

Introduced by: Council Present

AN ORDINANCE FOR THE CITY OF BERKELEY MISSOURI, AMENDING 500, SECTION 500.010, OF THE CODE OF ORDINANCES OF THE CITY OF BERKELEY BY ADOPTING THE 2015 INTERNATIONAL BUILDING CODE (IBC), THE 2015 INTERNATIONAL RESIDENTIAL CODE (IRC), THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2014 NATIONAL ELECTRIC CODE (NEC), THE 2015 INTERNATIONAL MECHANICAL CODE (IMC), THE 2015 INTERNATIONAL PLUMBING CODE (IPC), THE 2015 INTERNATIONAL FUEL GAS CODE (IFGC), THE 2015 INTERNATIONAL EXISTING BUILDING (IEBC), 2015 INTERNATIONAL PROPERTY MAINTENANCE CODE (IPMC); AND THE 2015 INTERNATIONAL FIRE CODE (IFC) PROVIDING FOR THE REPEAL OF ALL ORDINANCES IN CONFLICT; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY OF FINE AS ESTABLISHED NOT TO EXCEED THE SUM ESTABLISHED IN SECTION 100.070 FOR EACH OFFENSE, AND EACH AND EVERY DAY SUCH OFFENSE CONTINUES SHALL CONSTITUTE A SEPARATE OFFENSE; AND PROVIDING AN EFFECTIVE DATE

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BERKELEY, MISSOURI, AS FOLLOWS:

- Section 1.** That the Code of Ordinances of the City of City of Berkeley is hereby amended by amending Chapter 500, "Building and Construction", to adopt by reference the 2015 International Building Code (IBC), the 2015 International Residential Code (IRC), the 2015 International Energy Conservation CODE (IECC), 2014 National Electric Code (NEC), the 2015 International Mechanical Code (IMC), the 2015 International Plumbing Code (IPC), the 2015 International Fuel Gas Code (IFGC), the 2015 International Existing Building (IEBC), 2015 International Property Maintenance Code (IPMC); and the 2015 International Fire Code (IFC); as Codes of the City of City of Berkeley governing the construction and maintenance of buildings in the City. The amendments to the various sections adopting the Codes and the amendments thereto are as set out in this document. A copy of these Codes, with a copy of this ordinance attached and the approved amendments, shall be kept on file at all times in the office of the City Clerk for reference and inspection during regular City business hours. The City Clerk and Building Commissioner shall also be furnished a copy of each Code book; and the Fire Chief shall be furnished a copy of the IBC and IFC, with a true and correct copy of this ordinance attached for use and reference.
- Section 2.** That all Ordinances of the City of Berkeley in conflict with the provisions of this ordinance are hereby repealed.
- Section 3.** That should any sentence, paragraph, subdivision, clause, phrase or section of this ordinance or the Codes or amendments adopted hereby be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole or any part or provision thereof, or the Code of Ordinances as a whole, other than the part so declared to be invalid, illegal or unconstitutional.

Section 4. Any person, firm or corporation violating any of the provisions of a Code adopted by this ordinance shall be deemed guilty of a misdemeanor and, upon conviction in the municipal court of the City of Berkeley, shall be fined in an amount not to exceed the sum established in Section 100.070 for each offense, and each and every day such offense continues shall constitute a separate offense.

Section 5. This Ordinance shall be in full force and effect March 1, 2019.

1st Reading, this 07th day of January 2019

2nd Reading this _____ day of _____ 2019

3rd Reading, PASSED and APPROVED, this _____ **day of** _____ **2019**

Theodore Hoskins, Mayor

ATTEST:

Deanna L. Jones, City Clerk

Approved As To Form:
Donnell Smith, City Attorney

Final Roll Call:

Mayor Hoskins	Aye ___	Nay ___	Absent ___	Abstain ___
Councilwoman Hoskins	Aye ___	Nay ___	Absent ___	Abstain ___
Councilwoman Mitchell	Aye ___	Nay ___	Absent ___	Abstain ___
Councilwoman Williams	Aye ___	Nay ___	Absent ___	Abstain ___
Councilman-at-Large Greene	Aye ___	Nay ___	Absent ___	Abstain ___
Councilwoman Hindeleh	Aye ___	Nay ___	Absent ___	Abstain ___
Vacant	Aye ___	Nay ___	Absent ___	Abstain ___

ARTICLE 1: BUILDING CODES

SECTION 1. International Building Code (IBC)

Sec. 500.010 Adopted:

The International Building Code, 2015 edition, is herewith adopted. A certain document, three (3) copies of which one (1) is on file in the office of the City Clerk of the City of Berkeley, being marked and designated as the ICC Codes 2015 Edition, as published by the International Code Council, be and is hereby adopted as the Building and Housing Codes of the City of Berkeley in the State of Missouri and made a part hereof, as fully set out in this ordinance, with the additions, insertions, deletions and changes.

Section 1.01. Amendments to the Building Code are as follows:

The sections of the 2015 International Building Code that are changed, added, or deleted are as follows:

Section 101.1. Add reference to jurisdiction:

101.1 Title. These regulations shall be known as the building code of City of Berkeley hereinafter referred to as “this code.”

Section 101.2.1 Insert: Specifically Adopts Appendices A, E, F and I

Section 101.4; change to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code, when specifically adopted, shall be considered part of the requirements of this code to the prescribed extent of each such reference. Whenever amendments have been adopted for the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the National Electrical Code shall mean the National Electrical Code as adopted.

Section 101.4.8; add the following:

101.4.8 Electrical. The provisions of the National Electrical Code shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

Section 103.1 is amended to read as follows:

103.1 Creation of a code enforcement agency. The Inspections Division is hereby created and the person in charge thereof shall be known as the Public Works Director and/or the Building Commissioner

Section 105.2 is amended as follows:

** Section 105.2 Work exempt from permit;

Under sub-title entitled “Building” delete all exemptions except #7 and #11

Building:

#7 Painting, Papering, Tiling, Carpeting, Cabinets, Counter Tops and similar finish work

#11 Swings and other playground equipment accessory to detached one- and two-Family dwellings

Section 105.3.2 is changed to read as follows:

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 60 days after the date of filing, unless such application has been pursued in good faith... {Remainder of section unchanged}.

Section 105.5 is changed to read as follows:

105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 90 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 90 days after the time the work is commenced. The Building Commissioner... {bulk of section unchanged} ... for periods not more than 90 days each. The extension shall be requested in writing and justifiable cause demonstrated. Construction of 10,000 square feet or less in area shall be completed within 18 months. Construction of a building 10,001 square feet or greater in area shall be completed within 24 months after the date of issuance of the permit.

Section 105.8 is added to read as follows:

105.8 New permit required. A new permit must be obtained for any construction which is not completed in the allowable time period or extended as provided above.

A new fee shall be required in connection with issuance of a new permit. The new fee shall be one-half the amount required for the original permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work. A new permit must be obtained for any construction which has been suspended or abandoned for a period of more than 90 days. The permittee shall make a new application, resubmit plans for review, and pay a new full permit fee to resume work.

Section 109.2 is changed to read as follows:

Schedule of permit fees: Fees charged shall be in accordance with Appendix A, as adopted.

Section 109.3 is amended to read as follows:

Building permit valuations. Building permit valuation shall include total market value of the proposed building or improvement, including electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the Building Commissioner, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the Building Commissioner; and/or the Building Commissioners shall adjust the valuation depending on industry costs. After a permit has been issued, the Building Commissioner may require a certified valuation for the building or improvement to be submitted prior to issuance of a certificate of occupancy.

Investigation Fee. Work without a permit.

109.4 Investigation. Whenever work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit

may be issued for such work.

109.4 Fee. An administrative *triple fee* shall be assessed for all work starting without a permit.

Section 109.7 is added to read as follows:

Re-inspection fee. A fee as established in Appendix A may be charged when:
The inspection called for is not ready when the inspector arrives;

No building address or permit card is clearly posted;

City approved plans are not on the job site available to the inspector;

The building is locked or work otherwise not available for inspection when called;

The job site is red-tagged twice for the same item;

The original red tag has been removed from the job site; or

Failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid *before* any more inspections are made on that job site

109.8. has been added to read as follows: Unauthorized cover up fee

Any work concealed without first obtaining the required inspection in violation of section 110 shall be assessed a fee as established by the city fee schedule.

****Section 110.3.5 Lath, gypsum board and gypsum panel product inspection.**

Delete the exception

~~Exception: Gypsum board and gypsum panel products that are not part of a fire resistance rated assembly or a shear assembly.~~

Section 113.1.1 is added to read as follows:

113.1.1. The board of adjustment of the city shall serve as the board of appeals required by this code.

Section 113.3 is amended to read as follows:

113.3 Qualifications. The board of adjustment may consult with and obtain testimony and opinions from qualified and experienced professionals in making a determination on a matter relating to an appeal concerning building construction.

****Section 202 is amended to add the definition of Building Commissioner**

Building Commissioner: The designated authority charged with the administration and operation of the Inspections Divisions.

Section 202. The definition of high-rise building is amended to read as follows:

HIGH-RISE BUILDING. A building with an occupied floor located more than 55 feet (16,764 mm) above the lowest level of fire department vehicle access.

Section 202. The definition of ambulatory health care facility is amended as follows:

Ambulatory Health Care Facility

This group may include but not be limited to the following:

Dialysis centers

Sedation dentistry

Surgery centers

Colonic centers

Psychiatric centers

Section 202 is amended to change definition of "Atrium" as follows:

ATRIUM. An opening connecting three or more stories . . . {Balance remains unchanged}

** Section 202 is amended to add the definition of Assisted Living Facilities

ASSISTED LIVING FACILITIES. A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from the staff

Section 202 is amended to add the definition of Repair Garage

REPAIR GARAGE a building structure or portion thereof used for servicing or repairing motor vehicles. This occupancy shall also include garages involved in minor repair, modification and servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs

**Section 202 is amended to add the definition of Special Inspector

SPECIAL INSPECTOR a qualified person employed or retained by an approved agency who shall prove to the satisfaction of the Registered Design Professional in responsible charge and the Building Commissioner as having the competence necessary to inspect a particular type of construction requiring special inspection

** Section 303.1.3 Add sentence to read as follows

303.1.3 Associated with group E occupancies a room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy, except when applying the assembly requirements of Chapter 10 and 11

Section 304.1 is amended to add the following to the list of occupancies:

Fire stations

Police stations with detention facilities for 5 or less

Section 307.1.1 is amended to add the following to exception 4:

4. Cleaning establishments... {Language unchanged} ...with section 707 or 1-hour horizontal assemblies constructed in accordance with section 711 or both. See also IFC chapter 12, Dry Cleaning Plant provisions.

Section 403.1, exception 3, is changed to read as follows:

3. Open air portions of buildings with a group A-5 occupancy in accordance with section 303.6.

Section 403.3 is amended to delete Exception 2

** Section 403.3.2; change to read as follows:

[F] 403.3.2 Water supply to required fire pumps. In buildings that are more than ~~420~~ 120 feet (36.5 m) in building height, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: {No change to exception.}

Section 404.5 is amended to delete the exception.

Section 406.3.5.1 is amended to add item 3 to read as follows:

A fire separation is not required between a Group R-2 and U carport provided that the carport is entirely open on all sides and that the distance between the two is at least 10 feet (3048 mm)

Section 506.3.1 is amended to add a sentence to read as follows:

506.3.1 Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane In order to be considered as accessible, if not in direct contact with a street or fire lane, a minimum 10-foot wide pathway meeting fire department access from the street or approved fire lane shall be provided.

**Section 712.1.9, Change item 4 to read as follows:

is not open to a corridor in Group I and ~~R~~- H Occupancies

**Section 901.6.1: add Section 901.6.1.1 to read as follows

Section 901.6.1.1 Standpipe Testing. Building owners/managers must maintain and test standpipe systems as per NFPA 25 requirements. The following additional requirements shall be applied to the testing that is required every 5 years:

The piping between the Fire Department Connection (FDC) and the standpipe also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.

For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the tester shall connect hose from a fire hydrant or portable pumping system (as approved by the *fire chief*) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. Confirm that there

are no open hose valves prior to introducing water into a dry standpipe. There is no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.

Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25. All hose valves shall be exercised.

If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's as required by the Fire Chief

Upon successful completion of standpipe test, place a blue tag (as per Missouri Administrative Code, Fire Sprinkler Rules for Inspection, Test and Maintenance Service (ITM) Tag) at the bottom of each standpipe riser in the building. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.

The procedures required by Missouri Administrative Code Fire Sprinkler Rules with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (fire chief) shall be followed.

Additionally, records of the testing shall be maintained by the owner and contractor, if applicable, as required by the State Rules mentioned above and NFPA 25.

Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.

Contact the fire chief for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this firefighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the fire chief.

Section 901.6.2 is changed to add the following Paragraphs

901.6.2. Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the Building Commissioner shall be notified immediately and, where required by the fire Building Commissioner, the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shut down until fire protection system has been returned to service.

Where utilized, standby personnel shall be provided with at least one approved means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

Section 903.1.1 is amended to read as follows:

Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted ~~instead of~~ in addition to automatic sprinkler protection where recognized by the applicable standard ~~and~~ or as approved by the fire Building Commissioner.

Section 903.1.2 is amended in part, as follows:

Residential sprinkler systems. Unless specifically allowed by this code or the International Building Code (IBC), residential sprinkler systems installed in accordance with NFP 13D shall not be recognized for the purposes of exception or reductions, commonly referred to as "trade-offs,"

permitted by other requirements of this code.

In addition, all residential sprinkler systems installed in accordance with NFPA 13D must include attic sprinkler protection to be recognized for the purposes of such trade-offs permitted by other requirements of this code

Section 903.2 is amended to add the following to the end of the paragraph:

903.2 Where required. {Language unchanged} Automatic sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoist- ways. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating “ELEVATOR MACHINERY - NO STORAGE ALLOWED.”

Section 903.2 is amended to delete the exception.

Section 903.2.1.1 is amended to read as follows:

Group A-1. An automatic sprinkler system shall be provided throughout a fire area containing Group A-1 Occupancies.

Section 903.2.1.2 is amended to read as follows:

Group A-2. An automatic sprinkler system shall be provided throughout a fire area containing Group A-2 Occupancies.

Section 903.2.1.3 is amended to read as follows:

Group A-3. An automatic sprinkler system shall be provided throughout a fire area containing Group A-3 Occupancies.

Section 903.2.1.4 is amended to read as follows:

Group A-4. An automatic sprinkler system shall be provided throughout a fire area containing Group A-4 Occupancies.

Section 903.2.2 is amended to read as follows:

Group B. Ambulatory health care facilities. An automatic sprinkler system shall be provided throughout a fire area containing Group B-Occupancies.

Section 903.2.3 is amended to read as follows:

Group E. An automatic sprinkler system shall be provided throughout a fire area containing Group E Occupancies.

Section 903.2.4 is amended to read as follows:

Group F-1. An automatic sprinkler system shall be provided throughout a fire area containing Group F-1 Occupancies.

Section 903.2.7 is amended to read as follows:

903.2.7 Group M. An automatic sprinkler system shall be provided throughout a fire area containing

Group M Occupancies.

Section 903.2.8 is amended to read as follows:

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

All existing Group R Occupancies housing Fraternities and Sororities within the city limits of Berkeley shall have an automatic fire sprinkler system installed throughout within 5 years after April 3, 2018. The sprinkler systems shall be installed in accordance with the fire code that has been adopted at the time of permitting for the system. The fire suppression systems shall be installed and in service no later than January 1, 2023.

Section 903.2.8.1 is added to read as follows:

903.2.8.1 One- and Two-Family Dwellings and Townhouses. An automatic sprinkler system shall be installed for one- and two-family dwellings and townhouses in accordance with Section 903.3.

Section 903.2.9 is amended to read as follows:

903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing Group S-1 Occupancies.

Section 903.2.9.1 is amended to read as follows:

Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with the International Building Code.

Section 903.2.9.2 is amended to read as follows:

Bulk storage of tires. Buildings and structures with areas for the storage of tires shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.

Section 903.2.9.3 is added to read as follows:

Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

Section 903.2.10 is amended to read as follows:

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

Section 903.2.11 is amended to add 903.2.11.1 as follows:

903.2.11.1. Stories and basements without openings. An automatic sprinkler system shall be installed in every story or basement of all buildings without openings.

Amend Section 903.2.11 to delete 903.2.11.1.2 and 903.2.11.1.3 and amend 903.2.11.3

903.2.11.3 Buildings 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings that have one or more stories ~~with an occupant load of 30 or more~~, other than penthouses in compliance with Section 1510 of the *International Building Code*, located ~~55~~ 35 feet (16 764 10 668 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

Exceptions:

Open parking structures in compliance with Section 406.5 of the International Building Code, having no other occupancies above the subject garage.

~~Occupancies in Group F-2.~~

Amend Section 903.2.11 to add 903.2.11.7, 903.2.11.8, 903.2.11.9 and 903.2.11.10

High-piled combustible storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 32 to determine if those provisions apply.

Spray booths and rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

Existing buildings. The owner of any building shall be required to install an automatic sprinkler system at such time as the owner(s) constructs an addition or enlargement to the building if the total square footage of such an addition, when combined with the total square footage of all previous additions and enlargements to the building completed after April 3, 2007:

Causes the building to exceed 4,000 square feet (371.6 m²) of total floor area, and

Causes the total square footage of all such additions to exceed the original floor area by more than thirty percent (30%), regardless of fire area, areaseparation walls, or fire walls.

Exception: Open parking garages in compliance with Section 406.3 of the International Building Code.

903.2.11.10. Sprinkler system for new construction. An automatic sprinkler system shall be installed throughout all buildings. For the purpose of this provision, firewalls shall not define separate buildings.

Exceptions:

Detached Group U occupancies that are 500 square feet or less;

Detached Group U occupancies that are greater than 500 square feet, but less than 1,000 square feet, are required to choose from one of the following methods as a means for additional fire protection:

Automatic fire sprinkler system, or

Install 5/8" Type X Gypsum Board on all walls and ceilings of the entire structure.

Detached Group U occupancies 1,000 square feet or larger are required to be furnished with an automatic fire sprinkler system.

Covered walkways or open canopies above fuel dispensing pumps, bus stops or other similar structures intended only for the temporary protection of persons from inclement weather, but not including patios attached to buildings.

Temporary buildings housing construction materials and offices not exceeding 500 square feet for 180 days. Additional time can be granted by the Fire Chief or Building Commissioner.

Open parking structures in compliance with Section 406.3 of the International Building Code.

Guard houses for commercial and residential development.

Gazebos and Ramada's for residential and public use.

Independent restroom buildings associated with golf courses, construction sites, parks and similar uses.

Section 903.3.1.1.1 is changed to delete #4 and #6 and read as follows:

903.3.1.1.1 Exempt locations. When approved by the fire chief, automatic sprinklers shall not be required in the following rooms or areas where such . . .
{language unchanged} . . . because it is damp, of fire-resistance-rated construction or contains electrical equipment.

Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.

Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the Building Commissioner.

Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours

Delete

~~Fire service access Elevator machine rooms, and machinery spaces, and hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.~~

Delete

** Section 903.3.1.2.3; add section to read as follows:

[F] Section 903.3.1.2.3 Attics and Attached Garages. Sprinkler protection is required in attic spaces of such buildings two or more stories in height, in accordance with NFPA 13 and or NFPA 13R requirements and attached garages.

Section 903.3.1.3 is amended to add the following:

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one- and two-family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D or in accordance with state law.

**Section 903.3.1.4: add to read as follows:

[F] 903.3.1.4 Freeze protection. Freeze protection systems for automatic fire sprinkler systems shall be in accordance with the requirements of the applicable referenced NFPA standard and this section.

Attics. Only dry-pipe, *preaction, or listed antifreeze automatic fire sprinkler systems shall be allowed to protect attic spaces.

* Pre-action fire sprinkler systems employ the basic concept of a dry pipe system in that water is not normally contained within the pipes. The difference, however, is that water is held from piping by an electrically operated valve, known as a pre-action valve. Valve operation is controlled by independent flame, heat, or smoke detection.

Exception: Wet-pipe fire sprinkler systems shall be allowed to protect non-ventilated attic spaces

where:

The attic sprinklers are supplied by a separate floor control valve assembly to allow ease of draining the attic system without impairing sprinklers throughout the rest of the building, and

Adequate heat shall be provided for freeze protection as per the applicable referenced NFPA standard, and

The attic space is a part of the building's thermal, or heat, envelope, such that insulation is provided at the roof deck, rather than at the ceiling level.

Heat trace/insulation. Heat trace/insulation shall only be allowed where approved by the fire chief for small sections of large diameter water-filled pipe.

Section 903.3.5 is amended to add a second paragraph to read as follows:

Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every fire protection system shall be designed with a 10-psi safety factor. Reference section 507.4 for additional design requirements

Section 903.3.5.1 is amended to read as follows:

903.3.5.1. Connections for automatic fire sprinkler systems. Automatic fire sprinkler systems in residential structures with more than two individual units and all non-residential structures shall have a separate connection to the potable water supply. Installation plans for the underground supply main shall be submitted for review and approval. The underground supply main shall be installed in accordance with this code, National Fire Protection Association Standard 24, 2007 Edition, and State Fire Marshal's Office guidelines. The size of the connection shall be reviewed and approved by the Berkeley Fire Department prior to installation. The water supply for two individual units and a single-family residence can be installed in accordance with Section 903.3.5 or this section. The minimum size of a water line supplying a one- and two-family residence is 1 1/4 inch diameter. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the 2015 International Plumbing Code.

Delete Sections 903.3.5.1.1 and 903.3.5.1.2.

Section 903.3.6 is amended to read as follows:

Fire department connection attachment. All fire department connection outlets installed for the automatic sprinkler systems that are 1-1/2 inches in diameter shall be installed with iron pipe threading (IPT). Outlets that are 2-1/2 inches in diameter shall be American National Fire Hose Connection Screw Threads (NH). When a reducer is added to a system from a 2-1/2 inch to 1-1/2 inch outlet, the 2-1/2 inch diameter outlet must have NH screw threads and the 1-1/2 inch diameter outlet shall have IPT threading.

Section 903.4 is amended to read as follows:

All valves controlling the water 903.4 Sprinkler system monitoring and alarms supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, and water flow switches on all sprinkler systems shall be electrically supervised.

Exceptions:

Jockey-pump control valves that are sealed or locked in the open position.

Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.

Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.

Trim valves to pressure switches in dry, pre-action and deluge sprinkler systems that are sealed or locked in the open position.

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems, except for fire department hose connection valves, shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

Section 903.4.2 is amended to add second paragraph to read as follows:

The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

Section 905.2 is changed to read as follows:

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Manual dry standpipe systems shall be supervised with a minimum of 10-psig and a maximum of 40-psig air pressure with a high/low alarm.

Section 905.3; is amended to delete the exception and add Section 905.3.9 and exception to read as follows:

905.3.9 Buildings exceeding 10,000 sq. ft. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 200 feet (60960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual wet standpipes shall be provided.

Exceptions:

Automatic dry and semi-automatic dry standpipes are allowed as provided for in NFPA 14.

R-2 occupancies of four stories or less in height having no interior corridors

Section 905.4 change Item 1, 3, 5, and add Item 7, to read as follows:

[F] 1. In every required ~~interior~~ exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at an intermediate landing between stories, unless otherwise approved by the fire chief.

{No change.}

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

Exception: Where floor areas adjacent to an exit passageway are reachable from an ~~interior~~ exit stairway, hose connection by a {No change to rest.}

{No change.}

Where the roof has a slope less than four units vertical in 12 units horizontal (33.3 percent slope), each standpipe shall be provided with a two-way a hose connection shall be located to serve the roof or at the highest landing of an interior exit stairway with stair access to the roof provided in accordance with Section 1011.12.

{No change.}

When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter, or as otherwise approved by the fire chief.

Section 905.9 is amended to add a second paragraph after the exceptions to read as follows:

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

Section 907.1: add Section 907.1.4 to read as follows:

[F] 907.1.4 Design standards. Where a new fire alarm system is installed, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke detectors shall have analog initiating devices.

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after the effective date of this code, as adopted, exceeds 30% of the building. When cumulative building remodel or expansion exceeds 50% of the building must comply within 18 months of permit application.

Section 907.2.1 is changed to read as follows:

907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies having an occupant load of 300 or more persons or more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy

Exception: {No change.}

Activation of fire alarm notification appliances shall:

Cause illumination of the *means of egress* with light of not less than 1 foot-candle (11 lux) at the walking surface level, and

Stop any conflicting or confusing sounds and visual distractions.

Section 907.2.3 is changed to read as follows:

907.2.3 Group E. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group E educational occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. An approved smoke detection system shall be installed in Group E day care occupancies. Unless separated by a minimum of 100' of open space, all buildings, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

Exceptions:

1. No Change

1.1 Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 1/2 or less years of age, see Section 907.2.6.)

{Remainder of exceptions unchanged}

Section 907.2.11.5 is amended to add a second paragraph after the exceptions, to read as follows:

In an R-3 structure, the household fire alarm system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.

Section 907.2.12.2 is changed by changing the beginning paragraph to read as follows:

907.2.12.2 Emergency voice/alarm communication system. The operation of any automatic fire detector, sprinkler, water-flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions on a general or selective basis to the following terminal areas on a minimum of the alarming floor, the floor above, and the floor below in accordance with the building's fire safety and evacuation plans required by Section 404.

Section 907.2.13, exception 3 is changed to read as follows:

3. Open air portions of Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the International Building Code, however, this exception does not apply to accessory uses including but not limited to sky boxes, restaurants and similarly enclosed areas.

Section 907.4.2: add Section 907.4.2.7 to read as follows:

907.4.2.7 Type. Manual alarm initiating devices shall be an approved double action type.

Section 907.6.1 is amended to add Section 907.6.1.1 to read as follows:

907.6.1.1 Installation. All fire alarm systems shall be installed in such a manner that a failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All initiating circuit conductors shall be Class "A" wired with a minimum of six feet separation between supply and return circuit conductors. IDC - Class "A" Style D; SLC - Class "A" Style 6; NAC - Class "B" Style Y. The IDC from an addressable device used to monitor the status of a suppression system may be wired Class B, Style B provided the distance from the addressable device is within 10 feet of the suppression system device.

** Section 907.6.3; delete all four Exceptions.

Section 907.6.6: add sentence at end of paragraph to read as follows

[F] See 907.6.3 for the required information transmitted to the supervising station.

Section 907.6.6: add section 907.6.6.3 to read as follows

907.6.6.3 Communication requirements. All alarm systems, new or replacement, shall transmit alarm, supervisory and trouble signals descriptively to the approved central station, remote supervisory station or proprietary supervising station as defined in NFPA 72, with the correct device designation and location of addressable device identification. Alarms shall not be permitted to be transmitted as a General Alarm or Zone condition.

**Section 909.22: add to read as follows:

[F] 909.22 Stairway or ramp pressurization alternative. Where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and the stair pressurization alternative is chosen for compliance with Building Code requirements for a smokeproof enclosure, interior exit stairways or ramps shall be pressurized to a minimum of 0.10 inches of water (25 Pa) and a maximum of 0.35 inches of water (87 Pa) in the shaft relative to the building measured with all interior exit stairway and ramp doors closed under maximum anticipated conditions of stack effect and wind effect. Such systems shall comply with Section 909, including the installation of a separate fire-fighter's smoke control panel as per Section 909.16, and a Smoke Control Permit shall be required from the Fire Department as per Section 105.7.

[F] 909.22.1 Ventilating equipment. The activation of ventilating equipment for the stair or ramp pressurization system shall be by smoke detectors installed at each floor level at an approved location at the entrance to the smoke proof enclosure. When the closing device for the stairway or ramp shaft and vestibule doors is activated by smoke detection or power failure, mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

[F] 909.22.1.1 Ventilation systems. Smoke proof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smoke proof enclosure or connected to the smoke proof enclosure by ductwork enclosed by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

Equipment, control wiring, power wiring and ductwork shall be located within the smoke proof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or

horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

Exceptions:

Control wiring and power wiring utilizing a 2-hour rated cable or cable system.

Where encased with not less than 2 inches (51 mm) of concrete.

Control wiring and power wiring protected by a listed electrical circuit protective system with a fire-resistance rating of not less than 2 hours

[F] 909.22.1.2 Standby power. Mechanical vestibule and stairway and ramp shaft ventilation systems and automatic fire detection systems shall be provided with standby power in accordance with Section 2702 of the Building Code.

[F] 909.22.1.3 Acceptance and testing. Before the mechanical equipment is approved, the system shall be tested in the presence of the fire chief to confirm that the system is operating in compliance with these requirements.

Section 910.2: change Exception 2 and 3 to read as follows:

[F] 2. Only manual smoke and heat removal shall not be required in areas of buildings equipped with early suppression fast-response (ESFR) sprinklers. Automatic smoke and heat removal is prohibited.

3. Only manual smoke and heat removal shall not be required in areas of buildings equipped with control mode special application sprinklers with a response time index of $50(m^*S)^{1/2}$ or less that are listed to control a fire in stored commodities with 12 or fewer sprinklers. Automatic smoke and heat removal is prohibited.

Section 910.2 amended to add subsections 910.2.3 with exceptions to read as follows:

910.2.3; Group H. Buildings and portions thereof used as a Group H occupancy as follows:

In occupancies classified as Group H-2 or H-3, any of which are more than 15,000 square feet (1394 m²) in single floor area.

Exception: Buildings of noncombustible construction containing only noncombustible materials.

In areas of buildings in Group H used for storing Class 2, 3 and 4 liquid and solid oxidizers, Class 1 and unclassified detonable organic peroxides, Class 3 and 4 unstable (reactive) materials, or Class 2 or 3 water-reactive materials as required for a high-hazard commodity classification

Exception: Buildings of noncombustible construction containing only noncombustible materials.

Section 910.3: add section 910.3.4 to read as follows:

[F] 910.3.4 Vent operation. Smoke and heat vents shall be capable of being operated by approved automatic and manual means. Automatic operation of smoke and heat vents shall conform to the provisions of Sections 910.3.2.1 through 910.3.2.3.

[F] 910.3.4.1 Sprinkled buildings. Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically. The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees F (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

Exception: Manual only system per 910.2

[F] 910.3.4.2 Non-sprinkled buildings. Where installed in buildings not equipped with an approved automatic sprinkler system, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.

Exception: Listed gravity-operated drop out vents.

**Section 910.4.3.1: change to read as follows:

[F] 910.4.3.1 Makeup air. Makeup air openings shall be provided within 6 feet (1829 mm) of the floor level. Operation of makeup air openings shall be ~~manual~~ or automatic. The minimum gross area of makeup air inlets shall be 8 square feet per 1,000 cubic feet per minute (0.74 m² per 0.4719 m³/s) of smoke exhaust.

** Section 910.4.4: change to read as follows:

[F] 910.4.4 Activation. The mechanical smoke removal system shall be activated by manual controls only automatically by the automatic sprinkler system or by an approved fire detection system. Individual manual controls shall also be provided.

Exception: Manual only systems per Section 910.2.

912.2. Add section 912.2.3 to read as follows

912.2.3 Hydrant distance. An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays.

Section 913.2.1 is amended to add second paragraph and exception to read as follows:

When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 feet in width and 6 feet 8 inches in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by Section 506.1.

Exception: When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the fire chief. Access keys shall be provided in the key box as required by IFC Section 506.1.

Section 913.4 is amended to add a second paragraph to read as follows:

The fire-pump system shall also be supervised for “loss of power,” “phase reversal,” and “pump running” conditions by supervisory signal on distinct circuits.

Section 1006.2.2. Add a new Section 1006.2.2.6 as follows:

1006.2.2.6 Electrical Rooms. For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

Section 1009.1 is amended to add the following exception 4:

Exceptions: . . .

Buildings regulated under State Law and built in accordance with State registered plans, including any variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of Section 1007.

Section 1010.1.9.4: amend exceptions 3 and 4 as follows:

Exceptions: {Text of Exceptions 1 and 2 unchanged}

Where a pair of doors serves an occupant load of less than 50 persons in a Group B, F, M or S occupancy, [remaining text unchanged]

Where a pair of doors serves a Group B, F, M or S occupancy, [remaining text unchanged].

Section 1015.8 Window Openings. Revise text as follows

1. Operable windows where the top of the sill of the opening is located more than ~~75 feet (22 860 mm)~~ 55 feet (16 764 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.

Section 1020.1 Construction: add exception 6 to read as follows:

6. In group B occupancies, corridor walls and ceilings need not be of fire-resistive construction within a single tenant space when the space is equipped with approved automatic smoke-detection within the corridor. The actuation of any detector shall activate self-annunciating alarms audible in all areas within the corridor. Smoke detectors shall be connected to an approved automatic fire alarm system where such system is provided.

Section 1023.2 is amended to add exceptions 3 and 4 to read as follows:

In other than occupancy Groups H and I, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors.

In other than occupancy Groups H and I, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories.

Section 1023.11 is amended to read as follows:

1023.11. Smoke-proof enclosures and pressurized stairways. In buildings required to comply with Section 403 or 405, each of the exit enclosures serving a story with a floor service not more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9 144 mm) below... {Remaining language unchanged}

Section 1025.1 is changed to read as follows:

1025.1 General. Approved luminous egress path markings delineating the exit path shall be

provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access in accordance with...

Section 1029.1.1.1 Delete this section. Spaces under grandstands and bleachers:

Section 1101.1 Scope: add exception to Section 1101.1 as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Missouri Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

**Section 1203.1: amend to read as follows:

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *International Mechanical Code*.

Where air infiltration rate in a *dwelling unit* is less than 5 air changes or less per hour when tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with Section 402.4.1.2 of the *International Energy Conservation Code*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section 403 of the *International Mechanical Code*.

Section 1404.1.1 is added to read as follows:

1404.1.1 Masonry required. All multifamily buildings shall have a minimum of eighty per cent (80%) masonry material on the exterior surfaces. All nonresidential buildings shall have a minimum of ninety per cent (90%) masonry material on the exterior surfaces. Exterior surfaces shall exclude windows, doors, and other appurtenances. Masonry must have a minimum thickness of three and one-half inches (3 1/2") in order to be included in the above percentages.

Table 1505.1 is amended to delete footnote C and replace footnote B with the following:

b. Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 square feet of projected roof area. When exceeding 120 square feet of projected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

Section 1505.7 is deleted.

Section 1510.1 is amended to add a sentence to read as follows:

1511.1 General. Materials and methods of applications used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15. All individual replacement shingles or shakes shall be in compliance with the rating required by Table 1505.1.

**Section 1704.2. Special inspections and tests is amended to read as follows:

1704.2 Special inspections and tests. Where application is made to the Building Commissioner for construction as specified in Section 105, the owner or the owner's authorized agent, or the registered design professional in responsible charge, other than the contractor, shall employ one or more approved agencies to provide special inspections and tests during construction on the types of work listed under Section 1705 and identify the approved agencies to the Building Commissioner. The special inspector shall not be employed by the contractor. These special inspections and tests are in addition to the inspections identified by the Building Commissioner that are identified in Section 110.

****Section 1704.2.1, Special inspector qualifications, is amended to read as follows:**

1704.2.1 Special inspector qualifications. Prior to the start of construction and or upon request, the approved agencies shall provide written documentation to the registered design professional in responsible charge and the building Commissioner demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction. [Remainder unchanged]

****Section 1704.2.4, Report requirement, is amended to read as follows:**

1704.2.4 Report requirement. Approved agencies shall keep records of special inspections and tests. The approved agency shall submit reports of special inspections and tests to the Building Commissioner upon request, and to the registered design professional in responsible charge. Individual inspection reports [Reports] shall indicate that work inspected or tested was or was not completed in conformance to approved construction documents. [Remainder unchanged]

****Section 1704.2.5.2, Fabricator approval, is amended to read as follows:**

1704.2.5.1 Fabricator approval. Special inspections during fabrications required by Section 1704 are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved agency, or a fabricator that is enrolled in a nationally accepted inspections program. At completion of fabrication, the acceptable or approved fabricator shall submit a certificate of compliance to the owner or the owner's authorized agent or the registered design professional in responsible charge, for submittal to the building Commissioner as specified in Section 1704.5 stating that the work was performed in accordance with the approved construction documents. The certificate of compliance shall also be made available to the Building Commissioner upon request.

Section 1804.4 is amended to read as follows:

1804.4.1 Drainage requirements. Any person, firm, or corporation who builds or causes to be built any residential dwelling or residential accessory structure shall be responsible for the execution of the following site grading requirements and drainage provisions:

The slope of the final grading of soils at the side yard of any residential dwelling or residential accessory structure shall not exceed a gradient of 5% when measured from grade at the side property line to a point of intersection with the elevation of grade at the foundation wall of the structure.

Diversion of surface water shall be contained within the limits of a residential lot and shall be conveyed by a free, positive, and uninterrupted means to a point of discharge at the front property line and/or property line adjacent to an alley. Roof drainage shall be accomplished by use of a roof guttering system connected to a properly sized subsurface drainage conduit discharging through the curb at the street or at the property line adjacent to an alley.

If irregular site topography, use of landscaping, or architectural features such as raised planting beds, retaining walls, fences, or sidewalks prohibit compliance with provisions of this section, the designer shall provide alternate methods and means as may be approved by the Building Commissioner to assure that the requirements of this code are met. The drainage plan must be submitted, reviewed, and approved prior to issuance of a building permit and the work must be approved prior to final inspection and occupancy of the structure.

A drainage system capable of removing excess surface water, subsurface water, and/or excess moisture shall be provided under all pier and beam foundations exceeding five hundred (500) square feet in area and all basements or below grade construction. The subsurface water drainage system shall be of a type and design as provided by the owner's Registered Professional Engineer. The designer of the pier and beam foundation system shall include the subsurface drainage system design by reference in plan notes or details on the foundation plan. All subsurface water drainage systems shall be designed and installed on private property in such a manner as to prohibit backflow from surface water by means of grading, check valve, air gap, or other device as may be approved by the Building Commissioner. The drainage system design for a basement or below grade construction shall be such that surface water, subsurface water, and/or moisture is not diverted onto public property or adjacent properties, provided however, such water may be drained through enclosed pipe into the city's storm water drainage system.

Exception: Pier and beam foundation systems and basement or below grade construction designed and sealed by a registered professional engineer with a design expertise in structural foundation systems may incorporate a design for a foundation drainage system as deemed appropriate.

All site drainage requirements shall be installed and approved prior to final approval of the structure and occupancy thereof. The Building Commissioner shall inspect and approve all drainage plans, structures, and work required by this section.

Section 1804.3.2 is added to read as follows:

Maximum impermeable surface. It shall be required as a condition for granting a permit to build, repair, remodel, enlarge or replace a structure or install additional features such as swimming pools, drives, patios, etc., which increase impermeable surface, that the following standards be met and complied with. Impermeable areas of all lots shall be limited to those specified for the following lot categories:

<u>Lot Category/S.F. of Lot</u>	<u>Allowed Impermeable Surface</u>
Multifamily	63%
Nonresidential lots	90%

**Exception: Permeable Pavers and Permeable Concrete may be used provided they are:

Installed per Manufacturer's requirements

Materials proposed, Manufacturers installation requirements and proposed location are provided with Submitted Plans

City Inspection required for manufacturer's subsurface requirements

Section 2308.4.3 is amended to read as follows:

2308.4.3 Application to engineered design. When accepted by the Building Commissioner, any portion of this section is permitted to apply to buildings that are otherwise outside the limitations of this section provided that:

The resulting design will comply with the requirements specified in Chapter 16;

The load limitations of various elements of this section are not exceeded; and
The portions of this section which will apply are identified by an engineer in the construction documents.

Section 2901.1 is amended to add a sentence to read as follows:

The provisions of this Chapter are meant to work in coordination with the provisions of Chapter 4 of the International Plumbing Code. Should any conflicts arise between the two chapters, the Building Commissioner shall determine which provision applies.

Section 2902.1: is changed to read as follows and add subsections:

2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number as follows:

Assembly Occupancies: At least one drinking fountain shall be provided at each floor level in an approved location.

Exception: A drinking fountain need not be provided in a drinking or dining establishment.

Groups A, B, F, H, I, M and S Occupancies: Buildings or portions thereof where persons are employed shall be provided with at least one water closet for each sex except as provided for in Section 2902.2.

Group E Occupancies: Shall be provided with fixtures as shown in Table 2902.1.

Group R Occupancies: Shall be provided with fixtures as shown in Table 2902.1.

It is recommended, but not required, that the minimum number of fixtures provided also comply with the number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the Building Commissioner. The number of occupants shall be determined by this code. Occupancy classification shall be determined in accordance with Chapter 3.

Table 2902.1: add footnote f to read as follows:

Drinking fountains are not required in M Occupancies with an occupant load of 100 or less, B Occupancies with an occupant load of 25 or less, and for dining and/or drinking establishments

**Section 2902.1.3: add new Section 2902.1.3 to read as follows:

2902.1.3 Additional fixtures for food preparation facilities. In addition to the fixtures required in this Chapter, all food service facilities shall be provided with additional fixtures set out in this section.

2902.1.3.1 Hand washing lavatory. At least one hand washing lavatory shall be provided for use by employees that is accessible from food preparation, food dispensing and ware washing areas. Additional hand washing lavatories may be required based on convenience of use by employees.

2902.1.3.2 Service sink. In new or remodeled food service establishments, at least one service sink or one floor sink shall be provided so that it is conveniently located for the cleaning of mops

or similar wet floor cleaning tool and for the disposal of mop water and similar liquid waste. The location of the service sink(s) and/or mop sink(s) shall be approved by the City of Berkeley health department.

Section 3002.1 Hoist way Enclosure Protection add exceptions to read as follows:

Exceptions:

Elevators wholly located within atriums complying with Section 404 shall not require Hoist way enclosure protection.

Elevators in open or enclosed parking garages that serve only the parking garage, and complying with Sections 406.5 and 406.6, respectively, shall not require Hoist way enclosure protection.

Section 3005.4 Machine rooms, control rooms, machinery spaces and control spaces.

~~Delete text as follows: Elevator machine rooms, control rooms, control spaces and machinery spaces outside of but attached to a hoistway that have openings into the hoistway shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.~~

Revise text to read: Elevator machine rooms, control rooms, control spaces and machinery spaces shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

[Remainder unchanged]

Section 3005.7: add a Section 3005.7 as follows:

3005.7 Fire Protection in Machine rooms, control rooms, machinery spaces and control spaces.

3005.7.1 Automatic sprinkler system. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3005.7.2.1.

3005.7.2.1 Prohibited locations. Automatic sprinklers shall not be installed in machine rooms, elevator machinery spaces, control rooms, control spaces and elevator hoist-ways.

3005.7.2.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and water-flow initiating device provided for each floor that is monitored by the building's fire alarm system.

3005.7.3 Water protection. An approved method to prevent water from infiltrating into the hoist way enclosure from the operation of the automatic sprinkler system outside the elevator lobby shall be provided.

3005.7.4 Shunt trip. Means for elevator shutdown in accordance with Section 3005.5 shall not be installed.

Section 3005.8 add Section 3005.8 as follows:

3005.8 Storage. Storage shall not be allowed within the elevator machine room, control room, machinery spaces and or control spaces. Provide approved signage at each entry to the above

listed locations stating: "No Storage Allowed.

Section 3006.2. Hoist way opening protection required. Revise text as follows:

5. The building is a high rise and the elevator hoist way is more than 55 feet (16 764 mm) in height. The height of the hoist way shall be measured from the lowest floor at or above grade to the highest floors served by the hoist way.

Section 3107 is amended to read:

3107 Signs shall be designed, constructed and maintained in accordance with this code, Code of Ordinances and elsewhere in chapter 31

**Section 3109.1: change to read as follows:

3109.1 General. Swimming pools shall comply with the requirements of sections 3109.2 through 3109.5 and other applicable sections of this code and complying with applicable state laws.

Section 3303.8: is added to read as follows:

3303.8 Dust and rodent control measures. The work of demolishing any building shall not be commenced until the required pedestrian protection fences, dust control procedures, and rat elimination methods are in place. The Building Commissioner may require the permittee to submit plans and a complete schedule for demolition, rat elimination, pedestrian protection structures, and dust control measures. Where such plans and complete schedules are required, no work shall be done until they are approved by the community development director.

Section 3303.8.1 is added to read as follows:

3303.8.1 Dust control. The work of demolishing any building shall not be commenced until the required dust control procedures are in place. The Building Commissioner may require the applicant to submit plans and a complete schedule for demolition and dust control measures. Where such measures are required, no work shall be done until such plans or schedule, or both, are approved by the Building Commissioner. All ~~reasonable~~ precautions shall be taken to prevent dust from becoming airborne at and near the demolition site. The applicant shall provide for the adequate use of water for dust suppression on the demolition site so as to prevent a public nuisance, health hazard or safety hazard.

Section 3303.8.2 is added to read as follows:

3303.8.2; Rodent control. For the purpose of eliminating or controlling rats in a building scheduled for demolition, the owner or demolition contractor shall be required to submit a plan to exterminate, bait, trap, poison or fumigate for rats prior to demolition. Such methods may include "rodent stations" around the property. If traps are used, they shall be kept set and freshly baited at frequent intervals and maintained in good working order and shall be inspected daily for a minimum of seven (7) days immediately prior to the beginning of demolition. If the plan includes poisoning or fumigating, it must be conducted in a manner approved by the health officer or any other authorized agency of the city, state, or United States. To the extent required by state law, all such methods shall be carried out by licensed pest control operators.

Section 3304.2 is added to read as follows:

3304.2 Site grading. After Demolition and during construction, sites shall be graded such that surface water shall be contained within the limits of the lot in which the construction is taking

place, and shall be conveyed by a free, uninterrupted means to point of discharge at the front property line and/or property line adjacent to an alley. In order to prevent the runoff of water, mud, or soil onto an adjacent property, public street, alley, or sidewalk, the Building Commissioner may require various methods such as silt fencing, regarding, or other erosion protection procedures to be implemented to prevent such runoff.

Section 3304.2.1 is added to read as follows:

3304.2.1 Removal of structures. Where demolition or removal of any structure is done, the lot shall be completely cleaned of all structures and appurtenances and also be properly graded so as to insure proper drainage of the entire lot including proper leveling. Erosion Control must be established. Any exception to this requirement shall be determined by the community development director.

Section 3305.1, add a sentence to read as follows:

Sanitary facilities shall not be located in any required front or side yard setback area....

Section 2. International Residential Code (IRC)

The International Residential Code for One and Two-Family Dwellings, 2015 edition, and amendments (“code”) are herewith adopted by reference. ...

Section 2.01. Amendments are as follows:

The sections of the code that are changed, added, or deleted are as follows:

Section R101.1, add reference to jurisdiction:

R101.1 Title. These regulations shall be known as the Residential Code for One- and Two-Family Dwellings of City of Berkeley and shall be cited as such and will be referred to herein as “this Code.”

Section R102.4 is changed to read as follows:

R102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this Code shall be considered part of the requirements of this Code to the prescribed extent of each such reference. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the Electrical Code shall mean the 2014 National Electrical Code as adopted and amended. Where differences occur between provisions of this Code and referenced codes and standards, the provisions of this Code shall apply.

Exception: Where enforcement . . . {remainder of exception unchanged}. . .

Section R102.5 adopts Appendices A-D, F-K, N-P and U are specifically adopted

Section R105.1, add a sentence to read as follows:

It shall be the responsibility of those performing such work to obtain the proper permits prior to commencement of any work.

Section R105.2 is hereby deleted.

Section R105.5 is changed to read as follows:

R105.5 Expiration. Every permit issued shall become invalid unless the work authorized by such permit is commenced within 60 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 60 after the time the work is commenced. For one- and two-family construction, all work commenced under a building permit shall be completed within eighteen (18) months. The Building Commissioner... {remainder of section unchanged}. No permit shall be extended more than once.

Section R105.5.1 is added to read as follows:

R105.5.1. New permits required. A new permit must be obtained for any construction which is not completed in the allowable time period or extended as provided above. A new fee shall be required in connection with issuance of a new permit. The new fee shall be one-half the amount required for the original permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work.

A new permit must be obtained for any construction which has been suspended or abandoned for a period of more than sixty (60) days. The permittee shall make a new application, resubmit plans for review, and pay a new full permit fee to resume work.

Section 108.2 is changed to read as follows:

108.2. Schedule of permit fees: Fees charged shall be in accordance with Appendix A in this section.

Section R108.2.1 is added to read as follows:

R108.2.1. Building area. For fee calculation purposes, the building area is the total floor area of all stories devoted to human occupancy, including halls, stairways, elevators, and other uses, measured to the outside faces of exterior walls and includes:

Total area under the roof and enclosed by walls, excluding garages, carports, porches, patios, and other roofed, open areas; and One-half (1/2) of the area of the garage, carport, porch, patio, and other roofed, open areas.

The sum of the above areas constitutes the building area for permit evaluation and must be stated on the permit application.

Section R108.3 is changed in part as follows:

R108.3 Building permits valuations. Building permit valuation shall include total market value of the proposed building or improvement, including electrical, gas, ... {remainder of section unchanged}.

Section R108.6 Work commencing before permit issuance: shall be subject to an administrative triple fee in addition to the required permit fees.

Section 108.7 is amended to add Section 108.7 to read as follows:

108.7 Re-inspection fee. A fee as established in **Appendix A** may be charged when:

The inspection called for is not ready when the inspector arrives;

No building address or permit card is clearly posted;

Approved plans are not on the job site available to the inspector;

The building is locked or work otherwise not available for inspection when called;

The job site is red-tagged twice for the same item;

The original red tag has been removed from the job site and/or,

Violations exist on the property including failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid before any more inspections are made on that job site.

Section R109.1.3 is changed in part as follows:

R109.1.3. Floodplain inspections. For construction permitted in areas prone to flooding as Established by Table R301.2(1), upon... {bulk of section unchanged}...construction, the may require submission... {remainder of section unchanged}.

Section R110 is hereby deleted. Section 112.1.1 is added to read as follows:

112.1.1 The Board of Adjustment of the City of Berkeley shall serve as the Board of Appeals required by this Code.

Sections R112.2.1 and R112.2.2 are deleted. Section 112.3 is changed to read as follows:

Section 112.3 Qualifications: The Board of Adjustment may consult with and obtain opinions and testimony from qualified and experienced professionals in making a determination on appealed matters relating to building construction.

Section R115 is added to read as follows:

Section R115 Building site requirements

R115.1 General. All building sites shall be maintained in such a manner as to be kept free of construction debris, garbage, trash, or any unsanitary condition.

R115.2 Toilet facilities. During construction, all projects covered by a building permit shall have sanitation facilities located either in a building or in the rear yard. Portable toilets shall not be located in any required front or side yard

R115.3 Sanitation. All garbage and trash, as those terms are defined in Section 11.101 of the Code of Ordinances, shall be deposited in an approved container or containers on each residential construction site on a daily basis. Such containers shall meet the requirements of Section 11.101 of the Code of Ordinances and shall be placed for collection on the construction

~~site-adjacent to the alley which serves the site.~~

R115.4 Construction debris. During new residential construction or major residential remodeling, the Building Commissioner may require that a commercial dumpster or trash container be provided for construction debris, due to the size of the job or area of the lot. Such dumpster or container shall not be used to discard garbage or trash as defined in Section 11.101 of the Code of Ordinances, but only debris generated as a result of the construction materials used for the project. The dumpster or container must be emptied regularly. The dumpster or container may not be placed on public right-of-way at any time, including “staging” to replace a full container with an empty one, which staging shall be performed on private property, provided however, the Public Works Director may, upon written application by the builder, grant an exception for a period not to exceed thirty (30) minutes where the size, topography, or existing trees, of a lot prevent staging thereon, and provided the builder agrees in writing to be responsible for any damage caused to public property during such staging.

R115.5 Construction fence. A fence is required around all-residential new construction sites and major residential remodeling or alteration projects. If, in the opinion of the Building Commissioner, the proposed remodeling or alteration would not adversely impact adjoining properties due to construction debris, traffic, or other associated conditions, the Building Commissioner may waive the requirement of the construction fence or any portion thereof. The minimum height for a construction fence shall be six feet (6') and openings therein shall not exceed six (6) square inches. Gates, when open, shall not obstruct public sidewalks or alleys and shall be locked when daily activities are shut down. On any construction site where, in the opinion of the Building Commissioner, a solid fence would insure the safety of the public, a solid fence shall be required. Where the complete demolition of a residence is taking place, the Building Commissioner may require a construction fence around the property in order to insure public safety.

R115.6 Site grading. After Demolition or during Construction, residential sites shall be graded such that surface water shall be contained within the limits of the lot in which the construction is taking place, and shall be conveyed by a free, uninterrupted means to a point of discharge at the front property line and/or property line adjacent to an alley. In order to prevent the runoff of water, mud, or soil onto an adjacent property, public street, alley, or sidewalk, the Building Commissioner may require various methods, such as silt fencing, regrading, or other erosion protection procedures, to be implemented to prevent such runoff.

R115.7 Demolition. Prior to Demolition or Salvage of any Structure item's 1 thru 3 below must be achieved. Salvage on sites is not allowed until demolition permit has been issued. The Building Commissioner may require the permittee to submit plans and a complete schedule for demolition, rat elimination, pedestrian protection structures, and dust control measures. Where such plans and schedules are required, no work shall be done until they are approved by the Building Commissioner and the following methods and procedures are in place:

For the purpose of eliminating or controlling rats in a building scheduled for demolition, the owner or demolition contractor shall be required to submit a plan to exterminate, bait, trap, poison or fumigate for rats prior to demolition. Such methods may include “rodent stations” around the property. If traps are used, they shall be kept set and freshly baited at frequent intervals and maintained in good working order and shall be inspected daily for a minimum of seven (7) days immediately prior to the beginning of demolition. If the plan includes poisoning or fumigating, it must be conducted in a manner approved by the health officer or any other authorized agency of the City, State, or United States. To the extent required by state law, all such methods shall be carried out by licensed pest control operators.

The work of demolishing any building shall not be commenced until the required dust control

procedures are in place. The Building Commissioner may require the applicant to submit plans and a complete schedule for demolition and dust control measures. Where such measures are required, no work shall be done until such plans or schedule, or both, are approved by the Building Commissioner. All reasonable precautions shall be taken to prevent dust from becoming airborne at and near the demolition site. The applicant shall provide for the adequate use of water for dust suppression on the demolition site so as to prevent a public nuisance, health hazard or safety hazard.

On any demolition site a construction fence shall be required. The minimum height for a construction fence shall be six feet (6') and openings therein shall not exceed six (6) square inches. Gates, when open, shall not obstruct public sidewalks or alleys and shall be locked when daily activities are shut down. Fences are to be removed upon demolition final

R115.9 Removal of structures. Where demolition or removal of any Primary structure is done, the lot shall be completely cleaned of all structures and appurtenances and also be properly graded so as to insure proper drainage of the entire lot including proper leveling. Erosion Control must be established. Any exception to this requirement shall be determined by the Building Commissioner.

R115.10 Jobsite dust and material containment. To prevent dust from being airborne, a wet saw shall be used when cutting masonry, brick, stone, or concrete. Measures must be taken to contain blowing trash or building material.

Section R202 is amended to change the definition of "Townhouse" to read as follows:

TOWNHOUSE. A single-family dwelling unit constructed in a group of three or more attached units separated by property lines in which each unit extends from foundation to roof and with a yard or public way on at least two sides.

Table R301.2 (1); fill in as follows:

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY ^f	
	SPEED ^d (mph)	Topographic Effects ^k		
5 lb./ft. ²	115 (3-sec-gust)/76 fastest mile	No		A
SUBJECT TO DAMAGE FROM				
Weathering ^a	Frost line depth ^b	Termite ^c		
moderate	6"	very heavy		
WINTER DESIGN TEMPE ^e	ICE BARRIER UNDER-LAYMENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
22°F	No	local code	150	64.9°F

{No change to footnotes}

Section R302.1 delete exceptions.

Section R302.2. Exception: change to read as follows:

Exception: A common two-hour fire-resistance-rated wall assembly, or one-hour fire-resistance-rated wall assembly when equipped with a sprinkler system... {remainder unchanged}

Section R302.2.4. Exception 5. is changed to read as follows:

Exceptions:

5. Townhouses separated by a common two-hour fire-resistance-rated wall, or one-hour fire resistant rated wall when equipped with an automatic sprinkler system, {remainder unchanged}

Section R302.3: add Exception #3 to read as follows:

Exceptions:

{existing language unchanged}

{existing language unchanged}

Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

Section R302.5.1: change to read as follows:

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors equipped with a self-closing device.

Section 302.5.2 is amended in part as follows:

R302.5.2 Duct penetration. Ducts in the garage ... {language unchanged} ... and shall have no openings into the garage and shall be protected as required by Section 302.11, Item 4.

Section R302.5.3 is amended to read as follows:

R302.5.3 Other penetrations. Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.

Section R302.7 is changed to read as follows:

R302.7 Under-stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 5/8- inch (15.8 mm) fire-rated gypsum board or one-hour fire-resistive construction.

Section R303.3. Exception. is changed to read as follows:

Exception: The glazed areas shall not be required where artificial light and a mechanical ventilation system, complying with one of the following, are provided.

The minimum ventilation rates shall be 50 cfm (24 L/s) for intermittent ventilation or 20 cfm (10 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the

outside.

Bathrooms that contain only a water closet, a lavatory, or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

Section R315.2.2 Alterations, repairs and additions. Amend to read as follows:

Exception: 2. Installation, alteration or repairs of electrical powered
{remaining text unchanged}

Section R324 is added to read as follows:

R324 Fire sprinklers. An approved automatic fire sprinkler system shall be installed in all new one- and two-family dwellings and townhouses in accordance with Section 903.3.1.3 of the International Fire Code.

R324.1. Existing Buildings. The owner of any one and two family dwelling or townhouse shall be required to install an automatic sprinkler system to protect the existing building and new additions at such time as the owner(s) constructs an addition or enlargement to the building if the total square footage of such an addition, when combined with the total square footage of all previous additions and enlargements to the building after August 1, 2008:

Causes the building to exceed 4,000 square feet (371.6 m²) of total floor area; and

The total square footage of all such additions exceeds the *existing under roof floor area of the building by more than thirty percent (30%), regardless of fire area, area separation walls, or fire walls.

Section R326 Swimming Pools, Spas and Hot Tubs. Amended to read as follows:

R326.1 General. The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code 2015 IRC Appendix Q. Swimming Pools, Spas and Hot Tubs.

R401.2 is replaced to read as follows

Foundations for one and two-family dwellings shall be designed to meet one of the following criteria:

Concrete pier and beam foundation, designed by a registered Missouri engineer; or

Slab foundation supported by piers, designed in accordance with WRI/CRSI Design of Slab-on-Ground Foundations, and sealed by a registered Missouri engineer; or

Post-tensioned foundation, designed in accordance with PTI Design and Construction of Post-Tensioned Slab-on-Ground Foundations, and sealed by a registered Missouri engineer; or

Exception: Piers shall not be required for detached accessory structures unless existing soil conditions are determined to mandate such design.

The height of the exterior grade beam, on either a slab or a pier and beam foundation, shall be no higher than the average of the heights of the grade beams of the residences located on the adjacent properties. In cases where the average height will not allow for positive drainage of the subject site because of existing topography, the Building Commissioner may allow up to twelve

inches (12") to be added to the height of the exterior grade beam so as to achieve positive drainage, consistent with the requirements set out under Subsection R401.3.1 below.

In cases where the addition to the height of the exterior grade beam, as described in (4) above, will not provide for positive drainage of the subject site because of existing topography, the developer shall submit a drainage plan, prepared and sealed by a Missouri Registered Professional Engineer, which will establish the grading, drainage, grade beam height and minimum finished floor elevations in compliance with Section R401.3.1.

The exposed height of the exterior grade beam shall not exceed twelve inches (12").

Section R401.3 is replaced with the following:

R401.3 Drainage and control of runoff water. It shall be unlawful and an offense for any person, firm or corporation to do work or cause work to be accomplished that diverts, impounds, or otherwise alters the natural flow of surface water drainage in such a manner that causes damage to property, creates an attractive nuisance, or causes an unreasonable risk to the public health, safety, or general welfare.

Section R401.3.1 is added to read as follows:

R401.3.1 Drainage requirements. Any person, firm, or corporation who builds or causes to be built any residential dwelling or residential accessory structure shall be responsible for the execution of the following site grading requirements and drainage provisions:

The slope of the final grading of soils at the side yard of any residential dwelling or residential accessory structure shall not exceed a gradient of 5% when measured from grade at the side property line to a point of intersection with the elevation of grade at the foundation wall of the structure.

Diversion of surface water shall be contained within the limits of a residential lot and shall be conveyed by a free, positive, and uninterrupted means to a point of discharge at the front property line and/or property line adjacent to an alley. Roof drainage shall be accomplished by use of a roof guttering system connected to a properly sized subsurface drainage conduit discharging through the curb at the street or at the property line adjacent to an alley.

If irregular site topography, use of landscaping, or architectural features such as raised planting beds, retaining walls, fences, or sidewalks prohibit compliance with provisions of this section, the designer shall provide alternate methods and means as may be approved by the Building Commissioner to assure that the requirements of this Code are met. The drainage plan must be submitted, reviewed, and approved prior to issuance of a building permit and the work must be approved prior to final inspection and occupancy of the structure.

A drainage system capable of removing excess surface water, subsurface water, and/or excess moisture shall be provided under all pier and beam foundations exceeding five hundred (500) square feet in area and all basements or below grade construction. The subsurface water drainage system shall be of a type and design as provided by the owner's Registered Professional Engineer. The design of the pier and beam foundation system shall include the subsurface drainage system design by reference in plan notes or details on the foundation plan. All subsurface water drainage systems shall be designed and installed on private property in such a manner as to prohibit back flow from surface water by means of grading, check valve, air gap, or other device as may be approved by the Building Commissioner. The drainage system design for a basement or below grade construction shall be such that surface water, subsurface water, and/or moisture

is not diverted onto public property or adjacent properties, provided however, such water may be drained through enclosed pipe into the City's storm water drainage system.

Exception: Pier and beam foundation systems and basement or below grade construction designed and sealed by a registered professional engineer with design expertise in structural foundation systems may incorporate a design for a foundation drainage system as deemed appropriate.

All site drainage requirements shall be installed and approved prior to final approval of the structure and occupancy thereof. The Building Commissioner shall inspect and approve all drainage plans, structures, and work required by this section.

R401.3.2 Maximum impermeable surface. It shall be required as a condition for granting a permit to build, repair, remodel, enlarge or replace a structure or install additional features such as swimming pools, drives, patios, etc., which increase impermeable surface, that the following standards be met. Impermeable areas of all lots shall be limited to those specified for the following lot categories:

Lot Category/S.F. of Lot	Allowed Impermeable Surface
Single-family	
0 - 6,000 sq. ft.	3,600 sq. ft.
6,001 - 7,500 sq. ft.	60%
7,501 - 10,000 sq. ft.	52% or 4,500 sq. ft., whichever is greater
10,001 - 12,000 sq. ft.	48% or 5,200 sq. ft., whichever is greater
12,001 - 35,000 sq. ft.	40% or 5,760 sq. ft., whichever is greater
35,001 sq. ft. and greater	35% or 14,000 sq. ft., whichever is greater
Single-family attached and two-family	63%

**Exception: Permeable Pavers and Permeable Concrete may be used provided they are:

Installed per Manufacturer's Instructions

Materials proposed, Manufacturers Installation requirements and proposed location are provided with Submitted Plans

City Inspection required for manufacturer's subsurface requirements

Section R401.4 is changed to read as follows:

R401.4 Soil tests: A soil test is required for all new construction of one and two family dwellings.

Tests shall be made by an approved agency using an approved method.

Sections R401.4.1 and R401.4.2 are hereby deleted. Section R602.6.1: amend the following:

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and 1 ½ inches (38) mm 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1 ½ inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening {remainder unchanged}

Section R703.8.4.1; add a second paragraph to read as follows:

In stud framed exterior walls, all ties shall be anchored to studs as follows:

When studs are 16 in (407 mm) o.c., stud ties shall be spaced no further apart than 24 in (737 mm) vertically starting approximately 12 in (381 mm) from the foundation; or

When studs are 24 in (610 mm) o.c., stud ties shall be spaced no further apart than 16 in (483 mm) vertically starting approximately 8 in (254 mm) from the foundation.

Section R902.1 a second paragraph is added to read as follows:

R902.1 Minimum roof class. All roof coverings shall be a minimum Class C. All individual replacement shingles or shakes shall be a minimum Class C.

Section R908.1 add a sentence to read as follows:

All individual replacement shingles or shakes shall comply with Section R902.1.

Chapter 11 [RE] – Energy Efficiency is deleted in its entirety and replaced with the following:

N1101.1 Scope. This chapter regulates the energy efficiency for the design and construction of buildings regulated by this code.

N1101.2 Compliance. Compliance shall be demonstrated by meeting the requirements of the residential provisions of 2015 International Energy Conservation Code.

Section M1305.1.3 is changed to read as follows:

M1305.1.3 Appliances in attics. Attics containing appliances requiring access shall be provided . . . {bulk of paragraph unchanged} . . . sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, access to the attic space shall be provided by one of the following:

A permanent stair.

A pull down stair.

An access door from an upper floor level.

Access Panel may be used in lieu of items 1, 2, and 3 if appliance is serviceable from access opening and opening is large enough to remove the largest piece of equipment

Exceptions:

The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

Where the passageway is unobstructed ... [remainder unchanged]

Section M1307.7 is added to read as follows:

M1307.7 Gas appliances. No gas-fired appliances or equipment shall be installed under any stairway or stairway landing.

Section M1411.3 is changed to read as follows:

M1411.3 Condensate disposal. Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to a sanitary sewer through a trap, by means of a direct or indirect drain. {Remainder unchanged}

Section M1501 is amended to add new Section M1501.2 to read as follows:

M1501.2. Material and size. Exhaust ducts shall have a smooth interior finish and shall be constructed of metal a minimum 0.016-inch (0.4 mm) thick. The exhaust duct size shall be 4 inches (102 mm) nominal in diameter. Duct size shall not be reduced along its developed length or at termination.

Section M1501.3 is added to read as follows:

M1501.3 Specified length. The maximum length of the exhaust duct shall be 35 feet (10668 mm) from the connection to the transition duct from the appliance to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table M1502.4.4.1.

M1503.4 Makeup Air Required Amend and add exception as follows:

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m³/s) shall be provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Exception: Where all appliances in the house are of sealed combustion, power- vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m³/s) without providing makeup air.

Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m³/s) shall be provided with a makeup air at a rate approximately equal to the difference between the exhaust air rate and 600 cubic feet per minute.

Section 1601.2 Factory made ducts is amended to add the following sentence and exception

Flexible air ducts are prohibited.

Exception: Maximum 5' length allowed for transition to grill

Section M2005.2 is changed to read as follows:

M2005.2 Prohibited locations. Fuel-fired water heaters, shall not be installed in, or have access to, a room used as a storage closet, sleeping room, bathroom, a closet or enclosure opening directly into a sleeping room or bathroom, or under any stairway or stairway landing. Direct-vent water heaters are not required to be installed within an enclosure.

Section G2406.2. delete exceptions 3 and 4 and add the following paragraph

An unvented gas fired appliance such as a room heater, fire place or space heater shall not be installed in, or have access to, a room used as a storage closet, sleeping room, bathroom, a closet or enclosure opening directly into a sleeping room or bathroom.

Section G2408.3 is hereby deleted.

Section G2415.2.1 is hereby changed to add a second paragraph to read as follows:

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

“WARNING 1/2 to 5 psi gas pressure Do Not Remove”

Section G2415.2.2 is hereby changed to add an exception to read as follows:

Exception: Corrugated stainless-steel tubing (CSST) shall be a minimum of 1/2" (18 EDH).

Section G2415.12 (404.10) is changed to read as follows:

G2415.12. (404.10) Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12 inches~~ 18 inches (457 mm) below grade, ~~except as provided for in Section G2415.10.1.~~

Section 2415.12.1 is deleted

Section G2417.1 (406.1) is changed to read as follows:

G2417.1. (406.1) General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the building Commissioner when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

Section G2417.4 is changed to read as follows:

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to~~

measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.

Section G2417.4.1: change to read as follows:

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than 3 psig (20 kPa gauge), or at the discretion of the Building Commissioner, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. Irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 1/2"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 1/2"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing

Section G2417.4.2 is changed to read as follows:

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the Building Commissioner, but in no case for less than fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Building Commissioner, but in no case for less than thirty (30) minutes.

Section G2420.1.4 is added to read as follows:

G2420.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration, but in no case greater than 12 inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

Section G2420.5.1 (409.5.1) is amended to add text to read as follows:

G2420.5.1 (409.5.1) Located within the same room. The shutoff valve... {bulk of paragraph unchanged}... in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

Section G2421.1 is changed in part as follows:

G2421.1 (410.1) Pressure regulators. A line pressure regulator shall be ... {bulk of paragraph unchanged}... approved for outdoor installation. Access to regulators shall comply with the requirements for access to appliances as specified in Section M1305.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

Section G2422.1.2.3 (411.1.3.3) is amended to delete Exception 1 and Exception 4.

Section G2445.2 add Exception to read as follows:

G2445.2 (621.2) Prohibited use. One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.

Exception: Existing approved unvented room heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Building Commissioner unless an unsafe condition is determined to exist as described in International Fuel Gas Code Section 108.7 of the Fuel Gas Code.

Section G2448.1.1 is changed to read as follows:

G2448.1.1 (624.1.1) Installation requirements. The requirements for water heaters relative to access, sizing, relief valves, drain pans and scald protection shall be in accordance with this Code.

Section P2502.1.1 is added to read as follows:

P2502.1.1 Demolished structures. Sewer services which are a part of buildings or structures which are demolished or which are abandoned or the use thereof discontinued, shall be capped. All sewer lines for new construction and all relayed, replaced or relocated sewer lines constituting or involving 50% or more of the total building sewer shall require a new sewer tap.

Section P2709.1 is changed to add an exception to read as follows:

Exception: Showers designed to comply with ICC/ANSI A117.1. Section P2709.2 is changed to add an exception to read as follows: Exception: Showers designed to comply with ICC/ANSI A117.1.

Section P2801.6.1: change to read as follows:

Section P2801.6.1 Pan size and drain. The pan shall be not less than 1 1/2 inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4.

Multiple pan drains may terminate to a single discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

Section P2801.7 is amended to add exception #2 to read as follows:

Exceptions:

Electric Water Heater.

Section P2804.6.1: change to read as follows:

Section P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

Not be directly connected to the drainage system.

Discharge through an air gap located in the same room as the water heater.

Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.

Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

Discharge to the floor, to an indirect waste receptor or to the outdoors.

[remainder unchanged]

Section P2902.5.3; change to read as follows:

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

Section P2906 “Materials Joints and Connections” and all tables are changed to delete all references to Polybutylene pipes and fittings.

Section P2906.4 is amended in part as follows:

P2906.4. Water service pipe. Water service pipe and fittings shall be of brass or copper and shall conform to NSF61 and the standards listed in Table 605.4... [bulk of the section unchanged].

Section P2906.5 is changed in part as follows:

P2906.5. Water distribution pipe. Water distribution pipe shall be of brass or copper and shall conform to NSF61 and the standards listed in Table 605.4... [bulk of section unchanged]...

Tables 2906.4, 2906.5, and 2906.6. delete the following:

Cross-linked polyethylene (PEX) plastic tubing;

Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL- PEX) pipe;

Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL- PEX) pipe;

Polybutylene (PB) plastic pipe and tubing;

Polyethylene (PE) plastic pipe and tubing;

Polypropylene (PP) plastic pipe and tubing. Section P3001.4 is changed to read as follows:
P3001.4. Protection of sanitary sewer systems

All roofs, paved areas, yards, courts, courtyards, subsurface drainage, sump pumps, or similar areas having rain water drainage shall discharge to the outside of the building, or directly to the storm sewer system where required.

Tables P3002.1 (1), P3002.1 (2), and P3002.2, delete the following: “cellular core PVC

Section P3009.9; change to read as follows:

P3003.9. Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.

Exception: A primer is not required where both of the following conditions apply:

~~The solvent cement used is third-party certified as conforming to ASTM D-2564~~

The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings not in pressure applications in sizes up to and including 4 inches (102mm) in diameter.

Section P3111 is deleted.

Section P3112.2 is amended to read as follows

P3112.2 Installation. Traps for island sinks and similar equipment shall be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drain board height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye- branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9 mm/m) back to the drain shall be maintained. The return bend used under the drain board shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and a forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this Code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent.

Appendix Q Reserved. Amended to read as follows:

Appendix Q. Swimming Pools, Spas and Hot Tubs. Section AQ101.2.1 or AQ101.2.2.

AQ101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

AQ101.2 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on-ground pools and in-ground pools that involve placement of fill, shall comply with

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

AQ101.2.1 Pools located in designated floodways.

Where pools are located in designated floodways, documentation shall be submitted to the building Commissioner which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the jurisdiction.

AQ101.2.2 Pools located where floodways have not been designated. Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

SECTION AQ102 Definitions AQ102.1General.

For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one-or two-family dwelling, or a one-family townhouse not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

SECTION A G 103 SWIMMING POOLS

AQ103.1 In-ground pools.

In-ground pools shall be designed and constructed in compliance with ANSI/NSPI- 5.

AQ103.2 Above-ground and on-ground pools.

Above-ground and on-ground pools shall be designed and constructed in compliance with ANSI/NSPI-4.

AQ103.3 Pools in flood hazard areas.

In flood hazard areas established by Table R301.2(1), pools in coastal high- hazard areas shall be designed and constructed in compliance with ASCE 24.

SECTION A Q 104 SPAS AND HOT TUBS

AQ104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-3.

AQ104.2 Portable spas and hot tubs.

Portable spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-6.

SECTION A Q 105 BARRIER REQUIREMENTS

AQ105.1 Application. The provisions of this appendix shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs

AQ105.2 Outdoor swimming pool. An outdoor swimming pool, including an in- ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

The top of the barrier shall be at least 48 inches (1219mm) above grade measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51mm) measured on the side of the barrier, which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102mm)

Openings in the barrier shall not allow passage of a 4-inch-diameter (102mm) sphere.

Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.

Maximum mesh size for chain link fences shall be a 2.25-inch (57 mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches (44 mm).

Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1.75 inches (44 mm).

Access gates shall comply with the requirements of Section AQ105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and the gate and barrier shall have not opening greater than 0.5 inch (13 mm) within 18 inches (457 mm) of the release mechanism.

Where a wall of a dwelling serves a part of the barrier one of the following conditions shall be met:

The pool shall be equipped with a powered safety cover in compliance with ASTM F1346; or Doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:

The ladder or steps shall be capable of being secured, locked or removed to prevent access, or The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AQ105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter (102 mm) sphere.

AQ105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AQ105.2, Item 9.

AQ105.4 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb them

AQ105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AQ107, shall be exempt from the provisions of this appendix

SECTION AQ106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA

SUCTION OUTLETS 106.1 General. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

SECTION AQ107 ABBREVIATIONS

AQ107.1 General.

ANSI—American National Standards Institute 11 West 42nd Street
New York, NY 10036

APSP—Association of Pool and Spa Professionals NSPI—National Spa and Pool Institute
2111 Eisenhower Avenue
Alexandria, VA 22314

ASCE—American Society of Civil Engineers 1801 Alexander Bell Drive
Reston, VA 98411-0700

ASTM—ASTM International 100 Barr Harbor Drive
West Conshohocken, PA 19428

UL—Underwriters Laboratories, Inc. 333 Pfingsten Road, Northbrook, IL 60062-2096

Section 3. International Energy Conservation Code (IECC)

The International Energy Conservation Code, 2015 edition, is herewith adopted by reference. ...

Amendments are as follows:

The following sections of the 2015 International Energy Conservation Code are hereby amended as follows:

Section C202 and R202: add the following definition:

PROJECTION FACTOR. The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

Section R202: add the following definition:

***DYNAMIC GLAZING. Any fenestration product that has the fully reversible ability to change its performance properties, including *U*-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

Section R402.3.2 Glazed fenestration SHGC: amend by adding a paragraph and table following the exception to read as follows:

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

Table R402.3.2 SHGC Multipliers for Permanent Projections a Projection Factor	SHGC Multiplier (all Other Orientation)	SHGC Multiplier (North Oriented)
>0 - 0.10	1.00	1.00
>0.10 – 0.20	0.91	0.95
>0.20 – 0.30	0.82	0.91
>0.30 – 0.40	0.74	0.87

>0.40 – 0.50	0.67	0.84
>0.50 – 0.60	0.61	0.81
>0.70 – 0.80	0.56	0.78
>0.80 – 0.90	0.51	0.76
>0.90 – 1.00	0.47	0.75
	0.44	0.73

a North oriented means within 45 degrees of true north.

R402.4.1.2 Testing; Add a last paragraph to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing, certified by national or state organizations as approved by the building Commissioner. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the Company that constructs the structure.

R403.3.3 Duct Testing (Mandatory) Add a last paragraph to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building Commissioner. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial Interest in the company that constructs the structure.

Section C402.2.7/R402.2: Add Section C402.2.9 and R402.2.14 to read as follows:

Section C402.2.7/R402.2.14 Insulation installed in walls. To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the Building Commissioner.

Section R405.6.2: add the following sentence to the end of paragraph: Acceptable performance software simulation tools may include, but are not limited to, REM Rate tm, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the Building Commissioner.

TABLE R406.4 MAXIMUM ENERGY RATING INDEX: amend to read as follows:

TABLE R406.4 (1) MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	65

This table is effective until August 31, 2019.

TABLE R406.4 (2) MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	63

The table is effective from September 1, 2019 to August 31, 2022.

TABLE R406.4 (3) MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	59

This table is effective on or after September 1, 2022.

Section 4. National Electrical Code (NEC)

The 2014 National Electrical Code is hereby adopted by reference and made part of this code as a general standard for electrical equipment and the installation thereof in the city, as set forth herein. A copy of the 2014 National Electrical Code referred to herein, is on file in the office of the building inspection division for reference and inspection. References to the “electrical code” shall mean the 2014 National Electrical Code (NEC) and any amendments legally adopted by the city council of the city.

Section 4.01 Amendments are as follows:

The following sections of the 2014 National Electric Code are amended, added, or deleted as follows:

Article 80 - General 80-1 Application.

The provisions of this article shall apply to all activity involving the installation, servicing, repair, replacement, additions, modification, and/or maintenance of electrical systems, conductors, equipment, fittings, devices, motors, appliances, fixtures, signs and all other electrical equipment within or on public or private buildings and premises.

80-2 Application to existing electrical systems and equipment.

Additions, alterations or repairs. Additions, alterations or repairs may be made to any electrical system and equipment without requiring the existing electrical system and equipment to comply with all the requirements of this Code, provided that addition, alteration or repair conforms to that required for a new electrical system and equipment and provided further that no hazard to life, health or safety will be created by such additions, alterations or repairs. Minor additions, alterations and repairs to existing electrical system and equipment may be made in accordance with the law in effect at the time the original installation was made, when approved by the Building Commissioner.

Existing installations. Electrical systems and equipment lawfully in existence at the time of the adoption of this Code may have their use, maintenance or repair continued if the use, maintenance or repair is in accordance with the original design and no hazard to life, health or property has been created by such electrical system and equipment.

Change in building occupancy. Electrical systems and equipment which are a part of any building or structure undergoing a change in use or occupancy, as defined in the Building Code, shall comply with the requirements of this Code which are applicable to the new use or occupancy.

Maintenance. All electrical systems and equipment, both existing and new, and all parts thereof shall be maintained in a proper operating condition in accordance with the original design and in a safe and hazard free condition. All devices or safeguards which are required by this Code shall be maintained in conformance with this Code. The owner or his designated agent shall be

responsible for the maintenance of the electrical system. To determine compliance with this subsection, the Building Commissioner may cause any electrical system to be re-inspected.

Moved building. Electrical systems and equipment which are a part of buildings or structures moved into or within the City of Berkeley shall comply with the provisions of this Code for new installations.

Conflicting provisions.

Where, in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

Modifications.

Whenever there are practical difficulties involved in carrying out the provisions of this Code, the Building Commissioner may grant modifications for individual cases, provided he shall first find that a special individual reason makes the strict letter of this Code impractical and the modification is in conformity with the intent and purpose of this Code, and that such modification does not lessen health, life and fire safety requirements.

Tests.

Whenever there is insufficient evidence of compliance with any of the provisions of this Code or evidence that materials or construction do not conform to the requirements of this Code, the Building Commissioner may require tests as evidence of compliance to be made at the sole expense of the person providing such materials or performing such construction.

Test methods shall be as specified by this Code or by other recognized test standards. In the absence of recognized and accepted test methods for the proposed alternate, the Building Commissioner may determine test procedures.

All tests shall be made by an approved agency. Reports of such tests shall be retained by the Building Commissioner for a period deemed appropriate by the Building Commissioner.

Unsafe electrical systems or equipment.

All electrical systems or equipment regulated by this Code which are unsafe, or which constitute a fire hazard, or are otherwise dangerous to human life are, for the purpose of this section, unsafe. Any use of electrical systems or equipment regulated by this Code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is, for the purpose of this section, an unsafe use. All such 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 Article 3.03 "Abatement of Dangerous Buildings and Premises" of the Berkeley Code of Ordinances or such alternate procedure as may be adopted by this jurisdiction. As an alternative, the Building Commissioner or other employee or Commissioner of the City as designated by the governing body may institute any other appropriate action to prevent, restrain, correct or abate the violation.

Violations.

It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use or maintain any electrical system or equipment or cause or permit the same to be done in violation of this Code. The issuance or granting of a permit or approval of plans and specifications or the completion or approval of an

inspection shall not be deemed or construed to be a permit for, or an approval of, any violation of any of the provisions of this Code. No permit presuming to give authority to violate or cancel the provisions of this Code shall be valid, except insofar as the work or use which is authorized is lawful.

9. Article 85 - Organization and Enforcement 85-1 Powers and duties of Building Commissioner

General. The Building Commissioner is hereby authorized to enforce all the provisions of this Code. He shall cause a record to be kept of all permits issued and inspections made.

Deputies. In accordance with prescribed procedures and with the approval of the appointing authority, the Building Commissioner may appoint a Chief Electrical Inspector and other related technical officers and inspectors and other employees as shall be authorized from time to time. Reference to the "Inspector" and "Electrical Inspector" in this Code shall mean the Chief Electrical Inspector or other Electrical Inspectors, or the Chief Building Commissioner.

Right of entry. Whenever necessary to make an inspection to enforce any of the provisions of this Code, or whenever the Building Commissioner or his authorized representative has reasonable cause to believe that there exists in any building or upon any premises any condition or violation which makes such building or premises unsafe, dangerous or hazardous, the Building Commissioner or his authorized representative may enter such building or premises at all reasonable times to inspect the same or to perform any duty imposed upon the Building Commissioner by such Codes, provided that if such building or premises be occupied, he shall first present proper credentials and request entry. If such building or premises is unoccupied, he shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry. If entry be refused, the Building Commissioner or his authorized representative shall have recourse to every remedy provided by law to secure entry. When the Building Commissioner or his authorized representative shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other persons having charge, care or control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the Building Commissioner or his authorized representative for the purpose of inspection and examination pursuant to this Code.

Notice. When any order or notice is issued pursuant to the provisions of this Code to any person who cannot be found after a reasonable search, such order or notice may be served by posting it in a conspicuous place upon the premises occupied by him or upon the premises where the defects are alleged to exist. Such posting of the notice shall be considered equivalent to personal service of such order or notice. An order sent by mail in a sealed envelope with postage prepaid and directed to the address of the electrical contractor, owner, lessee, or occupant of the premises shall be equivalent to personal service of such order. Electrical Inspectors are hereby empowered to attach to the nearest electrical cabinet or equipment feeding defective or hazardous wiring, any Commissioner notice or seal to prevent use of electricity in that area, and it shall be unlawful for any other person to place or attach such seal, or to break, change, destroy, tear, mutilate, cover or otherwise deface or injure any such Commissioner notice or seal posted by an Electrical Inspector.

Stop orders. Whenever any work is being done contrary to the provisions of this Code, the Building Commissioner may order the work stopped by notice in writing served on any persons engaged in the doing or causing such work to be done, and any such persons shall forthwith stop such work until authorized by the Building Commissioner to proceed with the work.

Authority to disconnect utilities in emergencies. The Building Commissioner or his authorized

representative shall have the authority to disconnect any electric power or 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 Commissioner shall whenever possible notify the serving utility, the owner and occupant of the building, structure or building service equipment, in writing, of such disconnection immediately thereafter.

Authority to condemn electrical system and equipment. Whenever the Building Commissioner ascertains that any electrical system or equipment regulated in this Code has become hazardous to life, health or property, he may order in writing that such electrical system or equipment either be removed or restored to a safe condition, whichever is appropriate. The written notice itself shall fix a time limit for compliance with such order. No person shall use or maintain defective electrical system or equipment after receiving such notice. When such equipment or installation is to be disconnected, a written notice of such disconnection and causes therefore shall be given within 24 hours of the order to disconnect to the serving utility, the owner and occupant of such building, structure or premises. When any electrical system or equipment is maintained in violation of this Code and in violation of any notice issued pursuant to the provisions of this section, the Building Commissioner shall institute any appropriate action to prevent, restrain, correct or abate the violation.

Connection after order to disconnect. No person shall make connections from any energy or power supply nor supply power to any electrical system or equipment which has been disconnected or ordered to be disconnected by the Building Commissioner or the use of which has been ordered to be discontinued by the Building Commissioner until the Building Commissioner authorizes the reconnection and use of such electrical system or equipment.

Liability. The Building Commissioner, or his authorized representative charged with the enforcement of this Code, acting in good faith and without malice in the discharge of his duties, shall not thereby render himself personally liable for any damage that may accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of his duties. Any suit brought against the Building Commissioner or employee because of such act or omission performed by him in the enforcement of any provision of this Code shall be defended by legal counsel provided by this jurisdiction until final termination of such proceedings. This Code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building, structure or building service equipment therein for any damages to persons or property caused by defects, nor shall the Code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by the Code or approvals issued under this Code.

Cooperation of other Commissioners and officers. The Building Commissioner may request, and shall receive so far as is required in the discharge of his duties, the assistance and cooperation of other Commissioners of this jurisdiction.

Appeals. Any person, firm or corporation may file an appeal with the Board of Adjustment for review of any decision of the Building Commissioner, provided that such appeal is made in writing within (5) days after notification by the electrical inspector. The Board of Adjustment shall meet within ten (10) days of receipt of such appeal to hear the appeal and render a decision and findings in writing to the appellant with a duplicate copy to the Building Commissioner.

Requirements of electrical contractor.

Registration required. It shall be unlawful for any person, firm, or corporation who is not registered as a qualified electrician in the City of Berkeley to engage in work regulated by this code. Prior to

the approval of any permit to do work regulated by this code, the applicant for such permit must first register in person with the Building Inspection Division.

Application for registration. A person, firm, or corporation who desires to register as an Electrical Contractor's Master Electrician or Journeyman Electrician in the City of Berkeley shall complete the appropriate application and provide the following information:

A current, electrical license issued by a municipality and accompanied by a reciprocal letter or evidence of satisfactory performance on master or journeyman electrician's certification conducted by the Southern Building Code Conference International in conjunction with the North Central Missouri Council of Governments.

A form of picture identification.

Business identification to include the business name, business owner(s), address, and telephone number.

Issuance and term of registration. Upon satisfactory completion of the requirements of county licensing and payment of applicable fees as specified in Appendix A for registration as an Electrical Contractor, Master Electrician or Journeyman Electrician, the Building Commissioner may approve such registration. An approved registration is valid for a period of not more than one (1) year and shall terminate at the end of each calendar year.

Transfer of registration. It shall be unlawful for any person, firm, or corporation to lend, rent, or transfer an electrical registration issued by the City of Berkeley to another other person firm, or corporation for any purpose.

Revocation of registration. An electrical registration issued by the City of Berkeley may be revoked by the Building Commissioner for the following;

Falsification of any portion of an application for registration with intent to defraud.

Any person, firm or corporation who, after being found guilty in municipal court of violations of this code, is unwilling to make appropriate corrections to the satisfaction of the Building Commissioner or his designee shall be denied registration as an Electrical Contractor, Master or Journeyman Electrician.

Transfer of registration as stipulated in Section 85-2(d) of this code.

Notice of revocation of electrical registration. The Building Commissioner shall provide proper notice in writing to the person, firm or corporation holding a defective electrical registration of the decision to revoke an electrical registration. Notice shall be deemed effective on the post date of certified mail and/or acceptance by hand delivery.

Appeal of revocation. In the event that any person, firm or corporation shall appeal the decision of the Building Commissioner to revoke an electrical registration, a request for a public hearing of the matter shall be made in writing to the Chairman of the Board of Adjustment within five (5) days of receipt of notice of revocation as specified in this section. The Board of Adjustment shall meet to consider an appeal of revocation within ten (10) days of receipt of a written request.

False representation as to registration unlawful. It shall be unlawful for any person, firm, or corporation to represent himself or a business as an electrician or electrical contractor in the City of Berkeley without having first properly registered with the Building Inspection Division.

Electrical company vehicles to be marked. All electrical contractors' vehicles engaged in doing work in the City of Berkeley shall have signs permanently affixed to both sides of the vehicle indicating the company name of the electrical contractor.

Supervision. The actual work of installing, maintaining, altering, or repairing of electrical work for which a permit is required by this Code shall have supervision by a licensed master or journeyman electrician as provided by this Code. In the event the owner of electrical contracting business is not a licensed master electrician, a master electrician shall be designated by the owner of such place of business to the Building Commissioner as the person responsible for, and supervising, the electrical work done by such electrical contractor. Such designated master electrician shall be the supervisory electrician for only one (1) electrical contractor within the city at any one time. Should such supervision not be constantly provided, the Electrical Inspector may order the work being done by such electrical contractor to be discontinued until proper supervision and control has been provided and the name of the new master electrician disclosed to Building Commissioner.

License display. Each holder of a master, journeyman or specialist license shall carry evidence of proper license on his person at all times while doing electrical work and shall produce and exhibit same when requested by an Inspector or officer of the City.

Exception from licensing and registration.

Persons who are not registered electricians may carry out the following classes of work:

The replacement of lamps, fuses and the connection of portable devices to suitable receptacles which have been permanently installed.

The installation, alteration, or repairing of any wiring, devices, or equipment for signaling, remote control, or the transmission of information, provided such are inherently power limited and have a maximum nameplate rating not exceeding one volt-ampere.

The installation, alteration or repair of the electric wiring, devices, appliances and equipment installed by or for an electrical public service corporation legally operating in the city when for the use of such corporation in the generation, transmission, distribution or metering of the electrical energy or for the use of such a corporation in the operation of street railways, signals or the transmission of information.

Any work involved in the manufacture or test of electrical materials, devices, appliances or apparatus, but not including any installation of wiring other than that required for testing purposes unless such equipment as complete is approved by the Electrical Inspector before it is installed or used.

Permits.

Permits required. Except as specified in Subsection (c) of this section, no electrical system regulated by this Code shall be installed, altered, repaired, replaced or remodeled unless a separate electrical permit for each building or structure has first been obtained from the Building Commissioner. It shall be unlawful for any person, firm or corporation who is not registered by the City as an electrical contractor to secure permits except as provided in [Section 85-3](#). It shall be unlawful for any person to lend, rent, or transfer an electrical permit, or permit a person without proper license or registration to do the work, or for any person to make use of any such permit which is not actually his own, and any such permit obtained or submitted under these conditions shall be null and void.

Exempt work. An electrical permit shall not be required for the following:

Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when that cord or cable is permitted by this Code.

Repair or replacement of fixed motors, transformers or fixed approved appliances of the same type and rating in the same location.

Temporary decorative lighting.

Repair or replacement of current-carrying parts of any switch, contactor or control device.

Reinstallation of attachment plug receptacles, but not the outlets therefor.

Repair or replacement of any over current device of the required capacity in the same location.

Repair or replacement of electrodes or transformers of the same size and capacity for signs or gas tube systems.

Taping joints.

Removal of electrical wiring.

Temporary wiring for experimental purposes in suitable experimental laboratories.

Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.

A permit shall not be required for the installation, alteration or repair of electrical wiring, apparatus or equipment or the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.

Exemption from the permit requirements of this Code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this Code or any other laws or ordinances.

Application for permit. To obtain a permit, the applicant shall first file an application therefore in writing on a form furnished by the City agency for that purpose. Every such application shall:

Identify and describe the work to be covered by the permit for which application is made.

Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.

Indicate the use or occupancy for which the proposed work is intended.

Be accompanied by plans, diagrams, computations and specifications and other data as required in Subsection (d) of this section.

Be signed by permittee, or his authorized agent.

Give such other data and information as may be required by the Building Commissioner.

Plans and specifications. With each application for a permit, and where required by the Building Commissioner for enforcement of any provision of this Code, plans, specifications and calculations shall be submitted in the quantity deemed necessary by the Building Commissioner. When deemed necessary by the Building Commissioner to ensure code compliance, the Building Commissioner may require plans and specifications to be prepared and designed by an engineer licensed by the State of Missouri. All drawings, specifications and accompanying data involved with the practice of engineering, such as structural, mechanical, plumbing, electrical, heating and cooling, fire, life and safety systems, shall comply with state and local laws governing the practice of engineering as required by Article 3271a, Vernon's Annotated Missouri Statutes.

Information on plans and specifications. Plans and specifications shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this Code and all relevant laws, ordinances, rules and regulations.

Permits issuance. The applications, plans and specifications, and other data, filed by an applicant for permit may be reviewed by other departments of the City to determine compliance with any applicable laws under their jurisdiction. If the work described in an application for a permit and the plans, specifications and other data filed therewith conforms to the requirements of this Code and other pertinent laws and ordinances, and the fees specified by the City of Berkeley fee schedule have been paid, the Building Commissioner may issue a permit therefor to the applicant. When the Building Commissioner issues the permit where plans are required, he shall endorse in writing or stamp the plans and specifications "APPROVED." Such approved plans and specifications shall not be changed, modified or altered without authorizations from the Building Commissioner, and all work shall be done in accordance with the approved plans. The Building Commissioner may issue a permit for the construction of part of an electrical system before the entire plans and specifications for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this Code. The holder of such permit shall proceed at his own risk with assurance that the permit for the entire building, structure or building service will be granted.

Retention of plans. One set of approved plans and specifications shall be returned to the applicant and shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress. One set of approved plans, specifications and computations shall be retained by the Building Commissioner until final approval of the work.

Validity of permit. The issuance of a permit or approval of plans and specifications shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this Code, or of any other ordinance of the City, nor shall the issuance of a permit or approval of plans be construed as representing or warranting the safety or lack of defects of any electrical work described therein. No permit presuming to give authority to violate or cancel the provisions of these Codes shall be valid. The issuance of a permit based upon plans, specifications and other data shall not prevent the Building Commissioner from thereafter requiring the correction of errors in said plans, specifications and other data, or from preventing building operations being carried on thereunder when in violation of these Codes or of any other ordinances of the City.

Expiration. Every permit issued by the Building Commissioner under the provisions of this Code shall expire by limitation and become null and void, if the building or work authorized by such permit is not commenced within 60 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 60 days or more.

Before such work can be recommenced, a new permit shall be first obtained, and the fee therefore shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work; and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee. Any permittee holding an unexpired permit may apply for an extension of the time within which he may commence work under that permit when he is unable to commence work within the time required by this section for good and satisfactory reasons. The Building Commissioner may extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once.

Suspension or revocation. The Building Commissioner may, in writing, suspend or revoke a permit issued under the provisions of this Code whenever the permit is issued in error or on the basis of incorrect information supplied, or in violation of any ordinance or regulation of the City.

Fees. Permit fees shall be levied in the amounts specified by the City of Berkeley in Appendix A. For fee calculation purposes, the building area is the total floor area expressed in square feet of all stories devoted to human occupancy, including halls, stairways, elevators, and other uses measured to the outside face of exterior walls, except for attached garages, carports, porches, patios and other like roofed areas shall contribute 1/2 of their total area in square footage for the purpose of electrical permit fee calculation. The total building area for fee calculation purposes shall be stated on the application for electrical permit. Work started without a permit shall be charged an administrative *triple fee* along with regular permit fee.

Inspections.

General. All electrical systems and equipment for which a permit is required by this Code shall be subject to inspection by the Building Commissioner. No portion of any electrical system intended to be concealed shall be concealed until inspected and approved. Neither the Building Commissioner nor the City shall be liable for expense entailed in the removal or replacement of any material necessary to allow inspection. When the installation of an electrical system and equipment is complete, an additional and final inspection shall be made. Electrical systems and equipment regulated by this Code shall not be connected to the energy source until authorized by the Building Commissioner.

Inspection requests. It shall be the duty of the person doing the work authorized by a permit to schedule required inspections at least one working day before such inspection is desired. It shall be the duty of the person requesting inspections required by this Code to provide access to and means for proper inspection of such work.

Operation of electrical equipment. The requirements of this section shall not be construed to prohibit the operation of any electrical system or equipment installed to replace existing equipment. The request for inspection of such equipment must have been filed with the Building Commissioner not more than 48 hours after such replacement work is completed and before any portion of such electrical system is concealed by any permanent portion of the building.

Other inspections. In addition to the called inspections required by this Code, the Building Commissioner may make or require other inspections of any work to ascertain compliance with the provisions of this Code and other laws which are enforced by the Code enforcement agency.

Re-inspections. A re-inspection fee may be assessed for each inspection or re-inspection when such portion of work for which inspection is called is not complete or when required corrections

are not made. This provision 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 re-inspection or when required corrections are not made. Re-inspection fees may be assessed when the approved plans are not readily available to the Inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the Building Commissioner. 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.

Article 100 Definitions. amend to add the following

General. For the purpose of these provisions, certain terms, phrases, words and their derivatives shall be construed as specified in this section. Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used. Webster's Third New International Dictionary of the English Language, Unabridged, 2002, shall be considered as providing ordinarily accepted meanings.

Approved as to materials, equipment and method of construction. Refers to approval by the Building Commissioner as the result of investigation and tests conducted by him, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

Approved Agency. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved by the Building Commissioner or Fire Chief or designee.

Board of Appeals. Shall be the Board of Adjustment as appointed by the City Council of the City of Berkeley.

Building Code. The Building Code as adopted by the City of Berkeley.

Building Commissioner. The designated authority charged with the administration and operation of the Community Development Department

Building Commissioner. The officer charged with the administration and enforcement of this Code, or his duly authorized representative, and is the authority having jurisdiction for this Code.

Chief Electrical Inspector or Electrical Inspector. Shall be the person providing expertise for the Building Commissioner in the area of electrical regulations.

Code Enforcement Agency. The department, division or agency of the City of Berkeley charged with the function of Code enforcement and shall be under the administration and operational control of the Public Works Department.

Electrical Contractor. Any person, firm, or corporation to whom a valid, current electrical contractor's registration has been issued by the City of Berkeley.

Electrical Code. The National Electrical Code promulgated by the National Fire Protection Association, as adopted by the City of Berkeley.

Engineering Supervision. Supervision by a Qualified State of Missouri Licensed Professional Engineer engaged primarily in the design or maintenance of electrical installations.

Firewall. The same as an area separation wall as used in the Building Code.

Intersystem Bonding Termination. A device that provides a means for connecting intersystem bonding conductors for communication systems and other systems such as metallic gas piping systems to the grounding electrode system.

Bonding conductors for other systems shall not be larger than 6 AWG.

Journeyman Electrician. A person to whom a valid, current journeyman electrician's registration has been issued by the City of Berkeley.

Master Electrician. A person to whom a valid, current master electrician's registration has been issued by the City of Berkeley.

Multiple Occupancy Building. A building having more than one tenant and may be of single or mixed-use groups as classified by the Building Code.

Occupancy. The purpose for which a building, or part thereof, is used or intended to be used.

Article 110.2: change the following to read as follows:

110.2 Approval. The conductors and equipment required or permitted by this *Code* shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third-party inspection agency approved by the JHA.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL or qualified third-party inspection agency approved by the JHA.

Manufacturer's self-certification of any equipment shall not be used as a basis for approval by the JHA.

Article 110.5 is amended to add:

Branch circuits utilizing aluminum conductor material shall not be permitted as a wiring means in the City of Berkeley.

*Minimum size aluminum conductor allowed is 1 AWG

Article 210.52(G) (1) Garages: delete the following

(1) Garages. In each attached garage and in each detached garage with electric power. ~~The branch circuit supplying this receptacle(s) shall not supply outlets outside of the garage.~~ At least one receptacle outlet shall be installed for each car space.

Article 230 "Services" is amended to add the following:

Connection approval. An electrical system or equipment regulated by this Code for which a permit is required shall not be connected to a source of energy or power until approved by the Building Commissioner.

Temporary connections. The Building Commissioner may authorize the temporary connection of the electrical system or equipment to the source of energy or power for the purpose of testing the

equipment, or for the use under a temporary Certificate of Occupancy.

Authorized connection. When new electrical meters are installed, or existing electrical meters are to be relocated, the disconnection, connection or reconnection to the meter shall be made only by authorized employees of the Missouri Utilities Electric Company. Only authorized employees of Missouri Utilities Electric Company shall be permitted to make connection between the customer's service entrance conductors and Missouri Utilities Electric Company lines.

Article 230.71(A): add the following exception:

Exception: Multi-occupant buildings. Individual service disconnecting means is limited to six for each occupant. The number of individual disconnects at one location may exceed six.

Article 240.91: delete the Article.

Article 300.11: add the following exception:

Exception: Ceiling grid support wires may be used for structural supports when the associated wiring is located in that area, not more than two raceways or cables supported per wire, with a maximum nominal metric designation 16 (trade size 1/2").

Article 310.15(B) (7): change to read as follows:

(7) This Article shall not be used in conjunction with 220.82

Article 320.10 Uses permitted.

Type AC cable shall not be permitted as a wiring means in the City of Berkeley. (delete the remainder of this section)

Article 334.12. Uses not permitted.

(a) NM, NMC, and NMS. Types NM, NMC, and NMS cables shall not be permitted as follows:

(11) In non-residential metal frame structures.

Article 500.8 (A) (3) changed to read as follows:

500.8 Equipment.

Articles 500 through 504 require equipment construction and installation that ensure safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to installation and maintenance.

Informational Note No. 2: Since there is no consistent relationship between explosion properties and ignition temperature, the two are independent requirements.

Informational Note No. 3: Low ambient conditions require special consideration. Explosion proof or dust-ignition proof equipment may not be suitable for use at temperatures lower than -25°C (-13°F) unless they are identified for low- temperature service. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified as Class I,

Division 1 at normal ambient temperature.

Suitability. Suitability of identified equipment shall be determined by one of the following:

Equipment listing or labeling

Evidence of equipment evaluation from a qualified testing laboratory or inspection agency concerned with product evaluation

Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or ~~an owner's engineering judgment~~. an engineering judgment signed and sealed by a qualified ~~Registered~~ licensed Professional Engineer in the State of Missouri.

Informational Note: Additional documentation for equipment may include certificates demonstrating compliance with applicable equipment standards, indicating special conditions of use, and other pertinent information.

Article 505.7 (A) changed to read as follows:

505.7 Special Precaution.

Article 505 requires equipment construction and installation that ensures safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to the installation and maintenance of electrical equipment in hazardous (classified) locations.

Informational Note No. 2: Low ambient conditions require special consideration. Electrical equipment depending on the protection techniques described by 505.8(A) may not be suitable for use at temperatures lower than -20°C (-4°F) unless they are identified for use at lower temperatures. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified Class I, Zones 0, 1, or 2 at normal ambient temperature.

(A) Implementation of Zone Classification System. Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified person(s), Registered licensed Professional Engineer in the State of Missouri.

Article 517.30 Essential Electrical Systems for Hospitals: create a new (H) and add the following language:

Coordination. Overcurrent protective devices serving the equipment branch of the essential electrical system shall be coordinated for the period of time that a fault's duration extends beyond 0.1 second.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.

Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.

Selective Coordination. Overcurrent protective devices serving the life safety, and critical branches of the essential electrical system shall be selectively coordinated with all supply-side overcurrent protective devices.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.

Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.

Article 680.25(A) changed to read as follows:

680.25 Feeders.

These provisions shall apply to any feeder on the supply side of panelboards supplying branch circuits for pool equipment covered in Part II of this article and on the load side of the service equipment or the source of a separately derived system.

Wiring Methods.

Feeders. Feeders shall be installed in rigid metal conduit, intermediate metal conduit. The following wiring methods shall be permitted if not subject to physical damage:

Liquid-tight flexible nonmetallic conduit

Rigid polyvinyl chloride conduit

Reinforced thermosetting resin conduit

Electrical metallic tubing where installed on or in a building

Electrical nonmetallic tubing where installed within a building

Type MC Cable where installed within a building and if not subject to corrosive environment

Nonmetallic-sheathed cable

Type SE cable

~~Exception: A feeder within a one-family dwelling or two-family dwelling unit between remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an insulated equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A) (5).~~

Section 5. International Mechanical Code (IMC)

The International Mechanical Code, 2015 edition and amendments, are herewith adopted by reference. ...

Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies from the provisions of the 2015 International Mechanical Code, or any amendments, specifications or revisions thereto, shall be interpreted and determined by the Building

Commissioner, subject to the right of appeal contained in any of such codes, if any.

Section 5.01 Amendments are as follows:

The sections of the 2015 International Mechanical Code that are changed, added, or deleted are as follows:

Section 101.1, add reference to jurisdiction:

101.1 Title. These regulations shall be known as the International Mechanical Code of Berkeley, hereinafter referred to as “this code.”

Section 102.8 is changed to read as follows:

102.8 Referenced codes and standards. The codes and standards referenced herein shall be those that are listed in Chapter 15, and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the ICC Electrical Code shall mean the National Electrical Code as adopted.

Sections 106.1.1 and 106.1.2 are added to read as follows:

Registration of license. It shall be required that any contractor making application for a mechanical permit be licensed as a mechanical contractor by the city. To obtain a license as a mechanical contractor, the contractor shall first file an application for registration in person, accompanied by a copy of the current state- issued license of each person employed by the contractor, and pay the appropriate fee set forth in Appendix A.

Homeowner permits. Mechanical work performed by a property owner in a building owned and occupied by him and classified as his homestead will be permitted without the need for registration. Where the mechanical work done by property owner is deemed by the Building Commissioner to be hazardous to persons or property and repairable beyond the skills and knowledge of the property owner by the Building Commissioner, or his authorized representative, the Building Commissioner may void the permit or validation obtained by the homeowner. In such an event, the mechanical work shall only be completed by a licensed mechanical contractor, registered by the city.

Section 106.4.3 is changed to read as follows:

106.4.3 Expiration. Every permit issued by the Building Commissioner under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is commenced within 60 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 60 days. Before such work can be recommenced, a new permit shall be first obtained, and the fee therefore shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded 1 year. Construction of 10,000 square feet or less in area shall be completed within 18 months. Construction of a building 10,001 square feet or greater in area shall be completed within 24 months after the date of issuance of the permit.

Section 106.5.2, add a reference to Appendix A:

106.5.2 Fee schedule. The fees for mechanical work shall be as indicated in the following schedule:

The City of Berkeley, Appendix A, fee schedule.

Section 106.5.3 Item 2, add refund percentage as follows:

Not more than 80% of the permit fee paid when no work has been done under a permit issued in accordance with this code.

Section 109.1.2 is added to read as follows:

109.1.2. The Board of Adjustment of the city shall serve as the board of appeals required by the code.

Section 109.2 is deleted.

Section 109.2.1 is changed to read as follows:

109.2.1. Qualifications: The board of adjustment may consult with and obtain opinions and testimony from qualified and experienced professionals in making a determination on appealed matters relating to building construction.

Section 304.6 is deleted

Section 306.3 is changed to read as follows:

306.3 Appliances in attics. Attics containing appliances requiring access shall be provided . . . (bulk of paragraph unchanged) . . . side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, for access to the attic space, provide one of the following:

A permanent stair.

A pull-down stair.

An access door from an upper floor level.

Access Panel may be used in lieu of items 1, 2, and 3 if the appliance is capable of being serviced from the access panel and opening is large enough to remove the largest piece of equipment

Exceptions:

The passageway and level service space are not required where the appliance is capable of being serviced and removed... (remainder of section unchanged)

Section 306.5 is changed to read as follows:

306.5 Equipment and appliances on roofs or elevated structures. Where equipment requiring

access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, ~~an~~ a permanent interior or exterior means of access shall be provided. Permanent exterior ladders providing roof access need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliances' level service space. Such access shall . . . {bulk of section to read the same} . . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). . . {bulk of section to read the same}.

Section 306.5.1 is changed to read as follows:

306.5.1 Sloped Roofs. Where appliances, equipment, fans or other components that require service are installed on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch- diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.

Section 306.6 and 306.6.1 is added to read as follows:

306.6 Water heaters above ground or floor. When the mezzanine or platform in which a water heater is installed is more than eight feet (8') (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A maximum 10-gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and a water heater is installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

306.6.1 Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1.

Section 307.2.2 is changed to read as follows:

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or schedule 80 PVC pipe or tubing when exposed to ultra violet light. All components shall be selected for the pressure and temperature, and exposure rating of the installation. (Remaining language unchanged)

Section 307.2.3 is amended by changing item 2 to read as follows:

A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

Section 403.2.1 is amended to add an item 5 to read as follows:

5. Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

Section 501.3 is amended to read as follows:

501.3 Exhaust discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawl space.

Exceptions:

Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.

Commercial cooking re-circulating systems.

Where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled domestic ductless range hoods shall not be required to discharge to the outdoors.

Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

Section 504.8.1 is amended to add a sentence at the end of the paragraph to read as follows:

The size of duct shall not be reduced along its developed length, or at the point of termination.

Section 603.6.1.1 is amended to read as follows:

603.6.1.1. Duct length. Flexible air ducts are limited to 5' lengths. Transitioning from duct to grill

Section 607.5.1 is changed to read as follows:

607.5.1 Fire walls. Ducts and air transfer openings permitted in firewalls in accordance with Section 705.11 of the International Building Code shall be protected with listed fire dampers installed in accordance with their listing. For hazardous exhaust systems see Section 510.1-510.9 IMC.

Section 903.3 is amended to read as follows:

903.3. An unvented gas fired appliance such as a room heater, fireplace or space heater shall not be installed in, or have access to, a room used as a storage closet, sleeping room, bathroom, a closet or enclosure opening directly into a sleeping room or bathroom.

Section 6. International Plumbing Code (IPC)

The International Plumbing Code, 2015 edition, without appendices, and with amendments thereto, are herewith adopted by reference. A copy of this code with approved amendments shall be kept on file in the office of the building inspection division for reference and inspection.

Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies from the provisions of the 2015 International Plumbing Code, or any amendments, specifications or revisions thereto, shall be interpreted and determined by the community development director, subject to the right of appeal contained in any of such codes, if any.

Section 6.01 Amendments are as follows:

The following sections, paragraphs, and sentences of the 2015 International Plumbing Code are hereby amended as follows:

Table of Contents. Chapter 7. Section 714: change to read as follows:

“Section 714 ~~Computerized~~ Engineered Drainage Design 67”

**Section 102.8: change to read as follows:

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 or the National Electrical Code (NEC) shall mean the Electrical Code as adopted.

106.6.2 Fee schedule. The fees for all plumbing work shall be as indicated in the following schedule:

The City of Berkeley, Appendix A, fee schedule.

Section 106.6.3 Item 2: add refund percentage as follows:

2. Not more than 80% of the permit fee paid when no work has been done under a permit issued in accordance with this code.

Section 109.1.2 is added to read as follows:

Section 109.1. The board of adjustment of the city shall serve as the Board of Appeals.

Section 109.2 is deleted.

Section 109.2 is changed to read as follows:

Qualifications: The board of adjustment may consult with and obtain opinions and testimony from qualified and experienced professionals in making a determination on appealed matters relating to building construction.

Section 303.2.1 is added to read as follows:

303.2.1 Prohibited materials. In no case shall polybutylene (PB) piping or cellular- core PVC be used as piping material for any water-service pipes, water-distribution pipes, drain, waste or vents, or any necessary connecting pipes.

Section 305.4.1; change to read as follows:

305.4.1 Sewer depth. ~~Building sewers that connect to private sewage disposal systems shall be a minimum of [number] inches (mm) below finished grade at the point of septic tank connection.~~ Building sewers shall be a minimum of 12 inches (304 mm) below grade.

**Section 305.7; change to read as follows:

305.7 Protection of components of plumbing system. Components of a plumbing system installed within 3 feet along alleyways, driveways, parking garages or other locations in a manner in which they could be exposed to damage shall be recessed into the wall or otherwise protected in an *approved* manner.

Sections 312.10.1 and 312.10.2; change to read as follows:

Inspections. Annual inspections shall be made of all backflow prevention assemblies and air gaps to determine whether they are operable. In the absence of local provisions, the owner is responsible to ensure that testing is performed.

Testing. Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, pressure vacuum breaker assemblies, reduced pressure detector fire protection backflow prevention assemblies, double check detector fire protection backflow prevention assemblies, hose connection backflow preventers, and spill-proof vacuum breakers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with applicable local provisions. In the absence of local provisions, the owner is responsible to ensure that testing is done in accordance with one of the following standards: {list of standards unchanged}

Section 314.2.1; change to read as follows:

Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. ...
{language unchanged}... Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

Section 314.2.2 is changed to read as follows:

Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, CPVC, or schedule 40 PVC pipe or tubing when exposed to ultraviolet light. All components shall be selected for the pressure, temperature and exposure rating of the installation. Condensate waste and drain line size shall not be less than 3/4 inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drainpipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

Section 401.1; add a sentence to read as follows:

The provisions of this Chapter are meant to work in coordination with the provisions of the Building Code. Should any conflicts arise between the two chapters, the Building Commissioner shall determine which provision applies.

Section 403.1; change to read as follows:

403.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy

and in the minimum number as follows:

Assembly Occupancies: At least one drinking fountain shall be provided at each floor level in an approved location.

Exception: A drinking fountain need not be provided in a drinking or dining establishment.

Groups A, B, F, H, I, M and S Occupancies: Buildings or portions thereof where persons are employed shall be provided with at least one water closet for each sex except as provided for in Section 403.2.

Group E Occupancies: Shall be provided with fixtures as shown in Table 403.1.

Group R Occupancies: Shall be provided with fixtures as shown in Table 403.1.

It is recommended, but not required, that the minimum number of fixtures provided also comply with the number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the Building Commissioner. The number of occupants shall be determined by the International Building Code. Occupancy classification shall be determined in accordance with the International Building Code.

Section 409.2: change to read as follows:

409.2 Water connection. The water supply to a commercial dishwashing machine shall be protected against backflow by an air gap or backflow preventer in accordance with Section 608. (remainder of section unchanged)

Section 412.4: change to read as follows:

412.4 Required location. Floor drains shall be installed in the following areas:

In public coin-operated laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.

Commercial kitchens. In lieu of floor drains in commercial kitchens, the Building Commissioner may accept floor sinks.

Section 417.5: change to read as follows:

417.5 Shower floors or receptors. Floor surfaces shall be constructed of impervious, noncorrosive, nonabsorbent and waterproof materials.

Thresholds shall be a minimum of 2 inches (51 mm) and a maximum of 9 inches (229 mm), measured from top of the drain to top of threshold or dam. Thresholds shall be of sufficient width to accommodate a minimum twenty-two (22) inch (559 mm) door.

Exception: Showers designed to comply with ICC/ANSI A117.1.

Section 417: add Section 417.7 to read as follows:

417.7 Test for shower receptors. Shower receptors shall be tested for water tightness by filling with water to the level of the rough threshold. The drain shall be plugged in a manner so that

both sides of pans shall be subjected to the test at the point where it is clamped to the drain.

Section 502.3: change to read as follows:

502.3 Water heaters installed in attics. Attics containing a water heater shall be provided with an opening and unobstructed passageway large enough to allow removal of the water heater. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length when measured along the centerline of the passageway from the opening to the water heater. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the water heater. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the water heater.

Section 502.6: add Section 502.6 and 502.6.1 to read as follows:

502.6 Water heaters above ground or floor. When the attic, roof, mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A max 10-gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and a water heater is installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

502.6.1 Illumination and convenience outlet. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 502.1

Section 504.6: change to read as follows:

504.6 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

Not be directly connected to the drainage system. Discharge through an air gap.

Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.

Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instruction.

Discharge to an indirect waste receptor or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.

Discharge in a manner that does not cause personal injury or structural damage.

Discharge to a termination point that is readily observable by the building occupants.

Not be trapped.

Be installed so as to flow by gravity.

Not terminate less than 6 inches or more than 24 inches (152 mm) above grade nor more than 6 inches above the waste receptor.

Not have a threaded connection at the end of such piping.

Not have valves or tee fittings.

Be constructed of those materials listed in Section 605.4 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.

Section 604.4; add Section 604.4.1 to read as follows:

604.4.1 State maximum flow rate. Where the State mandated maximum flow rate is more restrictive than those of this section, the State flow rate shall take precedence.

Section 605.3 is changed to read as follows:

Section 605.3 Water service pipe. Water service pipe and fittings shall be of brass or copper and shall conform to NSF61 and the standards listed in Table 605.3... {bulk of the section unchanged}

Section 605.4 is changed to read as follows:

Section 605.4 Water distribution pipe. Water distribution pipe shall be of brass or copper and shall conform to NSF61 and the standards listed in Table 605.4... {bulk of section unchanged}...

Tables 605.3, 605.4 and 605.5, delete the following:

“Cross-linked polyethylene (PEX) plastic tubing”

“Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe.”

“Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-PEX) pipe.”

“Polybutylene (PB) plastic pipe and tubing.” “Polyethylene (PE) plastic pipe and tubing.”

“Polypropylene (PP) plastic pipe and tubing.” Section 606.1; delete items #4 and #5.

Section 606.2: Delete #2

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

on the fixture supply to each plumbing fixture other than bathtubs and showers in one- and two-family residential occupancies, and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar occupancies

Deleted.

on the water supply pipe to each appliance or mechanical equipment.

Section 608.1; change to read as follows:

608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from non-potable liquids, solids or gases being introduced into the potable water supply through cross- connections or any other piping connections to the system. Backflow preventer applications shall conform to applicable local regulations, Table 608.1, and as specifically stated in Sections 608.2 through 608.16.10.

Section 608.16.5: change to read as follows:

608.16.5 Connections to lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

Section 608.17; change to read as follows:

608.17 Protection of individual water supplies. An individual water supply shall be located and constructed so as to be safeguarded against contamination in accordance with applicable local regulations. In the absence of other local regulations, installation shall be in accordance with Sections 608.17.1 through 608.17.8.

Section 610.1: add exception to read as follows:

610.1 General. New or repaired potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to “on- site” or “in plant” fabrication of a system or to a modular portion of a system.

The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.

The system or part thereof shall be filled with a water/chlorine solution containing at least 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing at least 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.

Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.

The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system.

Exception: With prior approval the Building Commissioner may wave this requirement when deemed unnecessary by the Building Commissioner.

Tables 702.1, 702.2, and 702.3, delete the following: “Cellular core or composite wall piping”

Section 712.5: add Section 712.5 to read as follows:

712.5 Dual pump system. All sumps shall be automatically discharged and, when in any “public use” occupancy where the sump serves more than 10 fixture units, shall be provided with dual pumps or ejectors arranged to function independently in case of overload or mechanical failure.

For storm drainage sumps and pumping systems, see Section 1113.

Section 714. 714.1: change to read as follows:

Section 714 Engineered drainage design

714.1 Design of drainage system. The sizing, design and layout of the drainage sys

Section 903.1: change to read as follows:

904.1 Roof extension. All open vent pipes that extend through a roof shall be terminated at least six inches (6") (152 mm) above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

Section 906.1: change to read as follows:

906.1 Distance of trap from vent. Each fixture trap shall have a protecting vent located so that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements set forth in Table 906.1.

Section 918.3 is changed to read as follows:

Section 917.3. Where prohibited. Air admittance valves are prohibited in the City of Berkeley.

Section 1106.1: change to read as follows:

1106.1 General. The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on six inches (6") per hour rainfall rate.

Section 1108.3: change to read as follows:

1108.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

Section 1202.1: delete Exception 2.

Section 7: International Fuel Gas Code (IFGC)

The International Fuel Gas Code, 2015 edition, and amendments are herewith adopted by reference. A copy of this code with approved amendments hereinafter set out shall be kept on file in the office of the building inspection division for reference and inspection.

Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies from the provisions of the 2015 International Fuel Gas Code, or any amendments, specifications

or revisions thereto, shall be interpreted and determined by the Building Commissioner, subject to the right of appeal contained in any of such codes, if any.

Section 7.01. Amendments are as follows:

The sections of the 2015 International Fuel Gas Code that are changed, added, or deleted are as follows:

Section 102.2 is amended to add an exception to read as follows: Exception: Existing dwelling units shall comply with Section 621.2. Section 102.8 is amended to read as follows:

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 8 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the ICC Electrical Code shall mean the Electrical Code as adopted.

Section 306.3 is amended in part as follows:

Appliances in attics. Attics containing appliances requiring access shall be provided. ... (bulk of paragraph unchanged) ... side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, for access to the attic space, provide one of the following:

A permanent stair.

A pull-down stair.

An access door from an upper floor level.

Access Panel may be used in lieu of items 1, 2, and 3 if the appliance is capable of being serviced from the access panel and opening is large enough to remove the largest piece of equipment

Exceptions:

The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

Where the passageway is not less than ... (bulk of section to read the same)

Section 306.5 is amended in part as follows:

[M] 306.5 Equipment and appliances on roofs or elevated structures. Where equipment requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, an a permanent interior or exterior means of access shall be provided. Permanent exterior ladders providing roof access need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliances' level service space. Such access shall . . . {bulk of section to read the same} . . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). ... {bulk of section to read the same}.

Section 306.5.1 is amended to read as follows:

[M] 306.5.1 Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

Section 306 add Section 306.7 with exception and subsection 306.7.1 to read as follows:

Water heaters above ground or floor. When the attic, roof, mezzanine or platform in which a water heater is installed is more than eight feet (8') (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A max 10-gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and a water heater is installed is not more than ten feet (10') (3048 mm) above the ground or floor level and may be reached with a portable ladder.

Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1.

Section 401.5 is amended to add a second paragraph to read as follows:

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

“WARNING 1/2 to 5 psi gas pressure Do Not Remove”

Section 401.5.1, add a section to read as follows:

The use of corrugated stainless-steel tubing (CSST) is subject to the following procedure:

Community development department approval is required before installation;

Letter verifying pressure from Gas Company;

No hybrid systems allowed;

Steel casings on all drop and risers;

Letter from manufacturer’s representative verifying that product has been installed in accordance with specifications.

Section 402.3 is amended to add an exception to read as follows:

Exception: Corrugated stainless-steel tubing (CSST) shall be a minimum of 1/2" (18 EHD).

Section 404.12 is amended to read as follows:

404.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (305 458 mm) top of pipe below grade.

Section 404.12.1 is deleted. Section 406.1 is amended to read as follows:

406.1 General. Prior to acceptance and initial operation, all piping installations shall be inspected, and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 406.1.1 through 406.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the Building Commissioner when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

Section 406.4 is amended to read as follows:

Test pressure measurement. Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

Section 406.4.1 is amended to read as follows:

Test pressure. The test pressure to be used shall be no less than 4 1/2 times ~~the proposed maximum working pressure, but no less than 3~~ 3 psig (20 kPa gauge), or at the discretion of the Building Commissioner, the piping and valves may be tested at a pressure of at least six inches (152 mm) of mercury, measured with a manometer or slope gauge. Irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

For tests requiring a pressure of 3 psig,, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 1/2"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig.

For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 1/2"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi.

For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa).

For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

Section 406.4.2 is amended in part as follows:

Test duration. Test duration shall be held for a length of time satisfactory to the Building Commissioner, but in no case for less than fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Building Commissioner, but in no case for less than thirty (30) minutes. (Delete remainder of section.)

Section 409.1.4 is amended to read as follows:

409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12 inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping:

Section 410.1 is amended to add a second paragraph and exception to read as follows:

Access to regulators shall comply with the requirements for access to appliances as specified in Section 306,

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

Section 614.4 is amended to add a sentence as follows:

The size of duct shall not be reduced along its developed length or at the point of termination.

Section 621.2 is amended to read as follows:

621.2 Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing approved unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Building Commissioner unless an unsafe condition is determined to exist as described in Section 108.7.

Section 621.4 is amended to read as follows:

An unvented gas fired appliance such as a room heater, fireplace or space heater shall not be installed in, or have access to, a room used as a storage closet, sleeping room, bathroom, a closet or enclosure opening directly into a sleeping room or bathroom.

Section 8. International Existing Building Code (IEBC)

The International Existing Building Code, 2015 edition, and amendments are herewith adopted by reference. A copy of this code with approved amendments hereinafter set out shall be kept on file in the office of the building inspection division for reference and inspection.

Sec. 3.02.352 Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies from the provisions of the 2015 International Existing Building, or any amendments, specifications or revisions thereto, shall be interpreted and determined by the Building Commissioner, subject to the right of appeal contained in any of such codes, if any.

Section 8.01 Amendments are as follows:

The sections of the 2015 International Existing Building Code (IEBC) that are changed, added, or deleted are as follows:

Section 102.4: change to read as follows:

[A] 102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.

Section 202: amend definition of Existing Building as follows:

Existing Building - A building, structure, or space, with an approved final inspection issued under a code edition which is at least 2 published code editions preceding the currently adopted building code; or a change of ownership or occupancy.

Section 405.1.2, 405.1.3, 405.1.4; change to read as follows:

Existing fire escapes. Existing fire escapes shall continue to be accepted as a component in the means of egress in existing buildings only. Existing fire escapes shall be permitted to be repaired or replaced.

Section 405.1.3: delete entire section:

~~New fire escapes. New fire escapes for existing buildings shall be permitted only where exterior stairways cannot be utilized due to lot lines limiting stairway size or due to the sidewalks, alleys or roads at grade level. New fire escapes shall not incorporate ladders or access by windows.~~

Section 406.2: change to read as follows:

Replacement window opening control devices. In Group R-2 or R-3 buildings containing dwelling units, window opening control devices complying with ASTM F 2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window . . .

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section ~~1029.2~~ 1030.2 of the International Building Code.

Remainder unchanged

Section 406.3: change to read as follows:

Replacement window emergency escape and rescue openings. Where windows are required to provide emergency escape and rescue openings in Group R-2 and R-3 occupancies, replacement windows shall be exempt from the requirements of Sections 1030.2, 1030.3 and 1030.5 of the International Building Code provided the replacement window meets the following conditions:

Remainder unchanged

Section 408.3: to closely follow the amendments for the IBC:

408.3 Flood hazard areas. (Jurisdictions may consider the option to amend or delete depending on local enforcement and flood hazard ordinances.)

Section 409.1 add an exception to read as follows:

Exception: Moved historic buildings need not be brought into compliance with the exception of new construction features required as the result of such movement, including but not limited to foundations and/or other structural elements.

Section 410.1 adds an exception to read as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Missouri Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

Section 410.4.2: Add Number 7 to the list of requirements as follows:

7. At least one accessible family or assisted use toilet room shall be provided in accordance with Chapter 11 of the International Building Code.

Section 602.3: add code reference to read as follows:

602.3 Glazing in hazardous locations. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the International Building Code, International Energy Conservation Code, or International Residential Code as applicable.

Section 607.1: add a code reference to read as follows:

607.1 Material. Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material, in accordance with the requirements of NFPA 70.

Section 702.6: add a code reference to read as follows:

702.6 Materials and methods. All new work shall comply with the materials and methods requirements in the *International Building Code*, *International Energy Conservation Code*, *International Mechanical Code*, National Electrical Code, and *International Plumbing Code*, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

Section 802.1: add a code reference to read as follows:

802.1 General. Alteration of buildings classified as special use and occupancy as described in Chapter 4 of the International Building Code shall comply with the requirements of Section 801.1

and the scoping provisions of Chapter 1 where applicable.

Section 803.5.1: Exception: change to read as follows:

803.5.1 Minimum requirement. Every portion of a floor, such as a balcony or a loading dock, that is more than 30 inches (762 mm) above the floor or grade below open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps and landings that are and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

Section 804.1: add sentence to read as follows:

For the purpose of fire sprinkler protection and fire alarm requirements included in this section, the work area shall be extended to include at least the entire tenant space or spaces bounded by walls capable of resisting the passage of smoke containing the subject work area, and if the work area includes a corridor, hallway, or other exit access, then such corridor, hallway, or other exit access shall be protected in its entirety on that particular floor level.

Section 804.2.2, Number 2: change Exception to read as follows:

Exception: ~~If~~ Where the building does not have sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump, fire sprinkler protection shall not be required ~~work areas shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the International Building Code.~~

Section 804.2.5: change Exception to read as follows:

Exception: Supervision is not required where the Fire Code does not require such for new construction ~~for the following:~~

~~1. Underground gate valve with roadway boxes. 2. Halogenated extinguishing systems.~~

~~Carbon dioxide extinguishing systems.~~

~~Dry and wet chemical extinguishing systems.~~

~~5. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.~~

Section 804.3: change section to read as follows:

804.3 Standpipes. Refer to Section 1103.6 of the Fire Code for retroactive standpipe requirements.

{Delete rest of Section 804.3.}

Section 805.2: Remove Exception #1

Exception 1. ~~Where the work area and the means of egress serving it complies with NFPA101.~~

Section 805.3.1.1: delete #4

4. ~~In Group R-4 Occupancies, the maximum occupant load excluding staff is 16~~

Section 805.3.1.2; add change to read as follows:

Fire Escapes required. For other than Group I-2, where more than one exit is required an existing ~~or newly constructed~~ fire escape complying with section 805.3.1.2.1 shall be accepted as providing one of the required means of egress.

Section 805.3.1.2.1: add change to read as follows:

Fire Escape access and details – ...

Access to a new fire escape shall be through a door...

Strike whole section

5. In all building of Group E occupancy up to and including the 12th grade, building of Group I occupancy, ~~rooming~~ boarding houses, and childcare centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

Section 805.3.1.2.2: delete entire section.

~~Construction. The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved noncombustible materials. Fire escapes constructed of wood not less than nominal 2 inches (51mm) thick are permitted on buildings of Type V construction. Walkways and railings located over or supported by combustible roofs in buildings of Types III and IV construction are permitted to be of wood not less than nominal 2 inches (51mm) thick.~~

Section 805.3.1.2.3: delete entire section.

~~Dimensions. Stairways shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, 8 inches (203 mm). Landings at the foot of stairways shall be not less than 40 inches (1016 mm) wide by 36 inches (914 mm) long and located not more than 8 inches (203 mm) below the door.~~

Section 805.5.2 Transoms Add note to read as follows:

B and E occupancies are not included in the list and consideration should be given to adding them depending on existing buildings stock.

Section 806.2: add an exception to read as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Missouri Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

Section 904.1: add sentence to read as follows:

For the purpose of fire sprinkler protection and fire alarm requirements included in this section, the work area shall be extended to include at least the entire tenant space or spaces bounded by walls containing the subject work area, and if the work area includes a corridor, hallway, or other exit access, then such corridor, hallway, or other exit access shall be protected in its entirety on that particular floor level.

Section 904.1: add sentence to read as follows:

904.1.1 High-rise buildings. An automatic sprinkler system shall be provided in work areas of ~~where the high-rise buildings has a sufficient municipal water supply for the design and installation of an automatic sprinkler system at the site.~~

Section 1401.2: change to read as follows:

1401.2 Applicability. Structures existing prior to ~~[DATE TO BE INSERTED BY THE JURISDICTION. Note: it is recommended that this date coincide with the effective date of building codes within the jurisdiction]~~ the date of an approved final inspection issued under a code edition which is at least two published code editions preceding the currently adopted building code; or a change of occupancy, {rest of section un-changed}.

Section 1401.3.2: change to read as follows:

1401.3.2 Compliance with other codes. Buildings that are evaluated in accordance with this section shall comply with the *International Fire Code* and the *International Property Maintenance Code*.

Chapter 16 – Referenced Standards: change to read as follows:

IECC—15 Edition as adopted by the State of Missouri International Energy Conservation Code®. .301.2, 702.6, 708.1, 811.1, 908.1”

Section 9. International Property Maintenance Code (IPMC)

The International Property Maintenance Code, 2015 edition, and amendments are herewith adopted by reference. A copy of this code with approved amendments hereinafter set out shall be kept on file in the office of the building inspection division for reference and inspection.

Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies from the provisions of the 2015 International Property Maintenance Code, or any amendments, specifications or revisions thereto, shall be interpreted and determined by the Building Commissioner, subject to the right of appeal contained in any of such codes, if any.

Section. 9.01 Amendments are as follows:

The sections of the 2015 International Property Maintenance Code (IPMC) that are changed, added, or deleted are as follows:

Section 101.1 Insert: City of Berkeley.

Section 103.1 Change: Department of Property Maintenance Inspection, shall mean “Public Works Department Inspections Division”

Section 103.5. Insert: Appendix A--Schedule of Fees.

Section 302.4 Delete: Refer to City Code of Ordinances, Section 215.010 (7)

Section 304.1.1 (14) Insert: Exterior Board Up - Property owner(s) are required to board up a building/structure if it becomes vacant and is not secure. Accessory buildings/ structures on the property; such as storage sheds and garages, also must be secured. No building shall remain boarded for more than six (6) months. Property owners must maintain the structure in good shape. All points of entry to a vacant building, including windows and doors must be secured. See Appendix A for Boarding Standard.

Section 304.14. Insert: April and October 1.

Section 304.13.3 Insert: Window Board Up - In the event of breakage, the owner shall cause the immediate removal of broken glass from the premises and shall temporarily board up the affected openings with suitable material to provide protection from the elements and to prevent entry of insects, birds or animals and to provide security to occupants or contents of the building. The window board up shall not exceed 20 days in an occupied structure.

Section 304.14. Insert: April and October 1.

Section 404.4.1 Change: Every room occupied for sleeping purposes by one (1) occupant shall have a minimum floor area of seventy (70) square feet; and every room occupied for sleeping purposes by more than one (1) occupant shall have a minimum floor area of fifty (50) square feet for each occupant thereof.

Section 404.4.1.1 Insert: 1) Each bedroom must have six (6) square feet of closet space opening into the bedroom with an operable door(s). 2) No sleeping room may be used by two (2) children of opposite sex beyond the age of five (5) years nor may a minor child sleep in the same room as his parents on a permanent basis over five (5) years of age. 3). No room may be classed as a bedroom or sleeping room on a permanent basis by use of a cot, rollaway bed, sofa bed or any in-the-wall closet bed.

Section 602.3. Insert: October 1 and May 1.

Section 602.4. Insert: October 1 and May 1.

Appendix A103.6 : Insert: Jurisdiction right to board up - Any person failing to board up a building/structure when it becomes vacant and unsecure within twenty-four (24) hours from the service of the notice, the city reserve the right to enter upon the property to secure by board up, and to remove any debris from the exterior of the property . A cost shall be billed to the owner of record, or last know owner.

Appendix A103.7 Insert: Appendix A--Schedule of Fees.

Section 10: International Fire Code (IFC)

The International Fire Code, 2015 edition, and amendments are herewith adopted by reference. A copy of this code with approved amendments hereinafter set out shall be kept on file in the office of the building inspection division and the Fire Department for reference and inspection.

Interpretation

Any requirements considered necessary for the safety, strength or stability of any existing or proposed building or structure, or for the safety or health of the occupants thereof, which varies

from the provisions of the 2015 International Fire Code, or any amendments, specifications or revisions thereto, shall be interpreted and determined by the Building Commissioner and Fire Chief, subject to the right of appeal contained in any of such codes, if any.

- Section 101.1* Insert: City of Berkeley.
- Section 101.2.1* Insert: Adopts Appendices B- J
- Section 103.1* Insert: The Department of Fire Prevention shall mean the Berkeley Fire Department.
- Section 105.1.1* Insert: Appendix A--Schedule of Fees.
- Section 106.2* Change: Title: Inspections Required
- Section 113.2* Insert: Appendix A--Schedule of Fees
- Section 113.3* Insert: Work commencing before permit issuance shall be charged an administrative *triple fee*.
- Section 113.4* Insert: Appendix A--Schedule of Fees.
- Section 113.5* Insert: Refund policy shall comply with Appendix A: Schedule of Fees.