

**BUILDING STANDARDS COMMISSION**

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



July 30, 2015

Rose Thomsen  
Deputy City Clerk  
City of Berkeley  
2180 Milvia Street  
Berkeley, CA 94704

RE: Ordinance #7430-N.S.

Dear Ms. Thomsen:

This letter is to advise you of our determination regarding the referenced ordinance with express findings received from your agency on July 28, 2015.

Our review finds the submittal to contain one ordinance modifying provisions of the 2013 California Building Standards Code in Title 24, California Code of Regulations (code), and express findings complying with Health and Safety Code Sections 17958.7 and 18941.5. The code modification is accepted for filing and is 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 California Building Standards Commission (CBSC). CBSC 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 CBSC in order to remain in effect when the next triennial edition of the code is published.

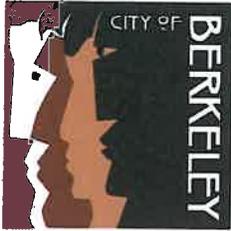
On a related matter, should your city receive and ratify Fire Protection District ordinances making modifications to the code, be advised that Health and Safety Code Section 13869.7(c) requires such ratified ordinances and express findings to be filed with the Department of Housing and Community Development, Division of Codes and Standards, State Housing Law Program, rather than CBSC. 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 Section 25402.1(h)(2).

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

Sincerely,

  
Enrique M. Rodriguez  
Associate Construction Analyst

cc: CBSC Chron  
Local Filings



City Clerk Department

RECEIVED

2015 JUL 28 P 3:50

CALIFORNIA BUILDING  
STANDARDS COMMISSION

July 23, 2015

California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833-2936

RE: City of Berkeley, Adoption of Building Code Ordinance

To Whom It May Concern:

Enclosed, please find certified copies of Ordinance No. 7,430-N.S. amending the Berkeley Building Code, and corresponding Resolution No. 67,170-N.S. adopting additional Local Conditions and Findings, both adopted by the City Council on July 14, 2015.

If you have any questions or concerns, please contact the City Clerk Department at (510) 981-6908.

Sincerely,

Rose Thomsen  
Deputy City Clerk

Enclosures:

1. Ordinance No. 7,430-N.S. – Amending the Berkeley Building Code
2. Resolution No. 67,170-N.S. – Berkeley Building Code Additional Local Conditions and Findings

cc: Alex Roshal, Building and Safety Manager

ORDINANCE NO. 7,430-N.S.

URGENCY ORDINANCE ADDING SECTION 19.28.090 TO THE BERKELEY MUNICIPAL CODE CHAPTER 19.28 (BERKELEY BUILDING CODE) REGARDING THE CONSTRUCTION OF WEATHER-EXPOSED BUILDING ELEMENTS EXTENDING BEYOND EXTERIOR WALLS

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

Section 1. Findings.

The City Council finds that:

- A. There is a need for additional modifications to impose more stringent requirements locally than are mandated in the adopted 2013 California Building Code.
- B. The marine weather environment in Berkeley, characterized by high humidity and low overall prevailing temperatures, results in a high overall moisture content in building construction materials and slow drying of building materials and assemblies once wet or humidified.
- C. Dry rot and other moisture related damage resulting from the effect of the City's climate and topography on exterior building construction features and materials pose risks to life and property.
- D. Currently, there is no law that balconies and other exterior projections exposed to weather be periodically inspected to determine if they have been structurally compromised and are in need of repairs.
- E. Since the City is experiencing a high volume of permit submittals for new buildings, which include balconies and similar exterior appurtenances, and there are a large number of balconies and similar appurtenances on existing buildings, it is imperative that the code amendments be adopted and become effective as soon as possible for the increased preservation of public health and safety.

Section 2. That Article 8 of the Berkeley Building Code is added to read as follows:

**Article 8. Construction of Exterior Appurtenances**

**19.28.090 Technical Amendments for Construction of Exterior Projecting Elements and Appurtenances**

**Chapter 12** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 1203.6 Ventilation of weather exposed enclosed assemblies.** Balconies, landings, decks, stairs and similar exterior projecting elements and appurtenances exposed to the weather and sealed underneath shall have cross ventilation for each separate enclosed space by ventilation openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. The net free ventilating area shall not be less than 1/150<sup>th</sup> of the area of the space ventilated. Ventilation openings shall comply with Section 1203.2.1. An access panel of sufficient size shall be provided on the underside of the enclosed space to allow for periodic inspection.

**Exceptions:**

1. An access panel is not required where the exterior coverings applied to the underside of joists are easily removable using only common tools.
2. Removable soffit vents 4 inches minimum in width can be used to satisfy both ventilation and access panel requirements.

Chapter 14 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 1404.13 Projections exposed to weather.** Balconies, landings, decks, stairs and similar floor projections exposed to the weather shall be constructed of naturally durable wood, preservative-treated wood, corrosion resistant (e.g., galvanized) steel, or similar approved materials.

Chapter 23 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 2304.11.3 Laminated timbers.** The portions of glued-laminated timbers that form the structural supports of a building, other structure, projecting element or appurtenance and are exposed to weather and not fully protected from moisture by a roof, eave or similar covering shall be pressure treated with preservative or be manufactured from naturally durable or preservative-treated wood.

**Section 2304.11.4.2 Wood structural members.** Wood structural members that support moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, shall be of naturally durable or preservative-treated wood unless and shall be separated from such floors or roofs by an impervious moisture barrier.

**Section 2304.11.5 Supporting members for permanent appurtenances.** Naturally durable or preservative-treated wood shall be utilized for those portions of wood members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances where such members are exposed to the weather without adequate protection from a roof, eave, overhang or other covering to prevent moisture or water accumulation on the surface or at joints between members.

**Section 3.** Vote Required, Immediately Effective

Based on the findings and evidence in Section 1 of this Urgency Ordinance, the Council determines that this Ordinance is necessary for the immediate preservation of the public health, peace and safety in accordance with Article XIV Section 93 of the Charter of the City of Berkeley and must therefore go into effect immediately. This ordinance shall go into effect immediately upon a seven-ninths vote of the City Council, in satisfaction of the Charter of the City of Berkeley and Government Code section 65858.

At a regular meeting of the Council of the City of Berkeley held on July 14, 2015, this Urgency Ordinance was adopted by the following vote:

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

Noes: None.

Absent: None.

ATTEST:

Rose Thomsen  
Rose Thomsen, Deputy City Clerk

Tom Bates  
Tom Bates, Mayor

In effect: Immediately

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2015 JUL 28 P 3:51

CALIFORNIA BUILDING  
STANDARDS COMMISSION

**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.

Rose Thomsen

DEPUTY CITY CLERK OF THE CITY OF BERKELEY

**RESOLUTION NO. 67,170-N.S.**

**ADOPTING ADDITIONAL FINDINGS OF LOCAL CONDITIONS THAT REQUIRE MORE STRINGENT REGULATIONS THAN THOSE PROVIDED BY THE 2013 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 emergency 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 Council of the City of Berkeley that it finds that each of the various proposed emergency 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.**

The City of Berkeley (City) is located at the geographic center of the Bay Area, immediately east of the Golden Gate (the geographic feature which is the natural entrance to the San Francisco Bay [Bay]). The western limits of the City are defined by Bay waters at sea level and its eastern limits by the Berkeley Hills, part of the Pacific Coast Range, rising abruptly to an elevation of 1,200 feet.

Local surface winds transport moisture laden air from the surface of the Bay waters into the City. Larger scale prevailing weather patterns and winds created by the jet stream from the west also transport highly humid air and storms across the Pacific Ocean through the strait between the San Francisco peninsula and the Marin Headlands straddled by Golden Gate bridge and into the City. The moderating effect of the Bay waters on local temperatures tends to reduce local temperature extremes, even during periods of high inland temperatures. The combination of moist air from adjacent waters and the associated mild temperatures means that it is common for local weather conditions to hover near the dew point. This can result in the formation of fog associated

with local and regional marine weather layers, which commonly cover the City for hours or even days at a time with an average morning relative humidity of 82 percent.

Much of Northern California is considered to possess a predominantly Mediterranean climate. At times Berkeley does experience periods of high temperature and/or low humidity particularly between mid-July and mid-October, when the danger of hillside fires is greatest. Throughout the rest of the year, the marine weather environment is characterized by higher humidity and lower overall prevailing temperatures, resulting in a higher overall moisture content in building construction materials and slower drying of building materials and assemblies once wet or humidified.

## 2. Topographical Conditions.

Part of the Pacific Coast Range, the Berkeley Hills, define the eastern boundary of the City and form a natural obstruction to the movement of humidified, cooler air out of the San Francisco Bay basin and the City of Berkeley into the dryer adjacent inland valleys and the interior of the State. Although these hills do not form an absolute air barrier, they do play a significant role in the creation of local microclimates. This effect is evidenced by the disparity in temperatures and relative humidities commonly experienced during periods of warm weather between communities adjacent to the San Francisco Bay / Pacific Ocean and communities in the Bay Area inland valleys only a few miles inland.

## B. REASONABLE NECESSITY

The proposed emergency changes and modifications to the California Building Code imposing more stringent requirements for construction of weather exposed building elements extending beyond exterior walls (Chapter 19.28 Berkeley Building Code Article 8) are reasonably necessary due to the local conditions set forth above because they reduce the risks to life and property from dry rot or other moisture related damage which may result from the influence of the City's climate and topography on the exterior building construction features and materials.

BE IT FURTHER RESOLVED that Resolution No. 66,367-N.S. is hereby amended.

The foregoing Resolution was adopted by the Berkeley City Council on July 14, 2015 by the following vote:

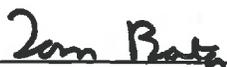
Ayes: Anderson, Arreguin, Capitelli, Droste, Maio, Moore, Wengraf, Worthington and Bates.

Noes: None.

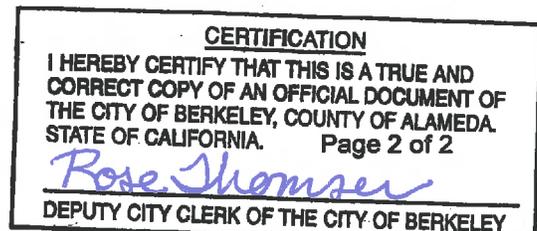
Absent: None.

Attest:

  
Rose Thomsen, Deputy City Clerk

  
Tom Bates, Mayor

Resolution No. 67,170-N.S.



**BUILDING STANDARDS COMMISSION**

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



January 27, 2014

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

RE: Ordinance #7,314-N.S., 7,315-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 December 19, 2013.

Our review finds the submittal to contain two ordinances modifying provisions of the 2013 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).

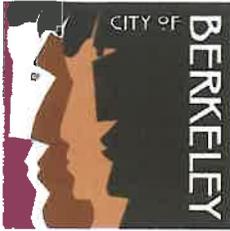
If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,

A handwritten signature in blue ink, appearing to read "Enrique M. Rodriguez".

Enrique M. Rodriguez  
Associate Construction Analyst

cc: Chron  
Local Filings



City Clerk Department

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2013 DEC 19 P 2:30  
CALIFORNIA BUILDING  
STANDARDS COMMISSION

December 12, 2013

California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833-2936

RE: City of Berkeley, Adoption of Fire and Building Code Ordinances

To Whom It May Concern:

Enclosed, please find certified copies of Ordinance No. 7,314-N.S. Berkeley Fire Code, adopted by the City Council on December 3, 2013, and corresponding Resolution No. 66,365-N.S. Local Conditions and Findings, adopted by the City Council on November 12, 2013.

Also enclosed, please find certified copies of Ordinance No. 7,315-N.S. Berkeley Building Code, adopted by the City Council on December 3, 2013, and corresponding Resolution No. 66,367-N.S. Local Conditions and Findings, adopted by the City Council on November 12, 2013.

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. Ordinance No. 7,314-N.S. – Berkeley Fire Code
2. Resolution No. 66,365-N.S. – Berkeley Fire Code Local Conditions and Findings
3. Ordinance No. 7,315-N.S. – Berkeley Building Code
4. Resolution No. 66,367-N.S. – Berkeley Building Code Local Conditions and Findings

cc: Aaron Lee, Deputy Fire Chief  
Alex Roshal, Building and Safety Manager

**ORDINANCE NO. 7,314-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:

**Chapter 19.48**

**BERKELEY FIRE CODE**

**Sections:**

|                          |   |
|--------------------------|---|
| <b>Section 19.48.010</b> | <b>Adoption of California Fire Code</b>       |
| <b>Section 19.48.020</b> | <b>Amendments to the California Fire Code</b> |
| <b>Section 19.48.030</b> | <b>Validity</b>                               |

**Section 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, 2012 Edition published by the International Code Council and the California Building Standards Commission with Errata, together with those portions of the International Fire Code, 2012 Edition, including Chapters 1 (excluding Section 103.2), 3 (excluding Section 317), Section 503 of Chapter 5, Sections 1104.16.5.1 and 1103.5.3 of Chapter 11 (as amended by BMC 19.48.020, Amendments to the California Fire Code), Appendix Chapters D, E, F, and K published by the International Code Council not included in the California Building Standards 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 this ordinance. 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".

**Section 19.48.020 Amendments to the California Fire Code**

The following additions, changes and deletions to the 2013 California Fire Code, as detailed below, are adopted as part of the Berkeley Fire Code.

- A. **Section 101.1 Title.** These regulations, including the local amendments to the California Fire Code set forth in this ordinance, shall be known as the Berkeley Fire Code, hereinafter referred to 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 is 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 102.6 Historic buildings.** The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings when such buildings or structures do not constitute a distinct hazard to life or property. Fire protection in designated historic buildings and structures shall be provided in accordance with ~~an approved fire protection plan~~ the 2013 California Historical Building Code.
- D. **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.
- E. **Section 104.13 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.
- F. **Section 105.1.4 Fees.** Fees for permits and inspections shall be set forth by the City Council by resolution.
- G. **105.6.16 Flammable and combustible liquids.** An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the offsite transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
  - 2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the fire code official, would cause an unsafe condition.
  - 2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.
3. To store, handle or use Class H or Class IRA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oilburning equipment.
4. To store, handle or use Class III-B liquids in excess of 110 gallons in containers, or in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.

**Exception:** Fuel oil and used motor oil used for space heating or water heating.
5. To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.
6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
7. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.
8. To change the type of contents stored in a Flammable or combustible liquid tank to a material that poses a greater hazard than that for which the tank was designed and constructed.
9. To manufacture, process, blend or refine flammable or combustible liquids.

10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments.
- H. Section 105.6.48 Christmas tree sales lot. To operate a Christmas tree sales lot.
- I. Section 105.6.49 Escort convoy service Police and/or Fire Department convoy service for vehicle transportation of extremely hazardous materials.
- J. 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.
- K. Section 105.6.51 Parking facility, special events. To use buildings or structures for vehicle parking, includes parking for special events (i.e. football games, etc.).
- L. Section 105.7.17 Window bars. To install window bars on exterior doors or windows of any sleeping rooms below the fourth floor in apartment houses, hotels, and motels.
- M. SECTION 108 BOARD OF APPEALS PROCESS
- N. ~~Section 108.1 Board of appeals established. In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The fire code official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the fire code official.~~ Appeals Procedure Whenever the Fire Code Official disapproves an application, refuses to grant a permit applied for, or revokes or suspends any permit or certificate already issued, an appeal therefore 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 days from the date of mailing of the Fire Chiefs 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 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 from.
- O. ~~Section 108.2 Limitations on authority. An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have~~

~~been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive requirements of this code.~~ 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 could result in an imminent threat to the public safety.

- P. ~~108.3 Qualifications.~~ ~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or fire protection systems, and are not employees of the jurisdiction.~~ 108.3 Decisions The City Council shall review the action of the Fire Chief and shall do any one of the following:
- a. Refer the matter back to the Fire Chief
  - b. 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.
  - c. 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.
  - d. 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.
  - e. 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.
  - f. 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.
- Q. **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, or 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.
- R. **Section 109.4 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect,

install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a ~~[SPECIFY OFFENSE]~~, punishable by a fine of not more than ~~[AMOUNT]~~ dollars or by imprisonment not exceeding ~~[NUMBER OF DAYS]~~, or both such fine and imprisonment misdemeanor, but may be cited or charged, at the election of the enforcing officer or city attorney, as infractions, with the exceptions cited in subsection 109.3.1 and subject to an election by the defendant under Penal Code Subsection 17 (d). Each day that a violation continues after due notice has been served shall be deemed a separate offense.

S. **Section 109.4.2 Misdemeanors** Notwithstanding Section 109.4, violation of any of the following provisions of this code shall be charged only as a misdemeanor:

1. Section 109.3.2 (Compliance with orders and notices)
2. Section 109.4.4 (Unauthorized tampering)
3. Section 110.2 (Evacuation of an Unsafe Building)
4. Section 110.2.1 (Unauthorized re-occupancy of an unsafe building)
4. Section 901.8 (Removal or tampering with equipment)
5. Section 405.1 (Making false report)

T. **Section 109.4.3 Work without a Permit** Contractors performing work without 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.

U. **Section 110.2.1 Unauthorized re-occupancy of unsafe buildings.** 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.

V. **Section 110.3 Summary abatement.** Where conditions exist that are deemed hazardous to life and property, the fire code official or fire department official in charge of the incident is authorized to abate summarily such hazardous conditions that are in violation of this code. Where the owner does not comply with an abatement order under Section 110.4 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

W. **Section 110.4.1 Abatement process.** 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.

- X. Section 202 Definitions - B BERKELEY MARINA Area shall mean all those, parts of the City of Berkeley west of the Interstate 80 Freeway.
- Y. 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 any thing 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.
- Z. Section 202 (Definitions — F) FIRE NUISANCE means any thing or act, which is annoying, unpleasant, offensive or obnoxious because of fire.
- AA. Section 202 (Definitions – J). JURISDICTION means the City of BerkeleyThe governmental unit that has adopted this code under due legislative authority.
- BB. 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.
- CC. Section 504.1.1 Marking of Exterior Building Openings. Where exterior doorways are not otherwise marked with identification such as building addresses, room/suite numbers or business names which identify the area(s) they provide access to, such opening shall be provided with signs or labels indicating the areas they serve. Doorways to be marked shall include but are not limited to doors serving building circulation (such as stairwells/exit passageways), potential hazards (such as trash rooms), and building service and utility spaces (such as electrical, gas, HVAC and elevator machine rooms). Signs/labels shall be permanent, weather and sunlight resistant with lettering not less than 3/4" high with a 1/16" width stroke on a contrasting background. Such signs or labels shall be affixed to the door frame or wall above the door. Such signs and labels shall be maintained.
- Exception: Doors associated with private dwellings, the main entrance to normally occupied spaces or when determined to be unnecessary by the Fire Code Official.
- DD. 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.
- EE. Section 903.2.10 Group S-2 enclosed parking garages. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.6 of the California Building Code or where located beneath other groups or with U occupancies with installed parking lifts with no exceptionsas follows:

- ~~1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m<sup>2</sup>); or~~
- ~~2. Where the enclosed parking garage is located beneath other groups.~~

**FF. Section 903.2.10.1 Commercial parking garages.** An automatic sprinkler system shall be provided throughout buildings used for storage of commercial trucks or busses ~~where the fire area exceeds 5000 square ft. (464m<sup>2</sup>).~~

**GG. Section 903.2.11.1 Stories without openings.** An automatic sprinkler system shall be installed throughout all buildings having stories, including basements, ~~of all buildings where the floor area exceeds 1,500 square feet (139.4 m<sup>2</sup>)~~ and where there is not provided at least one of the following types of exterior wall openings:

1. Openings below grade that lead directly to ground level by an exterior stairway complying with Section 1009 or an outside ramp complying with Section 1010. Openings shall be located in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm).
2. Openings entirely above the adjoining ground level totaling at least 20 square feet (1.86 m<sup>2</sup>) in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm) The height of the bottom of the clear opening shall not exceed 44 inches (1118 mm) measured from the floor.

**HH. Section 903.2.20 Structures in the Berkeley Marina Area.** All structures in the Berkeley Marina Area shall be provided with total automatic sprinkler protection.

**Exceptions:** Gear lockers not designed to permit human entry, municipal restrooms unattached to other structures, the existing City of Berkeley Harbor Master's office, and any temporary construction site structures.

**II. Section 903.2.21 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.

**JJ. Section 903.2.22 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 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.

**KK. 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 47* .

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

**LL. Section 903.4.3 Floor control valves.** Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings *and Group 1-2 occupancies having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.* Each floor and basement level of a building of three or more stories shall be provided with at least one control valve installed on each level in rated stairwells or other approved location.

Exception: Control valves in 3 story buildings can be located adjacent to stairwells having exterior ground floor access, when approved

**MM. Section 907.2 Where required—new buildings and structures.** An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

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

**Exceptions:**

- ~~1. The manual fire alarm box is not required for fire alarm control units dedicated to elevator recall control, supervisory service and fire sprinkler monitoring.~~
- ~~2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.~~
- ~~3. The manual fire alarm box is not required to be installed when approved by the fire code official.~~

**NN. Section 907.2.8.1 Manual fire alarm system.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-1 occupancies.

**Exceptions:**

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

~~2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:~~

~~2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2;~~

~~2.2. The notification appliances will activate upon sprinkler water flow; and~~

~~2.3. At least one manual fire alarm box is installed at an approved location.~~

~~OO. Section 907.2.8.2 Manual and Automatic fire alarm systems ~~smoke detection system~~. An ~~A~~ manual and automatic smoke detection ~~fire alarm~~ system that activates the occupant notification system in accordance with Section 907.5 shall be installed throughout all interior corridors and common areas of Group R-1 occupancies. The detection device for this purpose shall be a smoke detector (or heat detector as approved), which is system connected and electronically supervised ~~serving sleeping units~~.~~

~~Exception: An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.~~

~~PP. Section 907.2.9.1 Automatic and Manual fire alarm system. An automatic and manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-2 occupancies where:~~

- ~~1. The building is three or more stories in height and Any any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;~~
- ~~2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or~~
- ~~3. The building contains more than 16 dwelling units or sleeping units.~~
- ~~4. Congregate residences with more than 16 occupants.~~

~~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, egress court or yard.~~

~~2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.~~

3. 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.

**QQ. Section 914.3.8 Air Replenishment Systems.** New 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 breathing air supply for firefighting self-contained breathing air tanks. Such system or equipment shall provide adequate pressurized breathing air supply through a permanent piping system or other means acceptable 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. Design, installation, testing and maintenance of such air replenishment systems shall be made in accordance with a recognized standard such as Appendix F of the 2012 Uniform Plumbing Code or equivalent and must be approved by the Fire Chief. Each property owner shall be responsible for maintaining such equipment or systems including annual air sampling and testing.

**Exceptions:**

1. Buildings equipped with Firefighter Access Elevators as required by Berkeley Building Code section 403.6.1
2. Where an alternate method of supplying breathing air replenishment is approved by the Fire Chief.

**RR. Section 1103.5.3 Automatic Sprinkler Requirements for Existing Hotels.**

**SS. Section 1103.5.3.1 Definitions.** For the purposes of this Section, the following terms shall be defined as follows:

1. "Hotel" shall mean any building, including motels, dormitories, rooming houses, fraternity houses and sorority houses, which contain six 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.
2. "Story" is as defined in the Berkeley Building Code.
3. "First Story" is as defined in the Berkeley Building Code.
4. "Basement" is as defined in the Berkeley Building Code.
5. "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.

**Application:** This section shall apply to every hotel in which the rooms used for sleeping are rented or let above the ground floor, if the hotel was built prior to 1992, and also meets one of the following two conditions:

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 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 stairways(s) in accordance with the requirements of the Berkeley Building Code is required to comply with this section.

**TT. Section 1103.5.3.2 Types of Fire Sprinklers.** In the sleeping units of the building, only residential or quick response sprinkler heads shall be used.

**UU. Section 1103.5.3.3 Supervision of fire sprinkler systems.** All automatic sprinkler systems installed under this subsection in which the number of sprinkler heads is 50 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.

**VV. Section 1103.7 Fire Alarm Systems.** An approved fire alarm system shall be installed in existing buildings and structures in accordance with Sections 1103.7.1 through 1103.7.10 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by other sections of this code. Existing high-rise buildings shall comply with Section 1103.7.9.

Where an automatic and manual or a manual fire alarm system is required by this code or Berkeley local ordinance, elimination of fire alarm boxes in buildings equipped with an approved sprinkler system is not allowed/prohibited.

**Exception:** Occupancies with an existing, previously approved fire alarm system When deemed not required by the Fire Code Official.

**WW. Section 1103.7.5.1 Group R-1 hotels, and motels and congregate residences manual and automatic fire alarm system.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-1 hotels and motels ~~more than~~ with three stories or with ~~more than~~ 20 or more sleeping units.

**Exceptions:**

~~1. Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, egress court or yard.~~

~~2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:~~

~~2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2;~~

~~2.2. The notification appliances will activate upon sprinkler water flow; and~~

~~2.3. At least one manual fire alarm box is installed at an approved location.~~

**XX. Section 1103.7.6 Group R-2.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-2 occupancies ~~more than three or more~~ stories in height or with 16 or more dwelling 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 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-resistance 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 separate fire alarm system is not required in buildings that are equipped throughout with an approved supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm to notify all occupants.~~

3. 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.

**YY. Section 1103.7.10 Monitoring of Group R Occupancies.** 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.

**ZZ. 1104.16.5.1. Examination.** Fire escape stairs and balconies shall be examined for structural adequacy and safety in accordance with Section 1104.16.5 by a registered design professional or others acceptable to the fire code official every five years, or

as required by the fire code official. An inspection report shall be submitted to the fire code official after such examination.

**AAA. Section 4902.1 General.** For the purpose of this chapter, certain terms are defined as follows:

**CDF DIRECTOR.** Director of the California Department of Forestry and Fire Protection.

**FIRE PROTECTION PLAN.** 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 Article. When required by the enforcing agency for the purpose of granting modifications, a fire protection plan shall be submitted. Only locally adopted ordinances that have been filed with the California Building Standards Commission in accordance with Section 101.14 or the Department of Housing and Community Development in accordance with Section 101.15 shall apply. 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 HAZARD SEVERITY ZONES.** Geographical areas designated pursuant to California Public Resources Codes, Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189. The California Code of Regulations, Title 14, Section 1280 entitles the maps of these geographical areas as "Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California."

**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**

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

**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.** 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.

**STATE RESPONSIBILITY AREA.** Lands that are classified by the Board of Forestry pursuant to Public Resources Code Section 4125 where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the state.

**WILDFIRE.** Any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources as defined in Public Resources Code, Sections 4103 and 4104.

**WILDFIRE EXPOSURE.** One or a combination of radiant heat, convective heat, direct flame contact and burning embers being projected by vegetation fire to a structure and its immediate environment.

**WILDLAND-URBAN INTERFACE FIRE AREA.** 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.

**BBB. 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.

**CCC. 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.

**DDD. 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 California Building Standards Code, including the following:

1. Chapter 7A of 19.28.030 Berkeley Municipal Code . See the Berkeley Building Code for requirements.,
2. Berkeley Residential Code (B.R.C.) California Residential Code, Section R327,

3. California Referenced Standards Code, Chapter 12-7A and this chapter.

**EEE. 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 4907 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

**FFF. 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 combustibile 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.

**GGG. Section 4906.5 Electrical Distribution and Transmission Line Clearances.**

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

**III. 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**

| <b>Line Voltage</b> | <b>MINIMUM RADIAL CLEARANCE FROM CONDUCTOR (feet)</b> |
|---------------------|---|
|                     | <b>[x 304.8 mm]</b>                                   |
| <b>400 – 72,000</b> | <b>4</b>  |

|                          |           |
|--------------------------|-----------|
| <b>72,001 – 110,000</b>  | <b>6</b>  |
| <b>110,001 – 300,000</b> | <b>10</b> |
| <b>300,001 or more</b>   | <b>15</b> |

JJJ. **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**

| <b><u>Line Voltage</u></b> | <b><u>MINIMUM CLEARANCE (inches)<br/>[x 25.4 mm]</u></b> |
|----------------------------|--|
| <b>750 – 35,000</b>        | <b>6</b>   |
| <b>35,001 – 60,000</b>     | <b>12</b>  |
| <b>60,001 – 115,000</b>    | <b>19</b>  |
| <b>115,001 – 230,000</b>   | <b>30-1/2</b>  |

KKK. **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.

LLL. **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.

MMM. **Section 4906.6 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.

**NNN. Section 4906.7 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.

**OOO. Section 4907.1 General.** Defensible space will be maintained around all buildings and structures in State Responsibility Area (SRA) as required in Public Resources Code 4290 and "SRA Fire Safe Regulations" California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 2, Section 1270.

Buildings and structures within the Very-high Fire Hazard Severity Zones of a Local Responsibility Areas (LRA) shall maintain defensible space as outlined in Government Code 51175 — 51189 and ~~any local ordinance of the authority having jurisdiction.~~Section 4908 of this code.

**PPP. Section 4907.2 Clearance of Brush or Vegetative Growth from Structures.**

**QQQ. Section 4907.2.1 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.

**RRR. Section 4907.2.2 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.

**SSS. Section 4908 SUPPRESSION AND CONTROL OF WILDLAND-URBAN INTERFACE FIRE AREAS.**

**TTT. 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.

**UUU. Section 4908.2 Restricted Entry.** 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;
- 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

**VVV. Section 4908.3 Trespassing on Posted Property.**

**WWW. Section 4908.3.1 General.** When the Fire Chief determines that a specific area within a Wildland-Urban Interface Fire Areas presents an exceptional and continuing fire danger because of the density of natural growth, difficulty of terrain, proximity to structures or accessibility to the public, such areas shall be closed until changed conditions warrant termination of closure. Such areas shall be posted as hereinafter provided.

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

**YYY. 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.

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

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

**AAAA. 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.

**BBBB. 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 Interface Fire Areas.

**CCCC. 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 chief.

**DDDD. 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.

**EEEE. 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.

**FFFF. 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 fusees at the scenes of emergencies or as required by standard railroad operating procedures.

**GGGG. 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.

**HHHH. 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.

**III. Section 4908.13 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.**

**JJJJ. Section 4908.14 Disposal of Ashes.** Ashes and coals shall not be placed, deposited or dumped in or upon Wildland-Urban Interface Fire Areas.

**Exceptions:**

- 1. In the hearth of an established fire pit, camp stove or fireplace;**
- 2. In a noncombustible container with a tight-fitting lid, which is kept or maintained in a safe location not less than 10 feet (3048mm) from combustible vegetation or structures;**
- 3. Where such ashes or coals are buried and covered with 1 foot (304.8mm) of mineral earth not less than 25 feet (7620 mm) from combustible vegetation or structures.**

**KKKK. Section 4908.15 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.**

**LLLL. Section 4908.16 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.

**MMMM. Section 4908.17 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.

**NNNN. Section 4908.18 Liability for Damage.** The expenses of fighting fires, which result from a violation of 4714, shall be charged against the person whose violation of 4714 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.

**OOOO. Section 5001.7 Hazardous materials transportation restrictions.** No vehicle containing hazardous materials, including 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 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, and violation of any vehicle size limitation imposed, or failure to carry a map showing route approval 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

**PPPP. Section 5601.2 Storage and use of explosives.** The storage of explosives within the city limits is prohibited.

**QQQQ. Section 5701.4.1 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 on the street or public way except by written approval by the Fire Code Official.

**RRRR. Section 5701.4.2 Storage of Class I and Class II liquids in aboveground tanks.** 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 Code Official. Such installations shall be in accordance with this Section and all applicable laws and recognized national standards.

**SSSS. Section 5704.1.1 Restrictions on underground storage tanks.** 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.

**TTTT. Section 5704.2.13.1.4 Tanks abandoned in place.** 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 shall be placed in the deed to the property. This notice shall describe the precise location of the closed underground storage tank, the hazardous substances that it contained, and the closure method. 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.

**UUUU. Section 5704.2.14.2 Removal and disposal of tanks.** Removal and disposal of tanks shall comply with Sections 5704.2.14.1 and 5704.2.14.2. Removal of all tanks shall be done under permit, following City of Berkeley Fire Department procedures. The applicant shall submit 2 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.

**VVV. Section 6104.1.2 Restrictions on storage of LP-gas containers.** 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.

**WWWW. Section B105.2 (Appendix B) Buildings other than one- and two-family dwellings.** The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

**Exceptions:**

1. A reduction in required fire-flow of up to ~~75~~<sup>50</sup> percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting fire-flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105.1.
2. [SFM] Group B, S-2, and U occupancies having a floor area not exceeding 1,000 square-feet, primarily constructed of noncombustible exterior walls with wood or

steel roof framing, having a Class A roof assembly, with uses limited to the following or similar uses:

- 2.1. California State Parks buildings of an accessory nature (restrooms).
- 2.2. Safety roadside rest areas, (SRRA), public restrooms.
- 2.3. Truck inspection facilities, (TIF), CHP office space and vehicle inspection bays.
- 2.4. Sand/salt storage buildings, storage of sand and salt.

**Section 19.48.030 Validity** Should any section, paragraph, sentence or word of this Chapter or of the Code or Standards be declared invalid, all other portions of this Chapter shall remain in effect.

**Section 2.** 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 November 12, 2013 this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington and Wozniak.  
Noes: None.  
Absent: Bates.

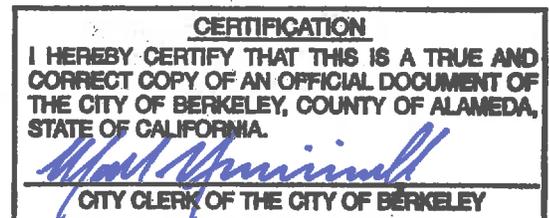
At a regular meeting of the Council of the City of Berkeley held on December 3, 2013, this Ordinance was adopted by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington, Wozniak and Bates.  
Noes: None.  
Absent: None.

ATTEST: *Mark Numainville*  
Mark Numainville, CMC, City Clerk

*Tom Bates*  
Tom Bates, Mayor

Date signed: December 5, 2013



RESOLUTION NO. 66,365-N.S.

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

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

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

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

WHEREAS, Health & Safety Code §17925, §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 or factors;" 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 Fire 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.

#### 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 Conditions.

#### a. Discussion.

The City of Berkeley is in a region of high seismic activity and is traversed by the Hayward fault. It has the San Andreas earthquake fault to the west and the Calaveras earthquake fault to the east. 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. It extends through many 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 presence of soft and unconsolidated sediments, extensive water content in the ground and the steepness of slopes.

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. Design is underway for a replacement. Berryman Reservoir North has been demolished and replaced by a steel tank. Berryman Reservoir South has received a seismic upgrade. Additional potential situations following an earthquake 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.

#### **b. Summary.**

Local geological conditions include high seismic activity and large concentrations of residential type buildings as well as a major freeway. Since the City of Berkeley is located in a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, the modifications cited herein are intended to better limit life safety hazards and property damage as a result of a seismic activity.

### **3. Topographical Conditions.**

#### **a. Discussion.**

The City of Berkeley has many homes built throughout the urban portion of the Berkeley Hills 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. Panoramic Way and other hill

areas with narrow and winding streets may face the problem of isolation from the rest of the City.

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 112,580 per 2010 Census in Berkeley are physically impaired. 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 topographical conditions include hillside housing with many narrow and winding streets with slide potential for blockage in the abruptly rising Berkeley hills. These conditions create an extremely serious problem for the Fire Department when a major fire or 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 Fire Code are reasonably necessary due to the local climatic, geological and topographical conditions set forth above. 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: the preservation of building and roof accessibility and emergency egress; maintenance of building compartmentation using fusible links; amendment of automatic sprinkler requirements; amendment of fire alarm system requirements; amendment of fire flow requirements; requirements for high-

rise air supply and the regulation of hazards including hazardous materials, Wildland-Urban Interface management and temporary assembly attractions. These more stringent local requirements are reasonably necessary to address risks created by local conditions set forth above for the following reasons:

1. Section 503 (Fire apparatus access roads) and Appendix D (Fire apparatus access roads) are adopted in their entirety as local code amendments. They are adopted due to: local geological conditions of severe earthquake potential which may result in landslides and the collapse of "built-environment" features which may block access roads; local topographical conditions including narrow streets and steep hills which slow and hinder emergency response and evacuation; and local climatic conditions including the need for rapid, unhindered citizen evacuation from and emergency responder access into wildfire prone areas of City.
2. Section 504.1.1 (Marking of Exterior Building Openings) is added due to local topographical conditions which promote multi-story and on-slope construction to maximize buildable space within the City. The limited space available for development encourages developers and designers to crowd exterior openings into limited available space, often resulting in groups of building openings without any obvious cues for firefighters as to the area(s) served within the building or the purpose of the openings. This amendment is intended to inform firefighters as to the area served and/or purpose of an exterior opening and therefore reduce the amount of time firefighters may spend searching for or forcing entry into otherwise unmarked doorways.
3. 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. 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.
4. Sections 903.2.10 through 903.2.22, 903.3.1.2, 903.4.3 and 1103.5.3 through 1103.5.3.3 (Fire Sprinkler Systems) are 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. 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.
5. Amendments and additions to Sections 907.2 through 907.2.9.1 and 1103.7 through 1103.7.10 (Fire Alarm Systems) are 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. 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 1998 as part of the Berkeley Fire Code.

6. Section 1104.16.5.1 (Examination of existing fire escape stairs) is a new local amendment and is adopted from the model code language. Numerous fire escape stairs are in use throughout the City due to the local topographical conditions of Berkeley's steep terrain and dense, multi-story development. Due to the severe risk of earthquake and ensuing fire in Berkeley fire escape stairs require periodic inspection by a licensed professional to provide reasonable assurance that existing fire escape stairs will survive a credible earthquake and be available for their intended life safety function after a seismic event.
7. Section 914.3.8 (High-Rise Building Air Supply Requirements) is added due to the local geological condition of severe risk of earthquake and ensuing fires. Breathing Air Replenishment systems are intended to maximize the operational efficiency of available firefighting forces, and to reduce the impacts of high-rise fire incidents on limited firefighting forces that may already be challenged by the aftermath of a major seismic event. 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. The proposed code adoption also recognizes the existence of newly created Appendix F of the Uniform Plumbing Code as one potential acceptable standard for the design, installation, testing and maintenance of such as system. As such it provides potential owners, designers and installers with a standard that they may refer to better understand a type of system that many may not be familiar with.
8. Sections 5701.4.2 (Storage of flammable liquids in aboveground tanks), 5704.1.1 (Restrictions on storage of flammable and combustible liquids in underground storage tanks), Section 5704.2.13.1.4 (Tanks abandoned in place), Section 5704.2.14.2 (Removal and disposal of tanks) and section 6104.1.2 (Restrictions on storage of LP-gas containers) of the Berkeley Fire Code are local amendments to the California Fire Code. These subsections are necessitated by local topographical conditions including 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 storage to ensure that it does not intrude in these areas.
9. Section B105.2 (Reduction in Fire Flow) is amended due to the geological conditions of the City with its proximity to the Hayward Fault and prediction by EBMUD that during an earthquake that many of the water mains will break during a

**6.7M earthquake on the Hayward Fault.**

- 10. Appendix K (Temporary haunted houses, ghost walks and similar amusement uses) is adopted as a local amendment to the California Fire Code and is adopted based on local geological conditions (the potential for severe earthquake with accompanying fire and/or structural collapse) and local topographical conditions including the need to ensure adequate separation of structures and uses in densely developed urban areas. Fire alarm systems (as required in this appendix) are shown to significantly reduce the life safety threat to occupants of structures during fire events. Regulation of these structures and activities ensures that adequate safety provisions have been made for limiting occupancy to safe numbers of guests and for the evacuation of attraction guests in crowded urban environments. Adoption of this appendix also allows for the regulation of related features such as the combustibility of decorations and the management of hazards such as temporary electrical wiring and the use of portable generators.**

**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 in Sections 101.1 through 110.4.1) provides administrative provisions, an appeal process, and additional clarification and non-building standard permit requirements required to implement the fire code.**
- 2. Chapter 2 as amended in section 202 (Definitions) provides additional definitions required to clarify and implement the local adoption of the fire code.**
- 3. Chapter 3 (General Requirements) excluding Section 317 (Rooftop gardens and landscaped roofs) is adopted in its entirety. The adopted sections of this chapter impose controls on a wide range of hazards that are not building standards. Hazards addressed include asphalt kettles, combustible waste materials, control of ignition sources, open burning/ recreational fires, open flames, powered industrial equipment, smoking, securing of vacant premises, vehicle impact protection, fueled equipment, general storage and hazards to firefighters.**
- 4. Chapter 49 as amended provides definitions related to local Wildland-Urban Interface (WUI) fire areas, directs interested parties to appropriate BMC Chapter 19.28 sections (Berkeley Building Code) for building construction requirements in WUI areas, and imposes various non-building standard requirements for the management of vegetation and the suppression and control of fires in WUI areas.**
- 5. Section 5001.7 (Hazardous Materials Transport Restrictions), Section 5601.2 (Storage and Use of Explosives) and Section 5701.4.1 (Transfer of Flammable Liquids) are local amendments to the California Fire Code that restricts the transportation, storage and transfer of hazardous materials but does not create or modify any building 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.

- Appendix E (Hazard categories) and Appendix F (Hazard ranking) are local amendments to the California Fire Code related to hazardous materials management. These chapters define the hazard categories and rankings associated with the storage, handling and use of hazardous materials, and provide the qualitative and quantitative rankings used on hazardous materials information signs posted for the benefit of firefighters and other first responders. These hazard categories and rankings are administrative in nature and do not constitute building standards.

BE IT FURTHER RESOLVED that this Resolution shall go into effect on January 1, 2014.

BE IT FURTHER RESOLVED that Resolution No. 63,930–N.S is hereby rescinded effective January 1, 2014.

The foregoing Resolution was adopted by the Berkeley City Council on November 12, 2013 by the following vote:

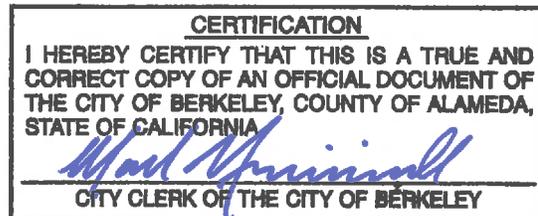
Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington and Wozniak.

Noes: None.

Absent: Bates.

  
Linda Maio, Mayor Pro Tempore

Attest:   
Mark Numalville, CMC, City Clerk



ORDINANCE NO. 7,315-N.S.

REPEALING AND REENACTING BERKELEY MUNICIPAL CODE CHAPTERS 19.28 (BERKELEY BUILDING CODE) INCLUDING APPENDIX J, 19.29 (BERKELEY RESIDENTIAL CODE) INCLUDING APPENDIX H, 19.30 (BERKELEY ELECTRICAL CODE), 19.32 (BERKELEY MECHANICAL CODE), 19.34 (BERKELEY PLUMBING CODE) INCLUDING APPENDICES A, B, D, AND I, 19.36 (BERKELEY ENERGY CODE), AND 19.37 (BERKELEY GREEN 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 2012 International Existing Building Code by Reference**

**Article 6. Repairs to Existing Buildings and Structures**

**19.28.070 Adoption of Regulations for the Repairs of Existing Structures**

**Article 7. Amendments to Structural Standards**

**19.28.080 Technical Amendments to Structural Standards**

**Notes:**

\* See Chapter 1.24 for abatement of nuisances by City.

#### **19.28.010 Adoption of the California Building Code.**

A. The California Building Code, 2013 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. The California Historical Building Code, 2013 edition, as adopted in Title 24 Part 8 of the California Code of Regulations, 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.

C. The California Existing Building Code, 2013 edition, as adopted in Title 24 Part 10 of the California Code of Regulations, 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.

D. 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.

E. This chapter will become effective on January 1, 2014, and shall not apply to any building permit submitted by December 31, 2013.

#### **Article 1. Administrative Provisions and Definitions**

#### **19.28.020 Adoption of Chapter 1 Scope and Administration**

Chapter 1 of the 2013 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.** The other codes listed in 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 2013 California Mechanical Code, and the Berkeley Plumbing Code, based on the 2013 California Plumbing Code, as amended herein, 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 the installation and operation of residential and commercial gas appliances and related accessories.

**101.4.2 Mechanical.** The provisions of the Berkeley Mechanical Code, based on the 2013 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 on the 2013 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 Property maintenance\*.** The provisions of the Berkeley Housing Code, based on 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.

Notwithstanding any provisions contrary in this chapter, any building or portion thereof constructed in compliance with the Berkeley Building Code shall not be deemed to be in violation of the Housing Code provisions that may conflict.

**101.4.5 Fire prevention.** The provisions of the Berkeley Fire Code based on the 2013 California 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.

**101.4.6 Energy.** The provisions of the Berkeley Energy Code, based on the 2013 California Energy Code, as amended herein, Berkeley Municipal Code Chapter 19.16 and Chapter 19.72 shall apply to matters governing the design and construction of buildings for energy efficiency.

**101.4.7 Electrical.** The provisions of the Berkeley Electrical Code, based on the 2013 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.

**101.4.8 Green.** The provisions of the Berkeley Green Code, based on the 2013 California Green Building Standards Code, as amended herein, shall apply to enhanced design and construction of buildings through the use building concepts having a reduced negative impact or the positive environmental impact and encouraging sustainable construction practices.

**101.5 References to prior codes.** Unless superseded and expressly repealed, references in City forms, documents and regulations to the chapters and sections of former Berkeley Building Code editions, shall be construed to apply to the corresponding provisions contained within the 2013 Berkeley Building Code. Ordinance No. 7158–N.S. and all other ordinances or parts of ordinances in conflict herewith are hereby superseded and expressly repealed.

## **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 building official or the permit service center coordinator are 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 building official or the permit service center 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 systems 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 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, and the owner of the building, structure or electrical system or equipment and any building occupants of the decision to disconnect prior to taking such action and shall notify them, 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 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, inadequate 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 evaluation 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 buildings and structures 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 there is no damage to the building or structure, but that any damage that occurred does not present a hazard to occupants.

**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 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**

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

**Chapter 7A** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

#### **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.** New 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**

**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 51189 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:

| <u>Parcel Number (APN)</u> | <u>Address</u>      |
|----------------------------|---------------------|
| 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**

#### **19.28.040 Wood Burning Appliances.**

**Chapter 31** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

#### **3112 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**

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

**Chapter 32** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

#### **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**

### **19.28.060 Adoption of Certain Chapters of the 2012 International Existing Building Code by reference**

Chapter 34 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

### **3401.10 Adoption of Certain Chapters of the 2012 International Existing Building Code by reference.**

When seismic retrofit is not otherwise required by this code, the following Chapters of the 2012 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 A2, Earthquake Hazard Reduction in Existing Reinforced Concrete and Reinforced Masonry Wall Buildings with Flexible Diaphragms,

Chapter A4, Earthquake Hazard Reduction in Existing Wood-framed Residential Buildings with Soft, Weak or Open Front Walls, and

Chapter A5, Earthquake Hazard Reduction in Existing Concrete Buildings.

## **Article 6. Repairs to Existing Buildings and Structures**

### **19.28.070 Adoption of Regulations for the Repairs of Existing Structures.**

**3405.6 Seismic Evaluation and Design Procedures for Repairs.** The seismic evaluation and design shall be based on the procedures specified in the California 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 3405.6.2.

**3405.6.1 Compliance with CBC level seismic forces.** Where compliance with the seismic design provisions of the California Building Code is required, the procedures shall be in accordance with one of the following:

1. One-hundred percent of the values in the California Building Code. Where the existing seismic force-resisting system is a type that can be designated as "Ordinary," the values of R,  $\Omega_0$ , and Cd used for analysis in accordance with Chapter 16 of the California Building Code shall be those specified for structural systems classified as

"Ordinary" in accordance with Table 12.2-1 of ASCE 7, unless it is demonstrated that the structural system will provide performance equivalent to that of a "Detailed," "Intermediate" or "Special" system.

2. Compliance with ASCE 41 using both BSE-1 and BSE-2 earthquake hazard levels and the corresponding performance levels in Table 3405.6.1.

**Table 3405.6.1  
PERFORMANCE CRITERIA FOR CBC LEVEL SEISMIC FORCES**

| OCCUPANCY CATEGORY<br>(BASED ON CBC TABLE<br>1604.5) | PERFORMANCE LEVEL<br>FOR USE WITH ASCE 41<br>BSE-1 EARTHQUAKE<br>HAZARD LEVEL | PERFORMANCE LEVEL<br>FOR USE WITH ASCE<br>41 BSE-2<br>EARTHQUAKE HAZARD<br>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)   |

- a. Acceptance criteria for Occupancy Category III shall be taken as 80 percent of the acceptance criteria specified for Occupancy Category II performance levels, but need not be less than the acceptance criteria specified for Occupancy Category IV performance levels.

**3405.6.2 Compliance with reduced CBC level seismic forces.** Where seismic evaluation and design is permitted to meet reduced California Building Code seismic force levels, the procedures used shall be in accordance with one of the following:

1. The California Building Code using 75 percent of the prescribed forces. Values of R,  $\Omega_0$ , and Cd used for analysis shall be as specified in Section 3405.6.1 Item 1.
2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A of the *International Existing Building Code* as specified in Items 2.1 through 2.5 below shall be deemed to comply with this section.
  - 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 in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.
3. Compliance with ASCE 31 based on the applicable performance level as shown in Table 3405.6.2. It shall be permitted to use the BSE-1 earthquake hazard level as defined in ASCE 41 and subject to the limitations in item 4 below.
4. Compliance with ASCE 41 using the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3405.6.2. The design spectral response acceleration parameters  $S_x$  and  $S_{x1}$  specified in ASCE 41 shall not be taken less than 75 percent of the respective design spectral response acceleration parameters  $SDS$  and  $SD1$  defined by the *California Building Code* and its reference standards.

**Table 3405.6.2  
PERFORMANCE CRITERIA FOR REDUCED CBC LEVEL SEISMIC FORCES**

| OCCUPANCY CATEGORY<br>(BASED ON CBC TABLE<br>1604.5) | PERFORMANCE LEVEL<br>FOR USE WITH ASCE 31 | PERFORMANCE LEVEL<br>FOR USE WITH ASCE<br>41 BSE-1<br>EARTHQUAKE HAZARD<br>LEVEL |
|--|---|--|
| I  | Life Safety (LS)                          | Life Safety (LS)   |
| II   | Life Safety (LS)                          | Life Safety (LS)   |
| III  | Note a, Note b                            | Note a   |
| IV   | Immediate Occupancy (IO)                  | Immediate Occupancy<br>(IO)  |

- a. Acceptance criteria for Occupancy Category III shall be taken as 80 percent of the acceptance criteria specified for Occupancy Category II performance levels, but need not be less than the acceptance criteria specified for Occupancy Category IV performance levels.

- b. For Occupancy Category III, the ASCE screening phase checklists shall be based on the life safety performance level.

**3405.6.3 Referenced Standards**

| Standard Reference Number               | Title  | Referenced in Code Section Number                        |
|---|--|--|
| ASCE 31-03                              | Seismic Evaluation of Existing Buildings     | 3405.6.1<br>Table 3405.6.1<br>3405.6.2<br>Table 3405.6.2 |
| ASCE 41-06<br>Including Supplement No.1 | Seismic Rehabilitation of Existing Buildings | 3405.6.1<br>Table 3405.6.1<br>3405.6.2<br>Table 3405.6.2 |

**Article 7. Technical Amendments to Structural Standards**

**19.28.080 Various Technical Amendments to Structural Standards.**

**Chapter 17** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

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

**Exception:** Special inspections shall not be required for: 1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength,  $f_c$ , no greater than 2,500 pound per square inch (psi) (17.2 Mpa).

**Chapter 19** of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**1905.1.8 ACI 318, section 22.10.** Delete ACI 318, Section 22.10, and replace with the following:

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

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

(a) ~~Structural plain concrete basement, foundation or other walls below the base are permitted in detached one and two family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to seismic~~

~~design category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7<sup>1</sup>/<sub>2</sub> inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5.~~

- (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. ~~For footings that exceed 8" inches (203 mm) in thickness, A~~ minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exceptions:

1. ~~In seismic design categories A, B and C, detached one- and two-family dwellings three stories or less in height and constructed with stud bearing walls, are permitted to have plain concrete footings without longitudinal reinforcement. 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.~~
2. ~~For foundation systems consisting of a plain concrete footing and a plain concrete stem wall, a minimum of one bar shall be provided at the top of the stem wall and at the bottom of the footing.~~
3. ~~Where a slab on ground is cast monolithically with the footing, one no. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.~~

Chapter 23 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**TABLE 2308.12.4  
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E**

| CONDITION | SHEATHING TYPE <sup>b</sup> | $S_{DS} < 0.50$ | $0.50 \leq S_{DS} < 0.75$ | $0.75 \leq S_{DS} \leq 1.00$ | $S_{DS} > 1.00$ |
|-----------|-----------------------------|-----------------|---------------------------|------------------------------|-----------------|
|           | G-P <sup>e</sup>            | 43              | 59                        | 75                           | 100             |

|           |     |    |    |    |    |
|-----------|-----|----|----|----|----|
| One Story | S-W | 21 | 32 | 37 | 48 |
|-----------|-----|----|----|----|----|

(Minimum Percentage of Wall Bracing per each Braced Wall Line<sup>a</sup>)

- a. Minimum length of panel bracing of one face of the wall for S-W sheathing ~~or both faces of the wall for G-P 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. The 2:1 h/w ratio limitation does not apply to alternate braced wall panels constructed in accordance with Section 2308.9.3.1 or 2308.9.3.2.
- b. ~~G-P = gypsum board, fiberboard, particleboard, lath and plaster or gypsum sheathing boards~~; S-W = wood structural panels and diagonal wood sheathing.
- c. ~~Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:~~  
~~For 1/2-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;~~  
~~For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) at 7 inches on center;~~  
~~For gypsum sheathing board, 1 3/4 inches long by 7/16 inch head, diamond point galvanized nails at 4 inches on center;~~  
~~For gypsum lath, No. 13 gage (0.092 inch) by 1 1/8 inches long, 19/64 inch head, plasterboard at 5 inches on center;~~  
~~For Portland cement plaster, No. 11 gage (0.120 inch) by 1 1/2 inches long, 7/16 inch head at 6 inches on center;~~  
~~For fiberboard and particleboard, No. 11 gage (0.120 inch) by 1 1/2 inches long, 7/16 inch head, galvanized nails at 3 inches on center~~

Section 2. That Berkeley Municipal Code Chapter 19.29 is hereby repealed and reenacted 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 Subsection R301.2 Climatic and geographic design criteria.**
- 19.29.050 Section R327 Materials and Construction Methods for Exterior Wildlife Exposure.**
- 19.29.060 Technical Amendments to Structural Standards.**

**19.29.010 Adoption of California Residential Code.**

The California Residential Code, 2013 Edition, as adopted by the California Code of Regulations, Title 24, Part 2.5, including Appendix H, 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.

**19.29.020 Title.**

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

**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.

For regulations governing wood burning appliances see BMC 19.28.040.

**19.29.040 CRC Subsection R301.2 Climatic and geographic design criteria.**

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

| GROUND<br>SNOW<br>LOAD             | WIND DESIGN  |                                     | SEISMIC<br>DESIGN<br>CATEGORY <sup>f</sup> | SUBJECT TO DAMAGE FROM           |                                  |                      |
|------------------------------------|--|-------------------------------------|--|----------------------------------|----------------------------------|----------------------|
|                                    | Speed <sup>d</sup><br>(mph)                          | Topographic<br>Effects <sup>k</sup> |  | Weathering <sup>a</sup>          | Frost line<br>depth <sup>b</sup> | Termite <sup>c</sup> |
| ZERO                               | 85   | NO                                  | D <sub>2</sub> or E                        | NEGLIGIBLE                       | N/A                              | VERY<br>HEAVY        |
| WINTER<br>DESIGN TEMP <sup>e</sup> | ICE BARRIER<br>UNDERLAYMENT<br>REQUIRED <sup>h</sup> | FLOOD<br>HAZARDS <sup>g</sup>       | AIR<br>FREEZING<br>INDEX <sup>i</sup>      | MEAN ANNUAL<br>TEMP <sup>j</sup> |                                  |                      |
| See footnote 'm'                   | NO   | See<br>Footnote 'l'                 | ZERO                                       | 57.2°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)A]. 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°)".
- 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)".
- 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 from FEMA. 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%)

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

Chapter 3 of the 2013 California Residential Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**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.** New 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 51189 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       |

## **19.29.060 Technical Amendments to Structural Standards**

**Chapter 4** of the 2013 California Residential Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**R403.1.3 Seismic reinforcing.** Concrete footings located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars, one top and one bottom and 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 D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> 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 D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> 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 D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> 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.

**Chapter 6** of the 2013 California Residential Code is adopted in its entirety subject to the modifications thereto which are set forth below.

### **Table R602.10.3(3) Bracing Requirements based on Seismic Design Category**

Add a new footnote "e" to the end of CRC Table R602.10.3(3)<sup>e</sup> to read:

e. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, Method GB is not permitted and the use of Method PCP is limited to one-story single family dwellings and accessory structures.

**R602.10.4.4 Limits on methods GB and PCP.** In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, 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 D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, 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.**

#### **19.30.010 Adoption of California Electrical Code.**

The California Electrical Code, 2013 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.

#### **19.30.020 Title.**

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

#### **19.30.030 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 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.**

#### **19.32.010 Adoption of the California Mechanical Code.**

The California Mechanical Code, 2013 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.

**19.32.020 Title.**

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

**19.32.030 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 CMC administrative provisions that may conflict.

For regulations governing wood burning appliances, see BMC 19.28.040.

Section 5. That Berkeley Municipal Code Chapter 19.34 is hereby repealed and reenacted 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 Gas Shut-Off Valves**

**19.34.010 Adoption of the California Plumbing Code.**

The California Plumbing Code, 2013 Edition, as adopted California Code of Regulations, Title 24, Part 5 including Appendices A, B, 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. 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.

**19.36.020 Title.**

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

**19.34.030 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 CPC administrative provisions that may conflict.

**19.34.040 Gas Shut-Off Valves**

**Chapter 12** of the 2013 California Plumbing Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**1209.2 General Requirements for Gas Shut-Off Valves.** Automatic gas shut-off valves installed either in compliance with this Section or voluntarily pursuant to a plumbing permit issued on or after the effective date of this Section, shall comply with the following:

**1209.2.1** All valves shall:

1. Comply with all applicable requirements of the Berkeley Plumbing Code.
2. Be tested and listed by recognized testing agencies such as the Independent Laboratory of the International Approval Services (IAS), Underwriter's Laboratory (UL), International Association of Plumbing and Mechanical Officials (IAPMO) or any other agency approved by the State of California Office of the State Architect (OSA).
3. Be listed by the State of California Office of the State Architect (OSA).
4. Be installed on downstream side of the gas utility meter.
5. Be installed in accordance with the manufacturer's instructions.
6. Be installed in accordance with a plumbing permit issued by the City of Berkeley.
7. Provide a method for expedient and safe gas shut-off in an emergency.
8. Provide a capability for ease of consumer or owner resetting in a safe manner.

**1209.2.2** Motion activated seismic gas shut-off valves shall be mounted rigidly to the exterior of the building or structure containing the fuel gas piping, unless otherwise specified in the manufacturer's installation instructions.

### **1209.3 Definitions**

For the purpose of this Section terms shall be defined as follows:

**AUTOMATIC GAS SHUT- OFF VALVE** shall mean either a motion activated gas shut-off valve or device or an excess flow gas shut-off valve or device.

**DOWNSTREAM OF GAS UTILITY METER** shall mean all gas piping on the property owner's side of the gas meter and after the service tee.

**EXCESS FLOW GAS SHUT- OFF VALVE** shall mean an approved valve or device that is activated by significant gas leaks or overpressure surges that can occur when pipes rupture inside a structure. Such valves are installed at each appliance, unless otherwise specified by the manufacturer's installation instructions.

**MOTION ACTIVATED GAS SHUT OFF VALVE** shall mean an approved gas valve activated by motion. Valves are set to activate in the event of a moderate or strong seismic event greater than 5.0 on the Richter scale.

**UPSTREAM OF GAS UTILITY METER** shall mean all gas piping installed by the utility up to and including the meter and the utility's service tee.

**1209.4 Devices When Required.** Approved automatic gas shut-off valves shall be installed as follows:

**1209.4.1 New Construction.** In any new building construction containing gas piping for which a building permit is first issued on or after the effective date of this Section.

**1209.4.2 Existing Buildings.** In any existing building, when any addition, alteration or repair is made for which a building permit is issued on or after the effective date of this Section and the valuation for the work exceeds \$50,000.

**Exceptions:**

1. Buildings with individually metered residential units when the building contains 5 or more residential units, unless the units are condominiums.
2. For residential or mixed use condominium buildings, valves are required when the value of the work exceeds \$50,000 in any single condominium unit or when any work done outside of the units exceeds \$50,000.
3. Commercial occupancies and uses in mixed use buildings of residential and non-residential occupancies with a single gas service line larger than 1 ½ inches that serves the entire building.
4. Automatic gas shut-off valves installed with a building permit on a building prior to the effective date of this Section provided the valves remain installed on the building or structure and are adequately maintained for the life of the building or structure.
5. Automatic gas shut-off valves installed on a gas distribution system owned or operated by a public utility.

**Section 6.** That Berkeley Municipal Code Chapter 19.36 is hereby repealed and reenacted 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.**

### **19.36.010 Adoption of the California Energy Code.**

The California Energy Code, 2013 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.

### **19.32.020 Title.**

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

### **19.32.030 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 California Energy Code administrative provisions that may conflict.

For regulations governing wood burning appliances see BMC 19.28.040.

Section 7. That Berkeley Municipal Code Chapter 19.37 is hereby repealed and reenacted 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**

### **19.37.010 Adoption of California Green Building Standards Code.**

The California Green Building Standards Code, 2013 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.

**19.37.020 Title.**

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

**19.37.030 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 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.

For regulations governing wood burning appliances see BMC 19.28.040.

In the event that provisions of this code conflict with provisions of Berkeley Municipal Code Chapters 19.16, 19.24, and 19.72, the most restrictive regulation shall govern.

**19.37.040 Chapter 4 Residential Mandatory Measures  
Division 4.4 Material Conservation and Resource Efficiency**

**Chapter 4 Division 4.4** of the 2013 California Green Building Standards Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**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.

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

**Chapter 5 Division 5.4** of the 2013 California Green Building Standards Code is adopted in its entirety subject to the modifications thereto which are set forth below:

**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 November 12, 2013 this Ordinance was passed to print and ordered published by posting by the following vote:

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

Noes: None.

Absent: Bates.

At a regular meeting of the Council of the City of Berkeley held on December 3, 2013, this Ordinance was adopted by the following vote:

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

Noes: None.

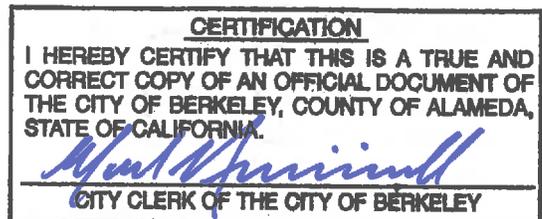
Absent: None.

ATTEST:

*Mark Numainville*  
Mark Numainville, CMC, City Clerk

*Tom Bates*  
Tom Bates, Mayor

Date signed: *December 5, 2013*



RESOLUTION NO. 66,367-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 Council of the City of Berkeley 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 Conditions.

a. Discussion.

The City of Berkeley is in a region of high seismic activity and is traversed by the Hayward fault. It has the San Andreas earthquake fault to the west and the Calaveras earthquake fault to the east. 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. It extends through many 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 presence of soft and unconsolidated sediments, extensive water content in the ground and the steepness of slopes.

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. Design is underway for a replacement. Berryman Reservoir North has been demolished and replaced by a steel tank. Berryman Reservoir South has received a seismic upgrade. Additional potential situations following an earthquake 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.

b. Summary.

Local geological conditions include high seismic activity and large concentrations of residential type buildings as well as a major freeway. Since the City of Berkeley is located in a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, the modifications cited herein are intended to better limit property damage as a result of a seismic activity and to establish criteria for repair of damaged properties following a local emergency.

3. Topographical Conditions.

a. Discussion.

The City of Berkeley has many homes built throughout the urban portion of the Berkeley Hills 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. Panoramic Way and other hill areas with narrow and winding streets may face the problem of isolation from the rest of the City.

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 112,580 per 2010 Census in Berkeley are physically impaired. 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 topographical conditions include hillside housing with many narrow and winding streets with slide potential for blockage in the abruptly rising Berkeley hills. These conditions create an extremely serious problem for the Fire Department when a major fire or 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 whose 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, Berkeley Residential Code Chapter 19.29 Section 19.29.050); (2) standards to reduce the risk caused by wood smoke under the climatic conditions of Berkeley (Berkeley Building Code Chapter 19.28 Article 3); (3) existing building standards for retrofit of certain building types with seismic weaknesses (Berkeley Building Code Chapter 19.28 Article 5); (4) standards for repair of buildings damaged in a disaster (Berkeley Building Code Chapter 19.28, Article 6); (5) various technical amendments to structural standards (Berkeley Building Code Chapter 19.28 Article 7, Berkeley Residential Code Chapter 19.29 Section 19.29.060); (6) provisions requiring installation of automatic gas shut-off valves (Berkeley Plumbing Code Chapter 19.34 Section 19.34.040); (7) provisions requiring retrofitting of unreinforced masonry buildings (Berkeley Building Code Chapter 19.38); and (8)

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, and Chapter 19.29 Section 19.29.050 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, Article 7, Chapter 19.29 Section 19.29.060, Chapter 19.34 Section 19.34.040, 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 and do not modify building standards pursuant to Health & Safety Code §17958, §17958.5 and §17958.7. These amendments establish administrative regulations for the effective enforcement of building standards throughout the City of Berkeley as follows:

Chapter 19.28, Article 1, (Administrative provisions and definitions) and Article 4 (Construction in the Right of Way) and administrative amendments to Chapter 19.29 (California Residential Code), to Chapter 19.30 (California Electrical Code), to Chapter 19.32 (California Mechanical Code), to Chapter 19.34 (California Plumbing Code), to Chapter 19.36 (California Energy Code) and to Chapter 19.37 (California Green Building Standards Code) are local amendments to the California Codes affecting administration provisions only.

BE IT FURTHER RESOLVED that this Resolution shall go into effect on January 1, 2014.

BE IT FURTHER RESOLVED that Resolution No. 65,083–N.S. is hereby rescinded effective January 1, 2014.

The foregoing Resolution was adopted by the Berkeley City Council on November 12, 2013 by the following vote:

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

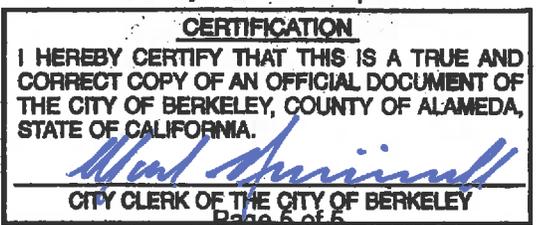
Noes: None.

Absent: Bates.

Attest:

  
Mark Numainville, CMC, City Clerk

  
Linda Maio, Mayor Pro Tempore



**BUILDING STANDARDS COMMISSION**

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



February 26, 2016

Rose Thomsen  
Deputy City Clerk  
City of Berkeley  
2180 Milvia Street  
Berkeley, CA 94704

RE: Ordinance #7,433-N.S.

Dear Ms. Thomsen:

This letter is to advise you of our determination regarding the referenced ordinance with express findings received from your agency on November 30, 2015.

Our review finds the submittal to contain one ordinance modifying provisions of the 2013 California Building Standards Code in Title 24, California Code of Regulations (code), and express findings complying with Health and Safety Code Sections 17958.7 and 18941.5. The code modification is accepted for filing and is 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 California Building Standards Commission (CBSC). CBSC 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 CBSC in order to remain in effect when the next triennial edition of the code is published.

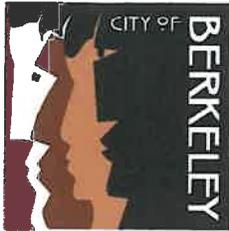
On a related matter, should your city receive and ratify Fire Protection District ordinances making modifications to the code, be advised that Health and Safety Code Section 13869.7(c) requires such ratified ordinances and express findings to be filed with the Department of Housing and Community Development, Division of Codes and Standards, State Housing Law Program, rather than CBSC. 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 Section 25402.1(h)(2).

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

Sincerely,

  
Enrique M. Rodriguez  
Associate Construction Analyst

cc: CBSC Chron  
Local Filings



City Clerk Department

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CALIFORNIA BUILDING  
STANDARDS COMMISSION

November 24, 2015

California Building Standards Commission  
2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833-2936

RE: City of Berkeley, Adoption of Building Code Ordinance

To Whom It May Concern:

Enclosed, please find a certified copy of Ordinance No. 7,433-N.S. amending the Berkeley Building Code, adopted by the City Council on October 27, 2015. Also enclosed is a certified copy of the corresponding Resolution No. 67,170-N.S. adopting additional Local Conditions and Findings, adopted by the City Council on July 14, 2015.

If you have any questions or concerns, please contact the City Clerk Department at (510) 981-6908.

Sincerely,

Rose Thomsen  
Deputy City Clerk

Enclosures:

1. Ordinance No. 7,433-N.S. – Amending the Berkeley Building Code
2. Resolution No. 67,170-N.S. – Berkeley Building Code Additional Local Conditions and Findings

cc: Alex Roshal, Building and Safety Manager

ORDINANCE NO. 7,433-N.S.

ADDING SECTION 19.28.090 TO THE BERKELEY MUNICIPAL CODE CHAPTER 19.28 (BERKELEY BUILDING CODE) REGARDING THE CONSTRUCTION OF WEATHER-EXPOSED BUILDING ELEMENTS EXTENDING BEYOND EXTERIOR WALLS

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

Section 1. That Article 8 of the Berkeley Building Code is added to read as follows:

**Article 8. Construction of Exterior Appurtenances**  
**19.28.090 Technical Amendments for Construction of Exterior Projecting Elements and Appurtenances**

Chapter 12 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 1203.6 Ventilation of weather exposed enclosed assemblies.** Balconies, landings, decks, stairs and similar exterior projecting elements and appurtenances exposed to the weather and sealed underneath shall have cross ventilation for each separate enclosed space by ventilation openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. The net free ventilating area shall not be less than 1/150<sup>th</sup> of the area of the space ventilated. Ventilation openings shall comply with Section 1203.2.1. An access panel of sufficient size shall be provided on the underside of the enclosed space to allow for periodic inspection.

**Exceptions:**

1. An access panel is not required where the exterior coverings applied to the underside of joists are easily removable using only common tools.
2. Removable soffit vents 4 inches minimum in width can be used to satisfy both ventilation and access panel requirements.

Chapter 14 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 1404.13 Projections exposed to weather.** Balconies, landings, decks, stairs and similar floor projections exposed to the weather shall be constructed of naturally durable wood, preservative-treated wood, corrosion resistant (e.g., galvanized) steel, or similar approved materials.

Chapter 23 of the 2013 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

**Section 2304.11.3 Laminated timbers.** The portions of glued-laminated timbers that form the structural supports of a building, or other structure, projecting element, or appurtenance and are exposed to weather and not fully protected from moisture by a roof, eave or similar covering shall be pressure treated with preservative or be manufactured from naturally durable or preservative-treated wood.

**Section 2304.11.4.2 Wood structural members.** Wood structural members that support moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, shall be of naturally durable or preservative-treated wood ~~unless and shall be~~ separated from such floors or roofs by an impervious moisture barrier.

**Section 2304.11.5 Supporting members for permanent appurtenances.** Naturally durable or preservative-treated wood shall be utilized for those portions of wood members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances where such members are exposed to the weather ~~without adequate protection for a roof, eave, overhang or other covering to prevent moisture or water accumulation on the surface or at joints between members.~~

**Section 2.** 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 July 14, 2015, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Droste, Maio, Moore, Wengraf, Worthington and Bates.  
Noes: None.  
Absent: None.

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CALIFORNIA BUILDING  
STANDARDS COMMISSION

At a regular meeting of the Council of the City of Berkeley held on October 27, 2015, this Ordinance was adopted by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Droste, Maio, Moore, Wengraf, Worthington and Bates.  
Noes: None.  
Absent: None.

ATTEST: Mark Numainville  
Mark Numainville, City Clerk

Tom Bates  
Tom Bates, Mayor

Date signed: October 29, 2015

**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.  
Rose Thomsen  
DEPUTY CITY CLERK OF THE CITY OF BERKELEY

RESOLUTION NO. 67,170-N.S.

ADOPTING ADDITIONAL FINDINGS OF LOCAL CONDITIONS THAT REQUIRE MORE STRINGENT REGULATIONS THAN THOSE PROVIDED BY THE 2013 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 emergency 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 Council of the City of Berkeley that it finds that each of the various proposed emergency 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.**

The City of Berkeley (City) is located at the geographic center of the Bay Area, immediately east of the Golden Gate (the geographic feature which is the natural entrance to the San Francisco Bay [Bay]). The western limits of the City are defined by Bay waters at sea level and its eastern limits by the Berkeley Hills, part of the Pacific Coast Range, rising abruptly to an elevation of 1,200 feet.

Local surface winds transport moisture laden air from the surface of the Bay waters into the City. Larger scale prevailing weather patterns and winds created by the jet stream from the west also transport highly humid air and storms across the Pacific Ocean through the strait between the San Francisco peninsula and the Marin Headlands straddled by Golden Gate bridge and into the City. The moderating effect of the Bay waters on local temperatures tends to reduce local temperature extremes, even during periods of high inland temperatures. The combination of moist air from adjacent waters and the associated mild temperatures means that it is common for local weather conditions to hover near the dew point. This can result in the formation of fog associated

with local and regional marine weather layers, which commonly cover the City for hours or even days at a time with an average morning relative humidity of 82 percent.

Much of Northern California is considered to possess a predominantly Mediterranean climate. At times Berkeley does experience periods of high temperature and/or low humidity particularly between mid-July and mid-October, when the danger of hillside fires is greatest. Throughout the rest of the year, the marine weather environment is characterized by higher humidity and lower overall prevailing temperatures, resulting in a higher overall moisture content in building construction materials and slower drying of building materials and assemblies once wet or humidified.

**2. Topographical Conditions.**

Part of the Pacific Coast Range, the Berkeley Hills, define the eastern boundary of the City and form a natural obstruction to the movement of humidified, cooler air out of the San Francisco Bay basin and the City of Berkeley into the dryer adjacent inland valleys and the interior of the State. Although these hills do not form an absolute air barrier, they do play a significant role in the creation of local microclimates. This effect is evidenced by the disparity in temperatures and relative humidities commonly experienced during periods of warm weather between communities adjacent to the San Francisco Bay / Pacific Ocean and communities in the Bay Area inland valleys only a few miles inland.

**B. REASONABLE NECESSITY**

The proposed emergency changes and modifications to the California Building Code imposing more stringent requirements for construction of weather exposed building elements extending beyond exterior walls (Chapter 19.28 Berkeley Building Code Article 8) are reasonably necessary due to the local conditions set forth above because they reduce the risks to life and property from dry rot or other moisture related damage which may result from the influence of the City's climate and topography on the exterior building construction features and materials.

BE IT FURTHER RESOLVED that Resolution No. 66,367-N.S. is hereby amended.

The foregoing Resolution was adopted by the Berkeley City Council on July 14, 2015 by the following vote:

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

Noes: None.

Absent: None.

Attest: Rose Thomsen  
Rose Thomsen, Deputy City Clerk

Tom Bates  
Tom Bates, Mayor

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CALIFORNIA BUILDING STANDARDS COMMISSION

**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.  
Rose Thomsen  
DEPUTY CITY CLERK OF THE CITY OF BERKELEY