direction is from north to the east-southeast and the ignition component is 65 or greater. These conditions occur more frequently during the fire season but this does

not preclude the possibility that a serious fire could occur during other months of the year. The critical climate fire conditions create a situation conducive to rapidly moving, high intensity fires. Fires starting in the wild land areas along the easterly border are likely to move rapidly westward into Berkeley's urban areas.

In September 1923, critical climatic fire conditions were in effect and Berkeley sustained one of the most devastating fires in California's history. A fire swept over the range of the hills to the northeast of Berkeley and within two hours was attacking houses within the City limits. A total of 130 acres of built-up territory burned. 584 Berkeley buildings were wholly destroyed and about 30 others seriously damaged. By far the greater portion were single-family dwellings, but among the number were 63 apartments, 13 fraternity, sorority and students' house clubs and 6 hotels and boarding houses.

In December of 1980, during critical climatic fire conditions, a small fire started at Berkeley's northeast limits and within minutes five homes were totally destroyed by fire.

On October 20, 1991, a disastrous firestorm swept down from the Oakland hills. Within the first few hours, thousands of people were evacuated. Ultimately over 3,000 dwelling units were destroyed, of which more than 70 were in Berkeley. This fire matched the pattern established by the fires of 1923 and 1980. Additionally, the conditions that led to it were the same as the conditions that led to a 1970 fire that destroyed 70 homes in Oakland.

In addition, Berkeley frequently experiences cold winter days with accompanying temperature inversions which trap wood smoke near the ground and increase air pollution. These stagnant air days are marked by increased acute respiratory disease, including asthma, and a small but consistent increase in deaths from heart and lung disease. During these periods the usual onshore flow of clean marine air ceases and wood smoke air pollution becomes an area-wide phenomena. Studies by the Bay Area Air Quality Management District suggest that between 20 and 50% of air polluting small particles come from residential wood burning.

b. Summary.

Local climatic conditions of limited rainfall, low humidity, high temperatures and high winds along with existing building construction create extremely hazardous fire conditions that adversely affect the acceleration intensity and size of fires in the City. The same climatic conditions may result in the concurrent occurrence of one or more fires, which may spread in the more populated areas of the City without adequate fire department personnel to protect against and control such a situation.

2. Geological and Topographical Conditions.

a. Discussion.

The City of Berkeley is in a region of high seismic activity and has the San Andreas earthquake fault to the west and the Calaveras earthquake fault to the east. Berkeley is traversed by the Hayward fault. All three faults are known to be active as evidenced by the damaging earthquakes they have produced in the last 100 years and can, therefore, be expected to do the same in the future. Of primary concern to Berkeley is the Hayward Fault, which has been estimated to be capable of earthquakes exceeding a magnitude of 7.0 on the Richter scale, and extends through mainly residential areas and passes through a small business district and the University of California. A large number of underground utilities cross the fault, including major water supply lines. Intensified damage during an earthquake may be expected in those areas of poorer ground along the Bay, west of Interstate 80 and in known slide areas, as well as hillside areas (occupied mainly by dwellings) located within or near the fault zone; some areas are steep and have been subjected to slides. The waterfront areas and areas in the Berkeley flatlands immediately adjacent to creeks and water streams present a major potential for soil liquefaction hazard. The Eastshore Freeway may liquefy and fail under heavy shaking or it may be inundated by a tsunami. The north hill area is most susceptible to landslides because of the steepness of slopes, the presence of soft and unconsolidated sediments, plus extensive water content in the ground. Panoramic Way and other hill areas with narrow and winding streets may face the problem of isolation from the rest of the City. Great potential damage can be related to the likely collapse of freeway overpasses. In the event of a major earthquake, Berkeley's firefighting capability could be greatly affected by loss of its main water supply. There is also the strong possibility of inundation due to failure of water reservoirs in the hill area. For the purposes of disaster response planning, Summit Reservoir at the Kensington border in Berkeley is assumed to leak badly. Berryman Reservoir North has been demolished and will be replaced by a steel tank. Berryman Reservoir South is currently receiving a seismic upgrade. Both projects are slated for completion in late 2011. Additional potential situations inherent in such an occurrence include broken natural gas mains and ensuing fire in the streets, building fires, as the result of broken service connections, the need for rescues for collapsed structures, and the rendering of first aid and other medical attention to a large number of people.

The City of Berkeley has many homes built throughout the urban portion of Berkeley Hill area that are reached by narrow and often winding paved streets which hamper access for fire apparatus and escape routes for residents. In addition, many of the hillside homes are on the extreme eastern edge of the City and require longer response times for the total required firefighting force. In the areas north and south of the University of California, there are large concentrations of apartments, rooming houses, and fraternity and sorority houses. A number of apartments in these areas are of wood frame construction and are up to five stories in height from grade level. The fire potential is moderately high due to building congestion, heights, and wood shingle roof coverings and siding. Fires can be expected to involve large groups of buildings in these areas. It is noted that Berkeley most probably has more physically impaired people per capita than any other community in the United States. It is estimated that 14% of the approximate population of 108,000 in Berkeley are physically impaired. At least one half of this percentage is severely physically impaired, i.e., not able to see, hear or walk. Emergency egress and rescue for these people are more difficult during a fire or other life safety emergency.

The East Shore Freeway, running along the western edge of Berkeley, is one of the most heavily used and congested freeway sections in the state. Noted impacts have been increased rates of asthma, particularly among children. The proximity of Berkeley to this freeway and its location downwind from prevailing patterns negatively affects air quality, thus increasing the impact of wood smoke in Berkeley.

b. Summary.

Local climatic, geological and topographical conditions include high seismic activity, many narrow and winding streets (with slide potential for blockage in the abruptly rising Berkeley hills) and large concentrations of residential type buildings as well as a major freeway. These conditions create an extremely serious problem for the Fire Department when a major earthquake occurs. Many situations will result in limiting or total blockage of fire department emergency vehicular traffic, overtaxed fire department personnel and a total lack of resources for the suppression of fire in buildings and structures in the City of Berkeley. In addition, under these local conditions, the presence of wood smoke can cause increased disease, including asthma, and increased deaths from heart and lung disease.

B. REASONABLE NECESSITY

The proposed changes and modifications to the California Building Code are reasonably necessary due to the local conditions set forth above because they reduce the risks to life and property which result from the City's climate and location astride an active earthquake fault. They are further justified for the reasons set forth below.

In adopting the California Building Code as the Berkeley Building Code, the City proposes to make certain substantive modifications which effect is to impose more stringent requirements locally than are mandated by the California Building Code. These are (1) building standards relating to increased fire resistance in Fire Zones 2 and 3 (Berkeley Building Code Chapter 19.28 Article 2); (2) standards to reduce the risk caused by wood smoke under the climatic conditions of Berkeley (Berkeley Building Code Chapter 19.28 Article 4); existing building standards for retrofit of certain building types with seismic weaknesses (Berkeley Building Code Chapter 19.28 Article 5); standards for repair of buildings damaged in a natural disaster (Berkeley Building Code Chapter 19.28, Article 6); provisions requiring retrofitting of unreinforced masonry buildings (Berkeley Building Code Chapter 19.38,); and provisions governing the identification and analysis of soft, weak, or open front buildings (Berkeley Building Code Chapter 19.39) These more stringent local requirements are reasonably necessary to address risks created by local conditions set forth above for the following reasons.

- a. The modifications made by Chapter 19.28, Article 2 reduce the risk to life and property created by wildfires in the hill areas of the City.
- b. The modifications made by Chapter 19.28, Article 3, reduce the risk to life created by wood smoke throughout the City.
- c. The modifications made by Chapter 19.28, Article 5, Article 6, Chapters 19.38 and 19.39 reduce the risk to life and property of, and hasten recovery from, predictable future natural disasters.

BE IT FURTHER RESOLVED by the City Council that certain local amendments to the Codes are not more stringent than the provisions of the California Codes but rather cover matters not addressed by those Codes or are administrative in nature, as follows:

Chapter 19.28, Article 1, (Administrative provisions and definitions) and Article 5 (Construction in the Right of Way) and all amendments to Chapter 19.30 (California Electrical Code), to Chapter 19.32 (California Mechanical Code), and to Chapter 19.36 (California Plumbing Code), are local amendments to the California Codes affecting administration provisions only.

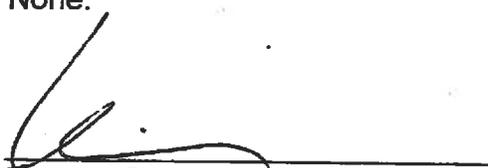
The foregoing Resolution was adopted by the Berkeley City Council on October 26, 2010 by the following vote:

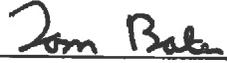
Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington, Wozniak and Bates.

Noes: None.

Absent: None.

Attest:


Deanna Despain, CMC, City Clerk


Tom Bates, Mayor

CERTIFICATION

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF AN OFFICIAL DOCUMENT OF THE CITY OF BERKELEY, COUNTY OF ALAMEDA, STATE OF CALIFORNIA.


CITY CLERK OF THE CITY OF BERKELEY

CALIFORNIA BUILDING STANDARDS COMMISSION

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



December 13, 2010

John W. Fitch, Assistant Fire Chief, Fire Marshal
Berkeley Fire Dept.
City of Berkeley
2100 Martin Luther King Jr. Way, Second Floor
Berkeley, California 92842

John W. Fitch,

This is to acknowledge receipt of the City Berkeley of submittal pertaining to Ordinance No. –N.S. with findings on November 19, 2010. As the law states, no local modification or change to the California Building Standards Code (Code) shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission (the Commission).

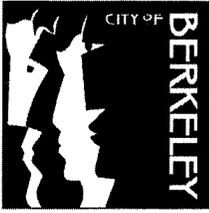
As a reminder, local modifications are specific to a particular edition of the Code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the Code is published. In addition, should you receive Fire Protection District ordinances for ratification;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

This letter attests only to the filing of these local modifications with the Commission, which is not authorized by law to determine the merit of the filing. If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,


Jane G. Taylor
Senior Architect

cc: Chron
Local Filings



Department of Fire and Emergency Services
Division of Fire Prevention
John W. Fitch, Assistant Chief/Fire Marshal

November 16, 2010

Certified Mail

Mr. David Walls, Executive Director
California Buildings Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833-2936

Dear Mr. Walls:

On behalf of the City of Berkeley, please find attached the local conditions and findings and the adopted local amendments to the 2010 California Fire Code that is required to be filed with your commission.

The City of Berkeley held two readings and one public hearing the local conditions and finding and local amendments to the 2007 California Fire Code on October 26, and November 9, 2010. There were no filed written or oral objections to the local amendments filed with the City of Berkeley.

If your commission has any questions, please feel free to contact me at 510-981-5585 or via email at jfitch@cityofberkeley.info.

Sincerely,

John W. Fitch,
Assistant Fire Chief / Fire Marshal
Berkeley Fire Department

Cc: Phil Kamlarz, City Manager
Zach Cowan, City Attorney
Debra Pryor, Fire Chief
File – 2010 Berkeley Fire Code

Attachments

1. Resolution 6,081 N.S. adopting the local findings and conditions
2. Resolution 7,157 N.S. adopting the 2010 California Fire Code with local amendments

2010 NOV 19 A 8:32
CALIFORNIA BUILDINGS
STANDARDS COMMISSION

ORDINANCE NO. -N.S.

REPEALING AND RE-ENACTING BERKELEY MUNICIPAL CODE CHAPTER 19.48
(FIRE CODE)

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Chapter 19.48 is hereby repealed and reenacted as to read as follows:

19.48.010 Adoption of California Fire Code

- A. That portion of the California Building Standards Code that imposes substantially the same requirements as are contained in the International Fire Code, 2009 Edition published by the International Code Council and the California Building Standards Commission with Errata, together with those portions of the International Fire Code, 2009 Edition, including Appendix Chapters 4, B, BB, C, CC, D, E, F, G, and I published by the International Code Council not included in the California Building Standards Code, otherwise known as the "California Fire Code", are adopted by this reference into this Chapter, and are hereby adopted and made a part of this Chapter as though fully set forth herein, subject to the modifications thereto which are set forth in this Chapter. One copy of this Code is on file in the office of the City Clerk of the City of Berkeley.
- B. This Chapter shall be known as the "Berkeley Fire Code" and shall be referred to in this Chapter as "this code".

19.48.020 Amendments to the California Fire Code

The following sections on the California Fire Code are adopted in their entirety subject to the modifications thereto which are set forth below.

- A. **Section 101.1 Title** These regulations, shall be known as the Berkeley Fire Code, may be cited as such and will be referred to herein as "this code."
- B. **Section 101.6. Expense of securing emergencies** The expense of securing any emergency that is within the responsibility for enforcement of the Fire Chief as given in Sections 104.1 or 104.11 shall be a charge against the person who caused the emergency. Damages and expenses incurred by any public agency having jurisdiction or any public agency assisting the agency having jurisdiction shall constitute a debt of such person and shall be collectible by the Fire Chief for proper distribution in the same manner as in the case of an obligation under contract expressed or implied. Expenses as stated above shall include, but not be limited to, equipment and personnel committed and any payments required by the public agency to outside business firms requested by the public agency to secure the emergency, monitor remediation, and clean up.

- C. Section 104.12. Authority to arrest and issue citations** The Fire Chief, Chief Officers, Deputy Fire Marshal, and Fire Inspectors shall have authority to arrest or to cite any person who violates any provision of this Chapter involving the International Fire Code or the California Building Standards Code regulations relating to fire and panic safety as adopted by the State Fire Marshal, in the manner provided for the arrest or release on citation and notice to appear with respect to misdemeanors or infractions, as prescribed by Chapters 5, 5c and 5d of Title 3, Part 2 of the California Penal Code, including Section 853.6, or as the same hereafter may be amended. It is the intent of the City Council that the immunities provided in Penal Code Section 836.5 are applicable to aforementioned officers and employees exercising their arrest or citation authority within the course and scope of their employment pursuant to this Chapter.
- D. Section 105.6.16.** 12. To store, handle or use class III-B liquids with a flashpoint of less than 500 degrees F. in excess of 110 gallons.
- E. Section 105.6.48 Christmas tree sales lot.** To operate a Christmas tree sales lot.
- F. Section 105.6.49 Escort convoy service.** Police and/or Fire Department convoy service for vehicle transportation of extremely hazardous materials.
- G. Section 105.6.50 General use permit.** For any activity or operation not specifically described in this code, which the Fire Chief reasonably determines, may produce conditions hazardous to life or property.
- H. Section 105.6.51 Parking facility, special events.** To use buildings, structures or facilities for vehicle parking, includes parking for special events, which shall include, but is not limited to, football games.
- I. Section 105.6.52 Bars on Windows and Doors.** It is prohibited to install bars on exterior doors or windows of any sleeping rooms below the fourth floor in apartment houses, hotels, and motels
- J. Section 108 Appeals Process**
- K. Section 108.1 Appeals Procedure.** Whenever the Fire Chief disapproves an application, refuses to grant a permit applied for, or revokes or suspends any permit or certificate already issued, an appeal there from may be taken to the City Council by the applicant or permit holder. Notice of the appeal must be filed in triplicate with the City Clerk of the City of Berkeley within ten (10) days from the date of mailing of the Fire Chief's decision to the applicant or permit holder. The notice of appeal shall contain a statement of the reasons for the appeal. The City Clerk shall forward one copy thereof to the Fire Chief. Within ten (10) days after the filing of the notice of appeal, the Fire Chief shall transmit to the City Council all his/her records pertaining to the decision appealed there from.

L. Section 108.3 Stay of Proceedings. The filing of the notice of appeal shall stay all proceedings by all parties in connection with the matter upon which the appeal is taken until determination of the appeal as hereinafter provided, unless the Fire Chief determines that such a stay would result in an imminent threat to the public safety.

M. Section 108.4 Decisions. The City Council shall review the action of the Fire Chief and shall do any one of the following:

1. Refer the matter back to the Fire Chief
2. If the facts stated in or ascertainable from the application, the Notice of Appeal, the written statement of the Fire Chief setting forth the reason for his/her decision, and the other papers, if any, constituting the record do not, in the opinion of the City Council, warrant further hearing, the City Council may affirm the decision of the Fire Chief. Such decision shall be final.
3. If, in the opinion of the City Council, said facts warrant further hearing, the City Council shall set the matter for hearing and shall give notice of the time and place of said hearing by mailing a copy of such notice by certified mail to the address of the applicant as stated in the Notice of Appeal, at least ten (10) days before the time fixed for the hearing. The City Council may continue the hearing from time to time.
4. Following such hearing, the City Council shall reverse, affirm wholly or partly modify any decision of the Fire Chief, or make any other decisions or determinations or impose such conditions as the facts warrant. Such decision or determination shall be final.
5. If none of the above actions have been taken by the City Council within thirty (30) days from the date the appeal first appears on the City Council agenda, then the decision of the Fire Chief shall be deemed affirmed and the appeal shall be deemed dismissed.
6. If the appeal is set for hearing, but the disposition of the appeal has not been determined within ninety (90) days from the date the appeal first appears on the City Council agenda, then the decision of the Fire Chief shall be deemed affirmed and the appeal deemed dismissed.

N. Section 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, premises or system regulated by this code without first obtaining a permit, or to cause same to be done in conflict with or in violation of any of the provisions of this code, or to create, maintain or allow to continue any fire hazard.

O. Section 109.3 Violations. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or the directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a misdemeanor, but may be cited or charged, at the election of the enforcing officer or city attorney, as infractions, with the exceptions cited below in subsection R and subject to an election by the defendant under Penal Code Subsection 17 (d). Nothing in this section shall prevent any other remedy by law. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

P. Section 109.3.1 Misdemeanors. Notwithstanding Section 109.3, violation of any of the following provisions of this code shall be charged only as a misdemeanor:

1. Section 109.2.2 (Compliance with Notice and Orders)
2. Section 109.2.4 (Compliance with Tags)
3. Section 109.2.4 (Removal and Destruction of Signs and Tags)
4. Section 110.2 (Evacuation of an Unsafe Building)
5. Section 901.8 (Tampering With Fire Protection Equipment)
6. Section 401.3.1 (Transmitting False Alarms)

Q. Section 109.3.2 Work without a Permit. In addition to any and all remedies available to the fire code official as specified in Sections 109.3 and 109.3.1, contractors or other persons performing work without first obtaining a permit for the addition, change out, installation replacement, upgrade, of any fire alarm, fire suppression, or fire sprinkler system shall be required to pay three times the amount of the required fees to obtain a permit for the addition, change out, installation, replacement, upgrade of the fire alarm, fire suppression, or fire sprinkler system.

R. Section 110.2.1 Re-occupy No person shall reoccupy any building, which has been posted as specified in this subsection except for the purpose of securing same or making the required repairs or demolishing the building or structure, nor shall any person remove or deface any such notice so posted until the hazard(s) has been abated.

S. Section 110.4.1 Notice of hearing The abatement process shall be conducted in accordance with the notice and hearing requirements of the nuisance abatement provisions of Berkeley Municipal Code Chapter 1.24, including summary abatements of structures or premises determined by the City to constitute an imminent hazard or emergency condition.

T. Section 110.4.1.1 Authority to abate fire nuisance. The Fire Chief, Chief Officers, Deputy Fire Marshal, Fire Inspectors, Fire Officers and Acting Fire Officers shall have the authority to order the abatement of fire nuisances.

U. Section 110.4.2 Non-Compliance. Where the owner does not comply with an abatement order under Section 110.4.1 within the period specified, the City may perform or cause to be performed the necessary work. The costs incurred shall be recoverable under the procedures in Section 110.4.1.

Section 113.6 Fees. Fees for permits and inspections shall be set forth by the City Council by resolution.

V. 202 (Definitions – B) Berkeley Marina Area shall mean all those parts of the City of Berkeley west of the Interstate 80 Freeway.

W. Section 202 (Definitions – F) Fire Hazard means anything or act which increases or could cause an increase of the hazard or menace of fire to a greater degree than that customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing or extinguishing fire or anything or act which could obstruct, delay, hinder or interfere with the operations of the fire department or the egress of occupants in the event of fire. Fire hazards as defined herein are hereby declared to be public nuisances subject to abatement by the City.

X. Section 202 (Definitions – F) Fire Nuisance means anything or act, which is annoying, unpleasant, offensive or obnoxious because of fire.

Y. Section 202 (Definitions – J) Jurisdiction means the City of Berkeley.

Z. Section 202 (Definitions – W) 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.

AA. Section 504.4 Roof accessibility. No objects, devices, equipment, or systems shall be installed or mounted within eighteen inches of either side of a hip or ridge line or within three feet of a roof edge to allow access and egress for firefighting operations.

BB. Section 703.2.4 Fusible Links. Doors required for fire and smoke separation for interior exit stairways and floor separation in R-1 or R-2 occupancies shall not be maintained in an open position with fusible links.

CC. Section 903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R as amended in Chapter 46.

Exception: Sprinkler systems in residential/commercial mixed-use buildings are to be in accordance with NFPA 13.

DD. Section 903.3.8 Floor Control Valves. Floor control valves and water flow detection assemblies shall be installed at each floor where any of the following occur:

1. Buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access.
2. Buildings that are three or more stories in height.
3. Buildings that are two or more stories below the highest level of fire department vehicle access.

Exception:

1. Group R-3 and R-3.1 occupancies floor control valves and water flow detection assemblies shall not be required.
2. Control valves in 3 stories building can be located adjacent to stairwells having exterior ground floor access, when approved.

EE. Section 903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy

FF. Section 903.2.10 Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the California Building Code or where located beneath other groups or with U occupancies with installed parking lifts with no exceptions.

GG. Section 903.2.10.1 Commercial Parking Garages. An automatic sprinkler system shall be provided throughout buildings used for the storage of commercial trucks and buses.

HH. Section 903.2.10.1.1 Structures in the Berkeley Marina Area. All structures in the Berkeley Marina Area shall be provided with total automatic sprinkler protection.

II. Section 903.2.11.1 Windowless stories in all occupancies. An automatic sprinkler system shall be installed in windowless stories in all occupancies.

JJ. Section 903.2.11.1.3 Stories and basements without openings. An automatic

sprinkler system shall be installed in all buildings and floors without openings to the exterior of the building. This shall include basement and sub-floor levels as well.

- KK. Section 903.10.1.2 Public Self-Storage Buildings.** Any building erected or existing building that was converted and/or subdivided for public self-storage use on or after August 19, 1982 shall be provided with total automatic sprinkler protection in accordance with NFPA 13 standards.
- LL. Section 907.2** Where an automatic and manual or a manual fire alarm system is required by this code, elimination of fire alarm boxes in buildings equipped with an approved sprinkler systems is prohibited.
- MM. Section 907.2.1 Group R-1 Occupancies.** A manual and automatic fire alarm system shall be provided in apartment houses three or more stories in height or sixteen or more dwelling units, in hotels three or more stories in height or containing 20 or more guest rooms, and in congregate residences three or more stories in height or having an occupancy load of 20 or more.
- NN. Section 907.2.8.2 Interior Corridor Protection.** An automatic fire alarm system shall be installed throughout all interior corridors and common areas. The detection device for this purpose shall be a smoke detector (or heat detector as approved), which is system connected and electronically supervised.
- OO. Section 907.2.9 Group R-2 and R-2.1.** . An automatic and manual fire alarm system shall be installed and maintained in Group R-2 occupancies three or more stories in height or containing sixteen (16) or more sleeping units or when any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling units or sleeping units.

EXCEPTIONS:

1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.

2. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1026.6, Exception 4.

PP. Section 907.2.13 High-Rise Buildings. High-rise buildings constructed after January 1, 2008 shall comply with Sections 907.2.13 through 907.2.13.2.

QQ. Section 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 adequate pressurized fresh air supply through a 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 to, installation and maintenance of such air replenishment systems shall be made 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.

RR. Section 2701.7 Hazardous materials transportation restrictions. No vehicle containing hazardous materials, including, but not limited to, a hazardous materials transportation tank truck, trailer, semi trailer or tank wagon containing flammable or combustible liquids, hazardous chemicals, liquefied petroleum gases, poisonous gases, or cryogenic fluids, shall be operated on any City street without first obtaining a permit from the Fire Chief.

A map showing the proposed route of the vehicle shall accompany applications for such permits. If a permit is granted, the map shall be carried at all times in the vehicle and the vehicle shall not deviate from the approved route as shown on the map. Such a permit may contain conditions, including restrictions on the hours within which certain routes may be used and limitations on the size of the vehicle allowed to travel the approved route. No route shall be approved that includes passage over or adjacent to subway entry or vent structures, through the Northbrae Tunnel, in any area designated an environmental safety residential district by the City of Berkeley's Zoning Ordinance, or in an area which may be designated as a hazardous fire area. Departure from the approved route, travel outside the permitted hours, violation of any vehicle size limitation imposed, failure to carry a map showing route approval or failure to comply with any other condition of the permit shall constitute a violation of this code.

The transportation of extremely hazardous materials may, in the discretion of the Fire Chief, require both a permit and accompaniment by a Fire Department or Police Department convoy.

The following streets contain purge chamber openings which lead directly into the subway section of the Bay Area Rapid Transit (BART) System in Berkeley and their use by tank vehicles or trailers for transportation or delivery of flammable or combustible liquids, hazardous chemicals, liquefied petroleum gases, poisonous gases, or cryogenic fluids is prohibited and a violation of this code:

- a. On Addison Street between Martin Luther King Jr. Way and Oxford Street;
 - b. On Shattuck Avenue between University Avenue and Dwight Way;
 - c. On Virginia Street between Franklin and Sacramento Streets;
 - d. On Sacramento Street between Virginia Street and Hearst Avenue;
 - e. On Hearst Avenue between McGee Avenue and Milvia Street;
 - f. On Adeline Street between Ward and Stuart Streets; and
 - g. On Adeline Street between Ashby Avenue and Woolsey Street.
- SS. Section 3301.2 Storage and use of explosives.** The storage of explosives within the City limits is prohibited.
- TT. Section 3401.4.1 Transfer of flammable and combustible liquids.** Transfer to or from above ground or underground tanks of flammable and combustible liquids shall not be made from or onto the street or public way except by written approval by the Fire Chief.
- UU. Section 3404.1.1** The storage of flammable and combustible liquids in underground tanks is prohibited in all areas zoned solely for residential occupancies, closely built commercial properties, and any other area deemed unsafe by the Fire Chief.
- VV. Section 3404.1.2** The storage of Class I and Class II liquids in aboveground tanks including enclosed tanks inside or outside of buildings is permitted only by authorization of the Fire Chief. Such installations shall be in accordance with this Chapter and all applicable laws and recognized national standards.
- WW. Section 3404.2.13.1.4.** Underground storage tanks may be abandoned only under permit and following City of Berkeley Fire Department procedures. The owner shall demonstrate to the satisfaction of the City of Berkeley Toxics Division that no unauthorized release has occurred. If the soil is contaminated, mitigation must be completed to the satisfaction of the Toxics Division. A notice describing the precise location of the closed underground storage tank, the hazardous substances that it contained, and the closure method shall be caused to be recorded on the property's title through the County Recorder's Office. . . Tanks abandoned in place shall be as follows:
1. Flammable and combustible liquids shall be removed from the tank and connected piping.
 2. The suction, inlet, gauge, vapor return and vapor lines shall be disconnected.
 3. The tank shall be filled completely with an approved inert solid material.
 4. Remaining underground piping shall be capped or plugged.

5. A record of tank size, location and date of abandonment shall be retained.
6. All exterior above-grade fill piping shall be permanently removed when tanks are abandoned or removed.

XX. Section 3404.2.14 Removal and disposal of tanks. Removal and disposal of underground storage tanks shall comply with Section 3404.2.14.1 and 3404.2.14.2 and City of Berkeley Fire Department procedures pursuant only to a permit. The applicant shall submit two copies of a site plan showing the location of the tank(s). The owner shall demonstrate to the satisfaction of the City of Berkeley Toxics Division that no unauthorized release has occurred. If the soil is contaminated, mitigation must be completed to the satisfaction of the Toxics Division.

Section 3804.1.2 L.P.G. Prohibited Storage It shall be unlawful to store any liquefied petroleum gas cylinder with a capacity greater than 2-1/2 lbs. water capacity or a portable tank within any structure or building with an occupancy classification of A, R-1, R-2, or R-4, unless specifically authorized by this code.

YY. Section 4603.4.3 Automatic Sprinkler Requirements for Existing Hotels. All existing hotel and motels shall be provided with an automatic fire sprinkler system when the rooms are used for sleeping or are rented or leased above the ground floor, if the hotel was built prior to 1992, and also meets one of the following two conditions:

1. The height of the hotel is three or more stories or two stories plus an inhabited basement, which is used for purposes other than exclusively servicing the maintenance and other needs of the building; or
2. The hotel contains 20 or more rooms, or regularly accommodates 20 or more residential occupants.

EXCEPTION: No hotel in which the exits from sleeping rooms lead either to the outside of the building either directly or via approved exit balconies with approved exterior stairway(s) in accordance with the requirements of the Berkeley Building Code is required to comply with this Section.

ZZ. Section 4603.4.3 Definitions. For the purposes of this Section, and used elsewhere in this code, these words shall have the meaning as shown herein as follows:

1. **“EXISTING” Buildings,** facilities or conditions that are already in existence, constructed or officially authorized prior to the adoption of this code.

2. **"HOTEL".** "Hotel" shall mean any building, including motels, dormitories, rooming houses, fraternity houses and sorority houses, which contain six (6) or more rooms which were intended or designed to be used, or which are used, for the purposes of renting, hiring or letting to residential occupants for sleeping purposes but shall not include apartment buildings as defined in this code.
3. **"STORY".** "Story" is as defined in the Berkeley Building Code.
4. **"FIRST STORY"** "First Story" is as defined in the Berkeley Building Code.
5. **"BASEMENT".** "Basement" is as defined in the Berkeley Building Code.
6. **"BALCONY, EXTERIOR EXIT".** "Balcony, Exterior Exit" shall mean a landing or porch projecting from the wall of a building which serves as a required exit. The long side shall be at least 50 percent directly open to the exterior, and the open area above the guardrail shall be so configured as to prevent the accumulation of smoke or toxic gases.

Section 4603.4.4 Quick Response Heads in Sleeping Rooms. In the sleeping units of the building, only residential or quick response standard sprinkler heads shall be used.

Section 4603.4.5 Supervised Central Station Monitoring of Existing Buildings. All automatic sprinkler systems installed under this subsection in which the number of sprinkler heads is 20 or more shall be supervised by an approved central, proprietary or remote-station alarm service or a local alarm which will give an audible signal at a constantly attended location.

AAA. Section 4603.4.6 3 Environmental Safety – Residential District. Any new construction requiring a permit determined to be \$100,000 or more in construction costs or new additions to existing structures shall be required to install automatic fire sprinklers throughout the existing structure. For the purpose of this subsection "Environmental Safety – Residential District" shall mean those areas designated as such on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

BBB. Section 4603.6 Where an automatic and manual or a manual fire alarm system is required by this code, elimination of fire alarm boxes in buildings equipped with an approved sprinkler system is prohibited.

EXCEPTION: When deemed not required by Fire Chief.

CCC. Section 4603.6.5.1 Group Existing R-1 hotel and motel fire alarm systems. An automatic and manual fire alarm system shall be installed and maintained in existing Group R-1 hotels and motels with three or more stories or with 20 or more sleeping units.

DDD. Section 4603.6 Fire alarm systems. A fire alarm system shall be installed in accordance with Sections 4603.6.1 through 4603.6.7 and provide occupant notification in accordance with section 907.6. All existing R occupancies that are required to provide both a fire alarm and fire suppression system shall have the system monitored by a central station, remote supervising station, or proprietary supervising station. Existing high-rise buildings shall comply with Section 4603.6.8.

EEE. Section 4603.6.6 Group R-2. An automatic and manual fire alarm system shall be installed and maintained in existing Group R-2 occupancies three or more stories in height or with 16 or more dwelling units or sleeping units. Congregate residences shall retrofit existing manual-only fire alarm systems with automatic fire detection. Other types of R-2 occupancies (such as apartment buildings) shall retrofit existing manual-only fire alarm systems with automatic fire detection when the existing fire alarm control unit is replaced for any reason. Automatic detection shall be accomplished by use of a smoke detector (or heat detector as approved), which is system connected and electronically supervised. Detectors shall also be installed in all interior corridors and common areas.

EXCEPTIONS:

1. Where each living unit is separated from other contiguous living units by fire barriers having a fire-resistive rating of not less than 0.75 hour, and where each living unit has either its own independent exit or its own independent stairway or ramp discharging at grade.
2. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

FFF. Section 4902 DEFINITIONS. Fire Protection Plan is a document prepared for a specific project or development proposed for a Wildland-Urban Interface Fire Area. It describes ways to minimize and mitigate potential for loss from wildfire exposure.

The Fire Protection Plan shall be in accordance with this Chapter. When required by the Fire Chief for the purposes of granting modifications, a Fire Protection Plan shall be submitted.

A Fire Protection Plan shall also be known as a Vegetation Management Plan (VMP), although it may also contain elements not directly associated with vegetation management including but not limited to building construction features

or equipment, engineering controls, administrative controls, process controls or site access requirements.

FIRE ZONE ONE shall encompass the entire City of Berkeley except for Fire Zones Two and Three.

FIRE ZONE TWO encompasses those areas designated as Combined Hillside District in the Official Zoning map of the City of Berkeley and those areas designated as Very High in the official Fire Hazard Severity Zones (FHSZ) map of The Department of Forestry and Fire Protection (CAL FIRE), as they may be amended from time to time. The following properties, not part of the Combined Hillside District, are included in Fire Zone Two under the Very High designation of the FHSZ map: The eastern section of the University of California, Berkeley main campus, block number 2042(Alameda County Accessory's parcel numbering (APN) system), to the east City line and all of the Clark-Kerr campus, block number 7690, to the east City line. All of block number 7680 in the City of Berkeley and portions of block number 1702 in the City of Berkeley. These additional parcels and their assigned street address are established in Section 19.28.030 of the Berkeley Municipal Code, Berkeley Building Code and are specified in Table 4902.1

Table 4902.1

Parcels Added to the Combined Hillside District	
Parcel Number (APN)	Address
048-7680-001-02	3 Tanglewood Road
048-7680-002-01	5 Tanglewood Road
048-7680-031-00	7 Tanglewood Road
048-7680-019-00	11 Tanglewood Road
048-7680-014-00	19 Tanglewood Road
048-7680-032-01	25 Tanglewood Road
048-7680-027-00	29 Tanglewood Road
054-1702-067-00	10 Tanglewood Road
054-1702-068-00	18 Tanglewood Road
054-1702-069-00	22 Tanglewood Road
054-1702-070-00	28 Tanglewood Road
054-1702-063-00	2701 Belrose Avenue
054-1702-076-00	2715 Belrose Avenue
054-1702-075-00	2721 Belrose Avenue
054-1702-074-00	2729 Belrose Avenue
054-1702-073-00	2737 Belrose Avenue
054-1702-112-00	2801 Claremont Boulevard
054-1702-123-01	2811 Claremont Boulevard

<i>054-1702-122-00</i>	<i>2815 Claremont Boulevard</i>
<i>054-1702-120-01</i>	<i>2821 Claremont Boulevard</i>
<i>054-1702-114-01</i>	<i>2816 Claremont Avenue</i>
<i>054-1702-115-00</i>	<i>2820 Claremont Avenue</i>
<i>054-1702-072-00</i>	<i>3005 Garber Street</i>
<i>054-1702-071-00</i>	<i>3015 Garber Street</i>
<i>054-1702-113-00</i>	<i>3020 Garber Street</i>
<i>054-1702-116-00</i>	<i>3017 Avalon Avenue</i>

FIRE ZONE 3 encompasses those areas designated as Environmental Safety - Residential Districts on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

GGG. Section 4902 DEFINITIONS

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Berkeley Fire Zones 2 and 3 are designated as Wildland-Urban Interface Fire Areas. See Article 86B for the applicable referenced Sections of the Government Code and the Public Resources Code.

HHH. Section 4903 PLANS.

III. Section 4903.1 General. When required to submit a Fire Protection Plan or Vegetation Management Plan for any reason the responsible party shall prepare or cause to be prepared a Fire Protection Plan in accordance with the latest standards of the Berkeley Fire Department. The Fire Protection Plan shall be submitted to, reviewed and approved by the Berkeley Fire Department and shall be enforced and maintained by the responsible party or their designated agent. The Berkeley Fire Department may charge an appropriate fee for the review, approval and processing of the Fire Protection Plan in accordance with the hourly rate established by City Council resolution.

JJJ. Section 4904.3 Berkeley Fire Hazard Severity Zones.

FIRE ZONE TWO. Fire Zone Two is designated a Very-High Fire Hazard Severity Zone and Wildland-Urban Interface Fire Area. All requirements of Berkeley Fire Code Chapter 49 and Berkeley Municipal Code Section 19.28.030, Berkeley Building Code, Chapter 7A shall apply.

FIRE ZONE THREE. Fire Zone Three is designated a Very-High Fire Hazard Severity Zone and Wildland-Urban Interface Fire Area. All requirements of Berkeley Fire Code

Chapter 49 and Berkeley Municipal Code Section 19.28.030, Berkeley Building Code, Chapter 7A shall apply.

KKK. Section 4905.2 Construction methods and requirements within established limits. Within the limits established by law, construction methods intended to mitigate wildfire exposure shall comply with the wildfire protection building construction requirements contained in the Berkeley Building Code and including the following:

1. Berkeley Building Code Chapter 7A,
1. California Reference Standards Code Chapter 12-7A,
2. International Residential Code (B.R.C.)

LLL. Section 4906.3 Requirements. Hazardous vegetation and fuels around all applicable buildings and structures shall be maintained in accordance with the following laws and regulations and subject to the requirements of Section 4906 of this code.

1. Public Resources Code Section 4291.
2. California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299 (see guidance for implementation "General Guideline to Create Defensible Space").
3. California Government Code Section 51182.
4. California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07.

MMM. Section 4906.4 Electrical Equipment Support Clearance. Persons owning, controlling, operating or maintaining electrical transmission or distribution lines shall have an approved program in place that identifies poles or towers with equipment and hardware types that have a history of becoming an ignition source, and provides a combustible free space consisting of a clearing of not less than 10 feet (3048 mm) in each direction from the outer circumference of such pole or tower during such periods of time as designated by the Chief.

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

NNN. Section 4906.5 Electrical Distribution and Transmission Line Clearances.

OOO. Section 4906.5.1 General. Clearances between vegetation and electrical lines shall be in accordance with this Section.

PPP. Section 4906.5.2 Trimming clearance. At the time of trimming, clearances not less than those established by Table 4906.5.2 should be provided. The radial clearances shown below are minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts.

EXCEPTION: The Fire Chief is authorized to establish minimum clearances different than those specified in Table 4906.5.2 when evidence substantiating such other clearances is submitted to the Fire Chief and approved.

**TABLE 4906.5.2 – MINIMUM CLEARANCES
BETWEEN VEGETATION AND
ELECTRICAL LINES AT TIME OF
TRIMMING**

Line Voltage	MINIMUM RADIAL CLEARANCE FROM CONDUCTOR (feet) [x 304.8 mm]
400 – 72,000	4
72,001 – 110,000	6
110,001 – 300,000	10
300,001 or more	15

QQQ. Section 4906.5.3 Minimum clearance to be maintained. Clearances not less than those established by Table 4906.5.3 shall be maintained during such periods of time as designated by the Fire Chief. 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 sway due to electrical loading and ambient temperature, and the tree's location in proximity to the high voltage lines.

EXCEPTION: The Fire Chief is authorized to establish minimum clearances different than those specified by Table 4906.5.3 when evidence substantiating such other clearances is submitted to the Fire Chief and approved.

**TABLE 4906.5.3 – MINIMUM CLEARANCES
BETWEEN VEGETATION AND
ELECTRICAL LINES TO BE MAINTAINED**

Line Voltage	MINIMUM CLEARANCE (inches) [x 25.4 mm]
750 – 35,000	6
35,001 – 60,000	12

60,001 – 115,000	19
115,001 – 230,000	30-1/2

RRR. Section 4906.5.4 Electrical power line emergencies. During emergencies, the utility company 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 4906.5.3.

SSS. Section 4906.5.5 Correction of Condition. The Fire Chief is authorized to give notice to the owner of the property on which conditions regulated by Section 4906.5 exist to correct such conditions. If the owner fails to correct such conditions, the City 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.

TTT. Section 4906.6 Clearance of Brush or Vegetative Growth from Structures.

UUU. Section 4906.6.1 General. Persons owning, leasing, controlling, operating or maintaining buildings or structures in, or upon Wildland-Urban Interface Fire Areas and persons owning, leasing or controlling land adjacent to such buildings or structures, shall at all times:

1. Maintain an effective firebreak by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet (9144 mm) of such buildings or structures; and

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.

2. Maintain additional fire protection or firebreak by removing brush, flammable vegetation and combustible growth located 30 feet (9144 mm) from such buildings or conditions causing a firebreak of only 30 feet (9144 mm) to be sufficient to provide reasonable fire safety; and.

Exception: Grass and other vegetation located more than 30 feet (9144 mm) from buildings or structures and less than 18 inches (457 mm) in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees which extend within 10 feet (3048 mm) of the outlet of chimney; and

4. Maintain trees adjacent to or overhanging a building free of deadwood; and

5. Maintain the roof of a structure free of leaves, needles or other dead vegetative growth; and

6. Brush and debris does not need to be completely removed, but may be chipped into pieces less than three (3) inches in length, provided that the resulting mulch is less than five (5) inches deep; and

7. The trunks of eucalyptus trees are to be maintained so that they are free of hanging bark and debris to a height of at least eight (8) feet.

VVV. Section 4906.6.2 Corrective Actions. The City Council is authorized to instruct the Fire Chief to give notice to the owner of the property upon which conditions regulated by Section 4906.6 exist to correct such conditions. If the owner fails to correct such conditions, the City Council 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.

WWW. Section 4906.7 Clearance of Brush or Vegetative Growth from Roadways. The Fire Chief is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways, streets and private roads which are improved, designed or ordinarily used for vehicular traffic to be cleared of flammable vegetation and other combustible growth. The Fire Chief is authorized to enter upon private property to do so.

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

Section 4906.8 Unusual Circumstances. If the Fire Chief determines that difficult terrain, danger of erosion or other unusual circumstances make strict compliance with the clearance of vegetation provisions of Section 4906 undesirable or impractical, enforcement thereof may be suspended and reasonable alternative measures shall be provided.

XXX. Section 4908 Suppression and Control of Wildland-Urban Interface Fire Areas.

YYY. Section 4908.1 Permit. The Fire Chief is authorized to stipulate conditions for permits. Permits shall not be issued when public safety would be at risk, as determined by the Fire Chief.

ZZZ. Section 4908.2 Restricted Entries. The Fire Chief shall 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 camp sites which have

not been closed during such time when the Wildland-Urban Interface Fire Areas are 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 upon their lands; and
- 2) Entry, in the course of duty, by peace officers, and other duly authorized public officers, members of a fire department and members of the United States Forest Service.

Section 4908.3 Trespassing on Posted Property

Section 4908.3.1 General. When the Fire Chief determines that a specific area within 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 closed until changed conditions warrant termination of closure. Such areas shall be posted as hereinafter provided.

Section 4908.3.2 Signs. Approved signs prohibiting entry by unauthorized persons and referring to this Section shall be placed on every closed area.

Section 4908.3.3 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, and local, state and federal public officers and their authorized agents acting in the course of duty.

Section 4908.4. Smoking. Lighting, igniting or otherwise setting fire to or smoking tobacco, cigarettes, pipes or cigars in Wildland-Urban Interface Fire Areas is prohibited.

Exception: Places of habitation or within the boundaries of established smoking areas or campsites as designated by the Fire Chief.

Section 4908.5 Spark Arresters. Chimneys used in conjunction with fireplaces, barbecues, incinerators or heating appliances in which solid or liquid fuel is used, upon buildings structures or premises located within Wildland-Urban Interface Fire Areas shall be provided with a spark arrester. (See Berkeley Building Code Section 704A1.6 for specifications.)

Section 4908.6 Tracer Bullets, Tracer Charges, Rockets and Model Aircraft. Tracer bullets and tracer charges shall not be possessed, fired or caused to be fired into or across Wildland-Urban Interface Fire Areas. Rockets, model planes, gliders and

balloons powered with an engine, propellant or other feature liable to start or cause fire shall not be fired or projected into or across Wildland-Urban Areas

Section 4908.7 Explosives and Blasting. Explosives shall not be possessed, kept, stored, sold, offered for sale, given away, used, discharged, transported or disposed of within Wildland-Urban Interface Fire Areas except by permit from the Fire Chief.

Section 4908.8 Fireworks. Fireworks shall not be used or possessed in Wildland-Urban Interface Fire Areas. The Fire Chief is authorized to seize, take, remove or cause to be removed fireworks in violation of this section.

Exception: Fireworks allowed by the Fire Chief under permit when not prohibited by applicable local or state laws, ordinances and regulations.

Section 4908.9 Apiaries. Lighted and smoldering material shall not be used in connection with smoking bees in or upon Wildland-Urban Interface Fire Areas except by permit from the Fire Chief.

Section 4908.10 Open-Flame Devices. Welding machines, tar pots, decorative torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon Wildland-Urban Interface Fire Areas, except by permit from the Fire Chief.

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

Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon Wildland-Urban Interface Fire Areas.

Exception: The proper use of fuses at the scenes of emergencies or as required by standard railroad operating procedures.

Section 4908.11 Outdoor Fires. Outdoor fires shall not be built, ignited or maintained in or upon Wildland-Urban Interface Fire Areas, except by permit from the Fire Chief.

Exception: Outdoor fires within habited premises or designated campsites, where such fires are built in a permanent barbecue, portable barbecue, outdoor fireplace, incinerator or grill and are minimum of 30 feet (9144 mm) from a grass-, grain-, brush or forest-covered area.

Permits shall incorporate such terms and conditions, which will reasonably safeguard public safety and property. Outdoor fires shall not be built, ignited or maintained in or upon Wildland-Urban Interface Fire Areas under the following conditions:

1. When high winds are blowing,
2. When a person age 17 or over is not present at all times to watch and tend such fire, or
3. When public announcement is made that open burning is prohibited. Permanent barbecues, portable barbecues, outdoor fireplaces or grills shall not be used for the disposal of rubbish, trash or combustible waste material.

Section 4908.12 Incinerators and Fireplaces. Incinerators, outdoor fireplaces, permanent barbecues and grills shall not be built, installed or maintained in Wildland-Urban Interface Fire Areas without prior approval of the Chief. Incinerators, outdoor fireplaces, permanent barbecues and grills shall be maintained in good repair and in a safe condition at all times. Openings in such appliances shall be provided with an approved spark arrester, screen or door.

Exception: When approved, unprotected openings in barbecues and grills necessary for proper functioning others without consent of the owner

Section 4908.17 Dumping. Garbage, cans, bottles, papers, ashes, refuse, trash, rubbish or combustible waste material shall not be placed, deposited or dumped in or upon Wildland-Urban Interface Fire Areas or in, upon or along trails, roadways or highways in Wildland-Urban Interface Fire Areas.

Exception: Approved public and private dumping areas.

Section 4908.18 Disposal of Ashes. Ashes and coals shall not be placed, deposited or dumped in or upon Wild-land-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 (3048 mm) from combustible vegetation or structures; 3. Where such ashes or coals are buried and covered with 1 foot (304.8 mm) of mineral earth not less than 25 feet (7620 mm) from combustible vegetation or structures.

Section 4908.19 Use of Fire Roads and Firebreaks. Motorcycles, motor scooters and motor vehicles shall not be driven or parked upon, and trespassing is prohibited upon, fire roads or firebreaks 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 which obstructs the entrance to a fire road or firebreak.

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 fire breaks unless located 16 feet (4877 mm) or more above such fire road or firebreak.

Section 4908.20 Use of Motorcycles, Motor Scooters and Motor Vehicles.

Motorcycles, motor scooters and motor vehicles shall not be operated within Wildland-Urban Interface Fire Areas, without a permit by the Fire Chief, except upon clearly established public or private roads. Permission from the property owner shall be presented when requesting a permit.

Section 4908.21 Tampering with Fire Department Locks, Barricades and Signs.

Locks, barricades, seals, cables, signs and markers installed within Wildland-Urban Interface Fire Areas, by or under the control of the Fire Chief, shall not be tampered with, mutilated, destroyed or removed. Gates, doors, barriers and locks installed by or under the control of the Fire Chief shall not be unlocked.

Section 4908.22 Liability for Damage.

The expenses of fighting fires, which result from a violation of 47144908, shall be charged against the person whose violation of 47144908 caused the fire. Damages caused by such fires shall constitute a debt of such person and are collectable by the Fire Chief in the same manner as in the case of an obligation under a contract, expressed or implied.

RESOLUTION NO. ##,###-N.S.

ADOPTING FINDINGS AS TO LOCAL CLIMATIC, GEOLOGICAL AND TOPOGRAPHICAL CONDITIONS RENDERING REASONABLY NECESSARY VARIOUS ENUMERATED LOCAL BUILDING STANDARDS THAT ARE MORE STRINGENT THAN THOSE MANDATED BY THE CALIFORNIA FIRE CODE AND RESCINDING RESOLUTION NO. 63,930-N.S. AND ALL RESOLUTIONS AMENDATORY THEREOF

BE IT RESOLVED by the City Council of the City of Berkeley as follows:

WHEREAS, the California Building and Standards Commission adopted and published the 2010 California Fire Code on July 1, 2010. The California Fire Code as referred to Title 24 Part 9 of the California Code of Regulations and will take effect on January 1, 2011; and

WHEREAS, Health & Safety Code Section 17958.5 allows the City, by ordinance, to make modifications or changes to the California Fire Code and other regulations adopted pursuant to Health & Safety Code Section 17921(a) which result in more stringent local requirements; and

WHEREAS, Health & Safety Code Section 17958, 17985.5 and 17985.7 incorporate the requirement that such changes be supported by findings made by the governing body that such more stringent local requirements are "reasonably necessary because of local climatic, geological or topographical conditions";

WHEREAS, such findings must be made available as a public record and a copy thereof with each such modification or change shall be filed with the California Building Standards Commission.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that said Council finds that each of the various proposed changes or modifications to the California Fire Code which are enumerated below are reasonably necessary because of local climatic, geological or topographical conditions in the area encompassed by the City of Berkeley, as set forth below:

A. LOCAL CONDITIONS

1. Climatic Conditions.

a. Discussion.

The City of Berkeley is located at the geographic center of the Bay Area. The western limits are defined by the Bay at near sea level and the eastern limits by the abruptly rising Berkeley Hills to 1,200 feet. The eastern limit faces open parklands and open space (covered with

vegetative fuel loading) to the east and is exposed to a unique danger from wildland fires during periods of hot, dry weather in the summer months. Many of the Berkeley homes in this area have wood shake and shingle roofs and are surrounded by brush type vegetation. The situation is made even worse by the negative effects of high wind conditions during the fire season. During May to October, critical climatic fire conditions occur where the temperature is greater than 80°F, the wind speed is greater than 15 mph, fuel moisture is less than or equal to 10.0 percent, wind direction is from north to the east-southeast and the ignition component is 65 or greater. These conditions occur more frequently during the fire season but this does not preclude the possibility that a serious fire could occur during other months of the year. The critical climate fire conditions create a situation conducive to rapidly moving, high intensity fires. Fires starting in the wildland areas along the eastern border are likely to move rapidly westward into Berkeley's urban areas.

In September 1923, critical climatic fire conditions were in effect and Berkeley sustained one of the most devastating fires in California's history. A fire swept over the range of the hills to the northeast of Berkeley and within two hours was attacking homes within the City limits. A total of 130 acres of built-up territory burned 584 Berkeley buildings which were totally destroyed and about 30 others which were seriously damaged. By far, the greater portion is single-family dwellings, but among the totals were 63 apartments, 13 fraternity, sorority and student's house clubs, and 6 hotels and boarding houses.

In December of 1980, during critical climatic fire conditions, a small fire started at Berkeley's northeast limits and within minutes five homes were totally destroyed by fire.

On October 20, 1991, a disastrous firestorm swept down from the Oakland hills. Within the first few hours, thousands of people were evacuated. Ultimately over 3,000 dwelling units were destroyed, of which more than 70 were in Berkeley. This fire matched the pattern established by the fires of 1923 and 1980. Additionally, the conditions that led to it were the same as the conditions that led to a 1970 fire that destroyed 70 homes in Oakland.

In addition, Berkeley frequently experiences cold winter days with accompanying temperature inversions which trap wood smoke near the ground and increase air pollution. These stagnant air days are marked by increased acute respiratory disease, including asthma, and a small but consistent increase in deaths from heart and lung disease. During these periods the usual onshore flow of clean marine air ceases and wood smoke air pollution becomes an area-wide phenomenon.

Studies by the Bay Area Air Quality Management District suggest that between 20 and 50% of air polluting small particles come from residential wood burning.

b. Summary.

Local climatic conditions of limited rainfall, low humidity, high temperatures and high winds along with existing building construction create extremely hazardous fire conditions that adversely affect the acceleration intensity and size of fires in the City. The same climatic conditions may result in the concurrent occurrence of one or more fires, which may spread in the more populated areas of the City without adequate fire department personnel to protect against and control such a situation.

2. Geological and Topographical Conditions

a. Discussion.

The City of Berkeley is in a region of high seismic activity and has the San Andreas earthquake fault to the west and the Calaveras earthquake fault to the east. Berkeley is traversed by the Hayward fault. All three faults are known to be active as evidenced by the damaging earthquakes they have produced in the last 100 years and can, therefore, be expected to do the same in the future. Of primary concern to Berkeley is the Hayward Fault, which has been estimated to be capable of earthquakes exceeding a magnitude of 7.0 on the Richter scale, and extends through mainly residential areas and passes through a small business district and the University of California. A large number of underground utilities cross the fault, including major water supply lines. Intensified damage during an earthquake may be expected in those areas of poorer ground along the Bay, west of Interstate 80 and in known slide areas, as well as hillside areas (occupied mainly by dwellings) located within or near the fault zone; some areas are steep and have been subjected to slides. The waterfront areas and areas in the Berkeley flatlands immediately adjacent to creeks and water streams present a major potential for soil liquefaction hazard. The Eastshore Freeway may liquefy and fail under heavy shaking or it may be inundated by a tsunami. The north hill area is most susceptible to landslides because of the steepness of slopes, the presence of soft and unconsolidated sediments, plus extensive water content in the ground. Panoramic Way and other hill areas with narrow and winding streets may face the problem of isolation from the rest of the City.

Great potential damage can be related to the likely collapse of freeway overpasses. In the event of a major earthquake, Berkeley's firefighting

resources for the suppression of fire in buildings and structures in the City of Berkeley.

B. REASONABLE NECESSITY

The proposed changes and modifications to the California Fire Code are reasonably necessary due to the local conditions set forth above because they reduce the risks to life and property which result from the City's climate and location astride an active earthquake fault. They are further justified for the reasons set forth below.

In adopting the California Fire Code as the Berkeley Fire Code, the City proposes to make certain substantive modifications whose effect is to impose more stringent requirements locally than are mandated by the California Fire Code. These are specifically listed below, but may be generally characterized as relating to: (1) roof accessibility (2) fusible links; (3) automatic sprinklers requirements; (4) fire alarm systems requirements; (5) fire flow requirements; and (6) high-rise air supply requirements. These more stringent local requirements are reasonably necessary to address risks created by local conditions set forth above for the following reasons:

1. Section 504.4 (Roof Accessibility) is added due to the increased risks caused by fires resulting from earthquakes and proximity to the wildland-interface. These risks, which are particularly severe in Berkeley due to its high population density, are shown by its past history of above average death and property loss due to fire in these types of occupancies in Berkeley. This amendment will provide reasonable firefighter access and egress to rooftops for firefighting operations.
2. Section 703.2.4 (Fusible Links) is added due to the increased risks caused by fires resulting from earthquakes and proximity to the wildland-interface. These risks, which are particularly severe in Berkeley due to its high population density, are shown by its past history of above average death and property loss due to fire in these types of occupancies in Berkeley. This amendment will maintain the fire and smoke separation requirements and prevent spread of smoke and fire in apartments, boarding houses, and congregate living spaces.
3. Section 903.2.21 (Fire Sprinkler Systems) is amended due to the increased risks caused by fires resulting from earthquakes and proximity to the wildland-interface. These risks, which are particularly severe in Berkeley due to its high population density, are shown by its past history of above average death and property loss due to fire in these types of occupancies in Berkeley. Automatic fire sprinkler systems significantly reduce the loss of life and fire spread with early suppression and control of a fire. Additionally, these amendments will maintain the standards established in 1992 after the 1990 fraternity fire and 1991 Berkeley Oakland firestorm.

4. Sections 914.3 through 914.3.7 (High-Rise Building Air Supply Requirements) are amended due to the increased risks caused by fires resulting from earthquakes. These risks, which are particularly severe in Berkeley due to its high population density, are shown by its past history of above average death and property loss due to fire in these types of occupancies in Berkeley. Automatic fire alarm systems significantly reduce the loss of life and fire spread with early detection and notification of firefighting personnel. Additionally, these amendments will maintain the standards adopted in 2002 as part of the Berkeley Fire Code to require air supply systems for firefighting operations.

BE IT FURTHER RESOLVED by the Council of the City of Berkeley that certain local amendments to the codes are not more stringent than the provisions of the California Fire Code but rather cover matters not addressed by those Codes or as administrative in nature, as follows:

1. Chapter 1 (as amended with Section 108.1 through 108.4) provides administrative provisions, an appeal process, and additional definitions.
2. Section 2701.7 (Hazardous Materials Transport Restrictions, Section 3301.2 (Storage and Use of Explosives) and 3401.1.4.1 through 3404.2.14 (Storage, Transport, and Use of Flammable and Combustible Liquids) of the Berkeley Fire Code is a local amendment to the California Fire Code which adopts restrictions for the use of hazardous materials. Since these issues are not covered by the California Fire Code, this subsection does not change or modify California Fire Code requirements or standards, but simply imposes additional requirements necessitated by local conditions. This new subsection is necessitated by: the dense population of residential dwellings throughout the City; the narrow winding streets of the hazardous hill area; and the presence of a major transportation system underground (BART with its surge chambers and other openings at the street level in various areas of the city). These factors make it very important for purposes of fire safety to regulate hazardous material transportation to ensure that it does not intrude in these areas.

BE IT FURTHER RESOLVED that Resolution No. 63,930–N.S. is hereby rescinded.