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06/20/07

ORIGINAL

CITY OF BELLEVUE, WASHINGTON

ORDINANCE NO. 5749

AN ORDINANCE amending Chapter 23.11 to adopt the 2006 International Fire Code with amendments, and establishing the Office of the Bellevue Hearing Examiner as the appellate body to hear appeals from Chapter 23.11, and establishing an effective date.

WHEREAS, RCW 19.27.031 expressly requires the City of Bellevue adopt state building, residential, mechanical, fire, plumbing and related uniform codes; and

WHEREAS, RCW 19.27.060 provides the City with authority to amend the codes enumerated in RCW 19.27.031 as they apply within the City's corporate boundaries, provided such modifications do not result in less than the minimum performance standards and objectives contained in the state uniform codes; and

WHEREAS, the City Council lawfully adopted Ordinance 5675 on June 5, 2006, repealing Chapter 23.11 and enacting a new Chapter 23.11, which adopted provisions of the 2003 International Fire Code as adopted by the Washington State Building Code Council in Chapter 51-54 WAC; and,

WHEREAS, the International Fire Code has been updated since the adoption of Ordinance 5675 and adopted by the Washington State Building Code Council in Chapter 51-54 WAC; and

WHEREAS, the 2006 International Fire Code Section 108 establishes a Board of Appeals to hear and decide appeals of orders, decisions, or determinations made by the fire code official relative to the application and interpretation of the International Fire Code; and

WHEREAS, the City desires the Office of the Bellevue Hearing Examiner, as authorized in Bellevue City Code Chapter 3.68 (Hearing Examiner), hear and decide appeals of orders, decisions, or determinations made by the fire code official relative to the application and interpretation of the International Fire Code; now, therefore

THE CITY COUNCIL OF THE CITY OF BELLEVUE, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Bellevue City Code Chapter 23.11 which is repealed in its entirety by this ordinance shall remain in full force and effect until July 1, 2007.

Section 2. The following provisions of the Bellevue City Code Chapter 23.11 shall become applicable on July 1, 2007.

Section 3. A new Chapter 23.11 of the Bellevue City Code is hereby adopted as follows:

23.11.100 Adoptions – International Fire Code.

The International Fire Code 2006 Edition, and Appendices B and C, all published by the International Code Council, as adopted by the State Building Code Council in Chapter 51-54 WAC, and as amended, added to or excepted in this chapter, and not including International Fire Code sections 108.2, 108.3, 109.1, 109.2, 109.2.1, 109.2.2, 109.2.3, 109.2.4, 109.3, 308.1.1, 604.2.16.1.2, and 907.2.7.1, is adopted by reference thereto as though fully set forth herein and shall be applicable within the city. Not less than one copy of such code, appendices and standards, in the form in which it was adopted and suitably marked to indicate amendments, additions, deletions and exceptions as provided herein, shall be filed in the city clerk's office and shall be available for use and examination by the public.

23.11.101 Definitions

As used in this chapter:

A. "Fire Code Official" means the fire marshal or his or her regularly authorized designee.

B. Terms used in this Chapter and otherwise defined in Chapter 1.18 BCC shall have the meanings set forth in Chapter 1.18 BCC as now or hereafter amended.

23.11.102 Violations

A. Any violation of this chapter or the code, appendices or standards adopted herein or any failure to comply with any lawful order of the chief or his authorized representative may be prosecuted as a misdemeanor or may be treated as a civil violation under Chapter 1.18 BCC. The imposition of one penalty for any violation shall not excuse the violation or permit it to continue.

B. In addition to those costs and expenses listed in Chapter 1.18 BCC (Civil Violations), the city may recover costs from responsible persons, business or property owners for any of the following:

1. Suppression and investigation of incendiary fires where the responsible party has been duly convicted of causing the fire.

2. Suppression and investigation of fires resulting from or aggravated by a condition that was a code violation for which a violation notice or letter of violation was issued, but not corrected.

3. Suppression and investigation of fires resulting from an escape of a control burn.

4. Extinguishment of an illegal control burn or a control burn in violation of a permit where adequate private fire extinguishing capability has not been provided or where private fire extinguishing efforts have been unsatisfactory.

5. Repeat responses to situations involving illegal burning.

6. Mitigation of a hazardous materials incident when the duration of the incident exceeds two hours.

7. Preventable responses to fire alarms when the number exceeds five nonexempt preventable responses to a single alarm system during a calendar year. This shall be in addition to any fees assessed under BCC 23.11.901.11. The chief may credit costs of system improvement to prevent responses or other life or life safety improvements to offset charges for fire departmental costs.

8. Extraordinary expenses incurred in, or as a result of, the control or extinguishment of fires or mitigation of hazardous materials incidents.

C. Chargeable costs under this section shall include the following:

1. Personnel costs (including salaries, overtime, fringe benefits, etc.) for the time that involved personnel were not available to respond to valid emergencies.

2. Apparatus costs according to the "Fee Schedule for Hazardous Materials Incidents and/or Fire Suppression" established by the King County Fire Chiefs Association.

3. With regard to subsection (B)(8) of this section, cost may include damaged, destroyed or contaminated equipment (such as protective clothing and fire hose); special supplies utilized (such as fire-fighting foams and absorbent pads); and cost of specialized or heavy equipment and their operation including that of other fire agencies, other departments of the city of Bellevue and private contractors or suppliers when such equipment is determined to be needed by the chief.

4. Administrative and any other costs associated with the recovery of these costs.

23.11.104.1 International Fire Code Section 104.1 – Authority of the chief and the fire department.

Section 104.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

104.1 General. The chief is hereby authorized to administer and enforce this code and to adopt policies, procedures, rules, and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code and shall not have the effect of waiving requirements specifically provided for in this code. The chief hereby delegates to the fire code official all authority under this chapter to enforce all ordinances of the jurisdiction pertaining to:

1. The prevention of fires.

2. The suppression or extinguishment of dangerous or hazardous fires.

3. The storage, use and handling of hazardous materials.

4. The installation and maintenance of automatic, manual and other private fire alarm systems and fire-extinguishing equipment.

5. The maintenance and regulation of fire escapes.

6. The maintenance of fire protection and the elimination of fire hazards on land and in buildings, structures and other property, including those under construction.

7. The maintenance of exits.

8. The investigation of the cause, origin and circumstances of fire and unauthorized release of hazardous materials.

104.1.1 Fire department personnel and police. The chief and members of the fire prevention bureau shall have the powers of a police officer performing their duties under this code.

23.11.104.10.1 International Fire Code Section 104.10.1 – Assistance from other agencies.

Section 104.10.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

> **104.10.1 Assistance from other agencies.** Police and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires or the enforcement of this code as requested by the fire code official.

23.11.104.11.2 International Fire Code Section 104.11.2 – Obstructing operations.

Section 104.11.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

> **104.11.2 Obstructing operations**. No person shall obstruct the operations of the fire department in connection with extinguishment, investigation, or control of any fire, or actions relative to other emergencies, or disobey any lawful command of the fire chief or officer of the fire department in charge of the emergency, or any part thereof, or any lawful order of a police officer assisting the fire department.

23.11.105.6.16 International Fire Code Section 105.6.16 amended – Flammable and combustible liquids.

Section 105.6.16 of the International Fire Code as adopted by this chapter is amended to read as follows:

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOT) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
    2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, or storage of approved portable motor boat fuel containers of six (6) gallons (22.7L) or less individual capacity and twelve (12) gallons (45.4L) aggregate capacity, unless such storage, in the opinion of the fire code official, would cause an unsafe condition.
    2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.
3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To remove Class I or Class II liquids from an under-ground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.
5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, trans-ported, stored, dispensed or used.
6. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.
7. To change the type of contents stored in a flammable or combustible liquid tank to a

material which poses a greater hazard than that for which the tank was designed and constructed.

8. To manufacture, process, blend or refine flammable or combustible liquids.
9. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
11. To store, handle or use Class III-B liquids in excess of 1,000 gallons.
12. To engage in the business of removing, abandoning or otherwise disposing of residential heating oil tanks.

23.11.105.7.14 International Fire Code Section 105.7.14– In building radio system.

Section 105.7. of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection to read as follows:

105.7.14 In Building Radio System. A construction permit is required to install an In Building Radio System as prescribe in BMC Section 511.

23.11.105.7.47 International Fire Code Section 105.7.47 – In building radio system.

Section 105.7 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 105.7.47 to read as follows:

In Building Radio System. An operational permit is required to operate an In Building Radio System as prescribed in BMC Section 511.

23.11.105.7.48 International Fire Code Section 105.7.48 – Positive alarm sequence.

Section 105.7. of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 105.7.48 to read as follows:

Positive alarm sequence. An operational permit is required to operate a PAS (Positive Alarm Sequence) Account as prescribed in NFPA (National Fire Protection Association) 72 Section 6.8.1.3

23.11.107.7 International Fire Code Section 107.7 – Unauthorized tampering.

A new subsection 107.7 is added to the International Fire Code as adopted by this chapter to read as follows:

107.7 Unauthorized tampering. Signs, tags or seals posted or affixed by the fire code official shall not be mutilated, destroyed or tampered with or removed without authorization from the fire code official.

23.11.108 International Fire Code Section 108 Appeals

Section 108 of the International Fire Code as adopted by this chapter is amended to read as follows:

108.1 Appeals Established

1. The City of Bellevue Hearing Examiner may hear appeals relating to the following:

A. The fire code official's denial of an application for an operational permit under Section 105 of the International Fire Code as adopted by this chapter and now or hereafter amended;
B. The fire code official's denial of an application for a construction permit under Section 105 of the International Fire Code as adopted by this chapter and now or hereafter amended;
C. The determination by the fire code official that a nonexempt preventable fire department response to a fire alarm has occurred under BCC 23.11.901.11 as now or hereafter amended.

2. The applicant in A or B above, or the responsible party in C above, may appeal to the City of Bellevue Hearing Examiner within thirty days from the date of the fire code official's determination. The fire code official's determination shall be in writing and shall constitute the final decision of the City. Appeals of determinations made by the fire code official in proceedings authorized under Chapter 1.18 BCC shall be heard simultaneously with the underlying action before the hearing examiner presiding over the proceeding.

23.11.109 International Fire Code Section 109 – Violations.

Section 109 of the International Fire Code as adopted by this chapter is hereby amended to read as follows:

109.3.1 Abatement of violation. In addition to the imposition of the penalties herein described, the fire code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

23.11.307.2.2 International Fire Code Section 307.2.2 – Open burning.

Section 307.2 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection to read as follows:

307.2.2 Open Burning Prohibited. Open burning shall not be conducted at any time in compliance with a permanent ban on open burning established by the Puget Sound Air Pollution Control Agency in September of 1992.

Point of Information
For air quality and burn ban status information and regulations contact the Puget Sound Clean Air Agency at www.pscleanair.org or (206) 689-4088.

23.11.308.3.7 International Fire Code Section 308.3.7 – Group A occupancies.

Section 308.3.7 of the International Fire Code as adopted by this chapter is amended to read as follows:

308.3.7 Group A occupancies. Open-flame devices shall not be used in a Group A occupancy.

Exceptions:

1. Open-flame devices are allowed to be used in the following situations, provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants:

1.1. Where necessary for ceremonial or religious purposes in accordance with Section 308.3.5.

1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.6.

1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.

2. Heat-producing equipment complying with Chapter 6 and the International Mechanical Code.

3. Gas lights are allowed to be used provided adequate precautions satisfactory to the Fire Code Official are taken to prevent ignition of combustible materials.

4. Except where approved by the Fire Code Official (see also Section 308.3.1.2).

23.11.314.4 International Fire Code Section 314.4 – Vehicles.

Section 314.4 of the International Fire Code as adopted by this chapter is amended as follows:

314.4 Vehicles. Liquid- or gas-fueled vehicles, fueled equipment, boats or other motorcraft shall not be located indoors except as follows:

1. Batteries are disconnected.

2. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (whichever is less).

3. Fuel tanks and fill openings are closed and sealed to prevent tampering.

4. Vehicles, boats or other motorcraft equipment are not fueled or defueled within the building.

23.11.401.6 Emergency Planning and Preparedness - General

Section 401 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection to read as follows:

401.6 Evacuation required. In the event of activation of a fire, emergency alarm, or at the direction the fire code official, occupants of the building or portion of the building in which the alarm is activated shall make a safe and orderly evacuation out of the building, or as provided in the building's fire safety and evacuation or high-rise emergency operations plan.

Exceptions:

1. Where the occupant's physical or other disability make the occupant unable to evacuate without assistance and no assistance is immediately available; or

2. Where the presence of smoke, fire, structural collapse or other hazard or obstruction in the occupant's means of egress make evacuation unsafe.

23.11.404.3.2 Fire Safety and Evacuation Plans – High-rise emergency operations plan required

Section 404.3.2 of the International Fire Code as adopted by this chapter is amended as follows:

404.3.2 High-rise emergency operations plan required. A high-rise emergency operations plan approved by the fire code official shall be required for all high-rise buildings. The plan shall be prepared as specified in the Bellevue Fire Department High-rise Emergency Handbook and shall include the following sections:

Section 1. Responsibilities.
Section 2. Fire Reporting.
Section 3 Evacuation.
Section 4. Fire Control Procedures.
Section 5 Post-Fire Operations.
Section 6. Confidence Testing.
Section 7. High Value List.
Section 8. Shutoff Valve List.
Section 9. Floor Plans.

23.11.503.1 International Fire Code Section 503.1 – Fire Apparatus Access Roads.
Section 503.1 of the International Fire Code is amended to read as follows:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with the Bellevue Fire Department Development Standards.

Point of Information
Additional information can be found in Chapter 3 of the Bellevue Fire Department Development Standards available online at www.bellevuewa.gov/pdf/Fire/BFDDS_2004_Edition.pdf.

23.11.503.4 International Fire Code Section 503.4.1 – Obstruction and control of fire apparatus access.
Section 503.4 of the International Fire Code as adopted by this chapter is amended by the addition of new subsections 503.4.1, 503.4.2, 503.4.3, 503.4.4, 503.4.5, 503.4.6, 503.4.7 to read as follows:

503.3.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times.

503.4.1 Entrances. Entrances to roads, trails or other access ways which have been closed with gates and barriers in accordance with Section 503.4.8 shall not be obstructed by parked vehicles.

503.4.2 Towing notification. At each entrance to property where fire lanes have been designated, signs shall be posted in a clearly conspicuous location and shall clearly state that vehicles parked in fire lanes may be impounded, and the name, telephone number, and address of the towing firm where the vehicle may be redeemed.

503.4.3 Property owner responsible. The owner, manager or person in charge of any property upon which designated fire lanes have been established shall prevent the parking of vehicles or placement of other obstructions in such fire lanes.

503.4.4 Violation – civil infraction. Any person who fails to mark or maintain the marking of a designated fire lane as prescribed in this chapter or who parks a vehicle in, allows the parking of a vehicle in, obstructs or allows the obstruction of a designated fire lane commits a civil infraction to which the provisions of R.C.W. 7.80 shall apply. The penalty for parking a vehicle in, allowing the parking of a vehicle in, obstructing or allowing the obstruction of a designated fire lane shall be one hundred dollars ($100.00).

503.4.5 Impoundment. Any vehicle or object obstructing a designated fire lane, whether on public or private property, is hereby declared a hazard and may be abated without prior notification to its owner by impoundment pursuant to the applicable state law.

503.4.6. Authorization. The fire chief, or his authorized designee, is authorized to take such lawful action, including impoundment or the writing and issuance of citations for civil infractions, as may be required to enforce the provisions of this section.

503.4.7 Obstructing a fire facility. It is hereby declared a violation of this section to stop, park a vehicle, or otherwise obstruct any fire station facility housing emergency response apparatus.

23.11.505.1 International Fire Code Section 505.1 – Address numbers.

Section 505.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

505.1 Address numbers. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background.

Point of Information
Additional information can be found in Chapter 4 of the Bellevue Fire Department Development Standards available online at www.bellevuewa.gov/pdf/Fire/BFDDS_2004_Edition.pdf.

23.11.505.2 International Fire Code Section 505.2 – Street or road signs.

Section 505.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

505.2. Street or road signs. Streets and roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs.

Point of Information
Where marking is required, the signs shall be posted by the Bellevue Transportation Department for city streets and right-of-ways, and by the owners for private property.

23.11.508.3 International Fire Code Section 508.3 – Fire Flow.

Section 508.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

508.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an approved method and shall be in accordance with Appendix B as amended, unless otherwise approved by the fire code official.

Point of Information
Fire flow shall be measure in accordance with WAC 246-290-230 & WAC 246-290-420 as now or hereafter amended.

23.11.508.5.1 International Fire Code Section 508.5 – Fire hydrant systems.

Section 508.5.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

508.5.1 Where required. Where any portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the Fire Code Official.

Exceptions:

1. For Group R-3 and U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet.

23.11.509.1 International Fire Code Section– Fire Command Center.

Section 509.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

509.1 Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in

accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of 96 square feet (9 m2) with a minimum dimension of 8 feet (2438 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators

Point of Information
This is intended to provide fire pump status apart from the Fire Alarm system.

12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.

23.11.511 International Fire Code Section 511 added – Building radio coverage.

The International Fire Code as adopted by this chapter is amended by the addition of a new section 511 to read as follows:

511.1 Building radio coverage. Except as otherwise provided no person shall maintain, own, erect, or construct, any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for City emergency services workers, including but not limited to firefighters and police officers.

Exceptions:

1. Single family residential buildings

2. Buildings constructed primarily of wood frame without below grade storage or parking areas

3. Buildings thirty-five (35) feet high (As defined by International Building Code Section 502) or less without below grade storage or parking areas.

Should construction that is thirty-five (35) feet high or less include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.

2. Preexisting buildings. Buildings constructed prior to the implementation of this section shall not be required to comply with public safety radio coverage provisions of this section. However, should exempted structures undergo renovation, restoration, or significant modification to the original structure, exemption from the provisions of this Ordinance shall not apply.

511.1.1 Adequate radio coverage. A minimum signal strength of three (3) micro volts available in 95% of all areas of the building and 99% in elevators (measured at the primary recall floor), stair shafts and Fire Command Centers when transmitted from the closest Regional 800 MHz. Radio System.

511.1.2 Minimum signal strength. A minimum signal strength of one-half (.5) micro volts received by the Regional 800 MHz. Radio System when transmitted from 95% of all areas of the building and 99% in elevators (measured at the primary recall floor), stair shafts and Fire Command Centers.

511.1.3 Frequency range. The frequency range which must be supported shall be 806 MHz to 824 MHz and 851 MHz. to 869 MHz. and such other frequencies as determined by the Regional Radio System operator in all areas of the building.

511.1.4 Power supply. Power supplies shall conform with NFPA 72, Section 1-5.2 (Power Supplies).

511.1.5 Supervision/continuing operation. The occurrence of any fault in this radio system where the system function is decreased will result in the transmission of a supervisory signal to the central station. If the system cannot be fully restored within one hour, the fire chief will be notified.

511.1.6 Proof of compliance. Each owner shall submit at least one field test, or as determined by the fire code official, whenever structural changes occur to the building that would materially change the original field performance tests by a consultant approved by the Fire Code Official. The performance test shall include at minimum a floor plan and the signal strength in various locations of the building.

511.2.2 Annual Test. It shall be the building owner's responsibility to have all active components of the system, such as amplifiers, power supplies and backup batteries tested a minimum of once every twelve (12) months. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If, within the one-hour test period, and in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one-hour periods until the integrity of the battery can be determined. All other active components shall be checked to determine that they are operating within the manufactures specification for the intended purpose. A report shall be submitted to the fire code official upon conclusion of the testing and not later than January 30th of each year.

511.2.3 Five-Year Tests. In addition to the annual test, it shall be the building owner's responsibility to perform a radio coverage test a minimum of once every five (5) years to ensure that the radio system continues to meet the requirements of the original acceptance test. A report shall be submitted to the fire code official upon conclusion of the testing.

511.2.4 Qualification of Testing Personnel. Personnel conducting radio system tests shall be qualified to perform the work. All tests shall be documented and signed by a person in possession of a current FCC General Radio Telephone Operator License, or a current technician certification issued by the Associated Public Safety Communications Officials International (APCO), the National Association of Business and Education Radio (NABER) or the Personal Communications Industry Association (PCIA)

511.3 Inadequate Radio Coverage. Buildings and structures which cannot support the required level of radio coverage shall be equipped:

1. A radiating cable system and/or

2. An internal multiple antenna system with FCC certificated bi-directional 800 MHz amplifiers or

3. Systems otherwise approved by the city radio system manager in order to achieve the required adequate radio coverage

In the event that a signal booster is employed, it shall be fully encased with a NEMA 4 (or equivalent) dust/waterproof rated enclosure, and filters that reject adjacent frequencies in addition to the multi-bandpass filters.

511.3.1 Battery Backup Required. If any part of the installed system or systems contains an electrically powered component, the installed system or systems shall be provided with an independent battery system capable of operating for a period of at least twenty four (24) hours without external power input. The battery system shall automatically charge in the presence of external power input.

511.3.2 Approval Prior to Installation. No amplification system capable of operating on frequencies used by the Regional 800 MHz. Radio System shall be installed without prior coordination and approval of the radio system licensee (The Eastside Public Safety Communications Agency) and any such system must comply with any standards adopted by the King County Regional Communications Board.

511.3.3 Acceptance Tests. Acceptance testing for an in-building radio amplification system is required, upon completion of installation. It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95% two-way coverage on each floor of the building.

Point of Information
A Certificate of Occupancy will not be issued to any structure if the building fails to comply with these provisions.

Talk-back testing from a site to the Regional 800 MHz. Radio System shall use a two (2) watt, portable transceiver with speaker/microphone and flexible antenna (or any calibrated device which will produce signal levels useable by the prescribed portable radio). Field strength testing instruments must have been calibrated within one (1) year of the date of the acceptance test. Field strength testing instruments must be of the frequency selective type incorporating a flexible antenna similar to the ones used on the hand held transceivers. City Radio System Manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety coverage. A report shall be submitted to the Bellevue Fire Department at the conclusion of acceptance testing containing a floor plan and the signal strengths at each location tested and other relevant information. A representative of the Bellevue Fire Department may oversee the acceptance test. Acceptance testing is also required whenever changes occur to the building that would materially change the original field performance test.

511.3.3.1 Testing Criteria. Each floor of the building shall be divided into a grid of approximately forty (40) equal areas. A maximum of two (2) nonadjacent areas will be allowed to fail the test. In the event that three (3) of the areas fail the test, the floor may be divided into eighty (80) equal areas in order to be more statistically accurate. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the eighty (80) area tests, if the system continues to fail, the building owner shall have the system altered to meet the 95% coverage requirement.

A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communication to and from the outside of the building through the Regional 800 MHz. Radio System. Once the spot has been selected, prospecting for a better spot within the grid area is not permitted.

The gain values of all amplifiers shall be measured and the results kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.

Point of Information
While the foregoing implies manual measurement and recording, automated testing and recording is certainly permitted so long as a report can be produced documenting the signal strength (or average) in each test square.

511.4 Field Testing. Police and Fire Personnel shall at any time have the right to enter onto the property to conduct its own field-testing to be certain that the required level of radio coverage is present.

23.11.602.1 International Fire Code Section 602 amended – Definitions.

Section 602.1 of the International Fire Code is hereby amended to include the following additional definitions:

Power tap. A listed device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end, and has over current protection.

Oil-burning Equipment. A stationary oil burner of any type, together with its tank, piping, wiring, controls and related devices. Oil-burning equipment includes oil burners, boilers, furnaces, oil-fired units and heating and cooking appliances, but does not include oil lamps and portable devices, such as blow torches, melting pots and weed burners.

23.11.603.1.3 International Fire Code Section 603 amended – Fuel Fired Appliances.
Section 603.1.3 of the International Fire Code as adopted by this chapter is hereby amended as follows:

603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with oil-burning equipment shall be installed and maintained in accordance with Section 605 and the electrical code as adopted by the City.

23.11.603.3 International Fire Code Section 603.3 amended – Fuel Storage Systems.
Section 603.3 of the International Fire Code as adopted by this chapter is hereby amended as follows:

603.3 Fuel oil storage systems. Fuel oil storage systems shall be installed in accordance with Chapter 34 of this code. Fuel oil piping systems shall be installed in accordance with the *International Mechanical Code*.

23.11.604.2.15.1 International Fire Code Section 604.2.15.1 – Standby Power
Section 604.2.15.1 of the International Fire Code as adopted by this chapter is hereby amended as follows:

604.2.15.1 Standby power. A standby power system shall be provided. Where the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire barriers or horizontal assemblies constructed in accordance with the International Building Code, or both, and shall be in a separate room from the normal power source including transformers and distribution equipment. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the fire command center. Standby power shall be provided for elevators in accordance with IBC Section 3003. Fuel-fired standby power generator sets and associated fuel storage, including optional landlord- or tenant-owned generator sets, located more than 75 feet above the lowest level of Fire Department vehicle access, requires the approval of the fire code official.

23.11.604.2.16.1 International Fire Code Section 604.2.16.1 amended – Standby Power
Section 604.2.16.1 of the International Fire Code as adopted by this chapter is hereby amended as follows:

604.2.16.1 Standby power. A standby power system complying with IBC Table 403 (1) and the National Electrical Code (NEC) as Legally Required Standby Power, except as designated in Table 403(1)shall be provided.

If the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire barriers constructed in accordance with IBC Section 706 or horizontal assemblies constructed in accordance with IBC Section 711, or both, and shall be in a separate room from the normal power source including transformers and

distribution equipment. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the fire command center.

Fuel-fired standby power generator sets and associated fuel storage, including optional landlord- or tenant-owned generator sets, located at a floor level more than 30 feet below the lowest level of exit discharge requires the approval of the Fire Code Official.

23.11.604.2.16.1.1 International Fire Code Section 604.2.16.1.1 amended – Standby Power Loads

Section 604.2.16.1.1 of the International Fire Code as adopted by this chapter is hereby amended as follows:

[B] 604.2.16.1.1 Standby power loads & Pickup Time. Standby power loads & Pickup Time shall be as identified in IBC Table 403 (1).

23.11.604.2.16.2 International Fire Code Section 604.2.16.2 amended – Emergency Power Systems

Section 604.2.16.2 of the International Fire Code Section 604.2.16.2 as adopted by this chapter is hereby amended to read as follows:

604.2.16.2 Emergency power. An emergency power system complying with IBC Table 403 (1) and the National Electrical Code (NEC) as Emergency Standby Power, except as designated in IBC Table 403(1) shall be provided as specified in Section 604.2.16.1 for emergency power loads. Fire pumps shall comply with NEC Article 695 and NFPA 20.

If the emergency power system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire barriers constructed in accordance with IBC Section 706 or horizontal assemblies constructed in accordance with IBC Section 711, or both, and shall be in a separate room from the normal power source including transformers and distribution equipment. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the fire command center.

Fuel-fired standby power generator sets and associated fuel storage, including optional landlord- or tenant-owned generator sets, located at a floor level more than 30 feet below the lowest level of exit discharge requires the approval of the Fire Code Official.

23.11.604.2.16.2.1 International Fire Code Section 604.2.16.2.1 amended – Emergency Power Loads

Section 604.2.16.2.1 of the International Fire Code as adopted by this chapter is hereby amended to read as follows:

604.2.16.2.1 Emergency power loads. Emergency power loads shall be as identified in IBC Table 403 (1).

23.11.605.1 International Fire Code Sections – Abatement of Electrical Hazards.
Section 605.1 of the International Fire Code as adopted by this chapter are hereby amended as follows:

605.1 Abatement of electrical hazards. Identified electrical hazards shall be abated. Identified hazardous electrical conditions in permanent wiring shall be brought to the attention of the code official responsible for enforcement of the electrical code as adopted by the city. Electrical wiring, devices, appliances and other equipment that is modified or damaged and constitutes an electrical shock or fire hazard shall not be used.

23.11.605.3 International Fire Code Sections Working Space and Clearance amended.
Section 605.3 of the International Fire Code as adopted by this chapter are hereby amended as follows:

605.3 Working space and clearance. A working space of not less than 30 inches (762 mm) in width, 36 inches (914 m) in depth and 78 inches (1981 mm) in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches (762 mm), the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space.

Exceptions:

1. Where other dimensions are required or allowed by the electrical code as adopted by the City.

2. Access openings into attics or under-floor areas which provide a minimum clear opening of 22 inches (559 mm) by 30 inches (762 mm).

23.11.605.4 International Fire Code Sections – Multiplug adapters.
Section 605.4 of the International Fire Code as adopted by this chapter are hereby amended as follows:

605.4 Multiplug adapters. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the electrical code as adopted by the City shall be prohibited.

23.11.605.9 International Fire Code Sections – Temporary Wiring.
Section 605.9 of the International Fire Code as adopted by this chapter are hereby amended as follows:

605.9 Temporary wiring. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of the electrical code as adopted by the City.

23.11.606.16 International Fire Code Section 606.16 Electrical Equipment.
Section 606.16 of the International Fire Code as adopted by this chapter is hereby amended as follows:

606.16 Electrical equipment. Where refrigerants of Groups A2, A3, B2, and B3, as defined in the International Mechanical Code, are used, refrigeration machinery rooms shall conform

to the Class I, Division 2 hazardous location classification requirement of the electrical code as adopted by the City.

23.11.807.1 International Fire Code Section 807.1 – General Requirements.

Section 807.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

807.1 General Requirements. In occupancies in Groups A, B, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 806.2

In Groups I-1 and I-2, combustible decorative materials shall meet the flame propagation criteria of NFPA 701 unless the decorative materials, including, but not limited to, photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorative materials are prohibited.

Fixed or movable walls and partitions, paneling, wall pads and crash pads, applied structurally or for decoration, acoustical correction, surface insulation or other purposes, shall be considered interior finish if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered decorative materials or furnishings.

In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 807.2 and NFPA 701 or shall be noncombustible.

23.11.901.10 International Fire Code Section 901.10 – Silencing hotel and public assembly fire alarms.

Section 901 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 901.10 to read as follows:

901.10 Hotel or Motel and Public Assembly Occupancies. Hotel or motel and public assembly occupancies, whose fire alarm systems have been activated shall not have their evacuation alarm devices silenced or incapacitated without fire department approval unless this is accomplished by resetting the system.

23.11.901.11 International Fire Code Section 901.11 – Preventable responses to fire alarms.

Section 901 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 901.11 to read as follows:

901.11 Scope. This section shall apply to activation of a fire alarm system resulting in responses of fire apparatus due to either direct transmission of the alarm to a monitoring station or telephone report of fire alarm activation caused by any of the following:

1. Improper type, installation, sensitivity, or maintenance of automatic detectors;

2. Improper installation (including unapproved or incompatible components) or maintenance of fire alarm systems including systems with unapparent reasons for repetitious alarms;

3. Erroneous transmission of an alarm including the reporting of trouble signals by fire alarm monitoring companies;

4. Work on a fire alarm system or automatic extinguishing system connected to an alarm system when reasonable steps were not taken to prevent reporting of an alarm to the fire department;

5. Fire drills or tests of alarm or extinguishing systems when reasonable steps were not taken to prevent reporting of an alarm to the fire department;

6. Work including painting, welding, cleaning, cooking, dust producing or other activities which could activate a fire alarm detector;

7. Smoke or fumes resulting from closed fireplace dampers, cooking activities, smoking of tobacco products, etc., including opening a door to a corridor equipped with detectors for the purpose of ventilating such smoke or fumes.

B. Exception: This section shall not apply to activation of a fire alarm system resulting from the following:

1. Any actual fire, explosion or overheating or other situation that could have resulted in a fire;

2. Any manual activation of an alarm where it was believed that a fire or any other emergency requiring response of emergency personnel existed;

3. Malicious manual activation or unlawful tampering with a fire alarm system;

4. Accidental striking of an alarm box, detector, circuitry, panel or other components of an alarm system or accidental breakage or discharge of a sprinkler system or other fire extinguishing system;

5. Accidental breakage or leak of any system that releases steam, heat, gases, water or vapors which might activate a detector;

6. Earthquake, lightning or natural occurrences that result in movement or flooding of a building;

7. Work on telephone lines or central office equipment.

C. Fees.

1. Exempt Alarms.

    a. The first preventable fire department response to fire alarms from any one system during a calendar year shall be exempt except that there shall be no

exempt responses to alarms caused by alarm system monitoring companies or companies performing work on fire alarm or fire extinguishing systems.

b. For newly installed alarm systems, the first five preventable responses to fire alarms from any one system or all preventable responses within 30 days of the first such alarm, whichever occurs first, are exempt.

2. Nonexempt Fire Department Responses to Fire Alarms.

a. A fee of $100.00 shall be charged for the first nonexempt preventable fire department response to a fire alarm during a calendar year from any one system.

b. A fee of $150.00 shall be charged for all subsequent nonexempt preventable fire department responses to a fire alarm from any system during a calendar year.

Point of Information
Preventable responses beyond five in a calendar year are subject to the full cost of the response. See BMC 23.11.101 for further information.

D. Responsibilities.

1. The owner of the alarm system or subscriber of an alarm service shall be responsible for all preventable fire department responses resulting from activation of a fire alarm system including those caused by tenants or any other occupant of the building or occupancy, except that fire alarm monitoring companies shall be responsible for their erroneous transmission of alarms and companies performing work on fire alarm or extinguishing systems shall be responsible when such work results in a fire department response.

2. When a preventable fire department response to a fire alarm has occurred, the responsible party shall, within 30 days, make a written report to the fire chief on forms provided by the fire department, stating the reasons for such alarm and the corrective action taken to prevent recurrence.

3. The fire code official's determination that a preventable fire department response has occurred shall be made in writing and shall constitute the final decision of the City. Any person aggrieved by this determination may file an appeal with the Hearing Examiner within thirty (30) days. The Hearing Examiner shall have jurisdiction over such appeal in accordance with the provisions of Section 108 of the International Fire Code as now or hereafter amended in this chapter and BCC 1.18 as now or hereafter amended.

23.11.903.2 International Fire Code Section 903.2 – Automatic sprinklers.

Section 903.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

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

23.11.903.2.10 International Fire Code Section 903.2.10 – Automatic fire extinguishing systems.

Section 903.2.10 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.2.10 All Occupancies. All Occupancies except Group R, Division 3 and Group U. An automatic sprinkler system shall be installed in the locations set forth in Sections 903.2.10.1 through 903.2.10.4.

903.2.10.1 Stories and basements without openings. An automatic sprinkler system shall be installed in every story or basement of all buildings where the floor area exceeds 1,500 square feet (139.4 m2) and where there is not provided at least one of the following types of exterior wall openings:

1. Openings below grade. that lead directly to ground level by an exterior stairway complying with Section 1009 or an outside ramp complying with Section 1010. Openings shall be located in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least one side.

2. Openings entirely above the adjoining ground level totaling at least 20 square feet (1.86 m2) in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least one side.

903.2.10.1.1 Opening dimensions and access. Openings shall have a minimum dimension of not less than 30 inches (762 mm). Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that fire fighting or rescue cannot be accomplished from the exterior.

903.2.10.1.2 Openings on one side only. Where openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet (22,860 mm) from such openings, the story shall be equipped throughout with an approved automatic sprinkler system or openings as specified above shall be provided on at least two sides of the story.

903.2.10.1.3 Basements. Where any portion of a basement is located more than 75 feet (22,860 mm) from openings required by Section 903.2.10.1, the basement shall be equipped throughout with an approved automatic sprinkler system.

903.2.10.2 Rubbish and linen chutes. An automatic sprinkler system shall be installed at the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Chute sprinklers shall be accessible for servicing.

903.2.10.3 Buildings of four or more stories in height. An automatic sprinkler system shall be installed throughout buildings four or more stories in height.

903.2.10.4 Buildings exceeding 10,000 square feet. Notwithstanding any provision of the International Building Code or International Fire Code, as such codes are adopted by the City, throughout all buildings where the total floor area, including

basements, exceeds 10,000 square feet. For purposes of this paragraph, portions of buildings separated by one or more fire walls will not be considered a separate building. Existing buildings shall comply with this section when an addition is made to the building and the total floor area, including the basements, or the existing building and the addition combined exceeds 10,000 square feet, or when the value of a structural alteration or repair of an existing building 10,000 square feet in area or greater exceeds 50 percent of the assessed valuation of such existing building, or exceeds 50 percent of the recognized replacement cost of the structure, without consideration of depreciation, as determined under the Marshall Valuation Service Cost Handbook, whichever is greater.

23.11.903.3.1.1.1 International Fire Code Section 903.3.1.1.1 – Exempt locations.

Section 903.1.1.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard, when approved by the fire code official.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official.
3. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

23.11.903.3.1.1.2 International Fire Code Section 903.3.1.1.2 – High rise building sprinkler system design.

Section 903.3.1.1 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 903.3.1.1.2 to read as follows:

903.3.1.1.2 High rise building sprinkler system design

Combination standpipe/sprinkler risers using 6 in. pipe minimum, shall be used with the sprinkler system connected between standpipe risers. Shut-off valves and water-flow devices shall be provided on each floor at the sprinkler system connection to each standpipe. Two four-way fire department connections serving the combination system shall be provided on separate streets well separated from each other. At least one of the fire department connections shall be connected to the riser above a riser isolation valve.

Dry pipe sprinkler systems serving parking garages may use one separate two-way fire department connection. The dry pipe sprinkler system shall be supplied by the on-site water tank.

23.11.903.3.1.4 International Fire Code Section 903.3.1.4 – Fire Pump Boosted System Design.

Section 903.3.1 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 903.3.1.4 to read as follows:

903.3.1.4 Fire Pump Boosted System Design. Sprinkler system designs utilizing a fire pump are limited to a maximum pressure loss of 0.7 psi/ft, where the city supply alone can not meet 110% of the design pressure at 100% of the design flow; unless otherwise approved by the Fire Code Official.

23.11.903.3.3 International Fire Code Section 903.3.3 amended – Obstructed Locations.
Section 903.3.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.3.3 Obstructed locations. Automatic sprinklers shall be installed in accordance with NFPA 13 obstruction criteria and the listing requirements of the sprinkler head. Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width and depth, and for all multi-level exhibit booths. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exception:

Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.

23.11.903.3.5.2 International Fire Code Section 903.3.5.2 – Secondary Water Source.
Section 903.3.5.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.3.5.2 Secondary water source. A secondary on-site water source shall be provided for high-rise buildings as follows:

1) High-rise buildings containing R-2 or B occupancy only shall be provided with a net useable volume of 15,000 gallons.
2) High-rise buildings containing an S-2 occupancy shall be provided with a net useable volume of 40,000 gallons.
3) High-rise buildings containing an M occupancy shall be provided with a net useable volume of 50,000 gallons.
4) Multi high-rise complexes sharing a common secondary water source shall be provided with a net useable volume calculated by combining the highest demand of number 2 or 3 above, with number 1 above. Only one parking/retail area and 2 high-rise buildings may share a common secondary water source.

An acceptable alternative to items 1 through 4 above, is to provide a calculated net useable volume capable of meeting the hydraulically calculated sprinkler demand, including the total (combined inside and outside) hose stream requirement, as per NFPA 13. The duration of this calculated source shall have a duration of not less than 30 minutes for buildings with light hazard occupancies only and a 60 minute duration for buildings with ordinary hazard occupancies as defined by NFPA 13.

Exception:
Existing buildings, including those undergoing substantial renovation

23.11.903.4.2 International Fire Code Section 903.4.2 – Alarms.

Section 903.4.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.4.2 Alarms. Approved audible and visible alarm notification appliances shall be provided for every new or substantially altered automatic sprinkler system in accordance with Section 907 and throughout areas designated by the Fire Code Official. Sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

Exception: With approval of the Fire Code Official, audible and visible alarm notification appliances may be omitted for approved residential sprinkler systems in 1 or 2 dwelling units if not otherwise specifically required.

23.11.903.4.3 International Fire Code Section 903.4.3 – Floor control valves.

Section 903.4.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.4.3 Floor control valves. Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings. The floor control valves shall be located within 6' of floors or landings unless chains or other approved devices are readily available.

Exception: When approved by the Fire Code Official in NFPA 13D and NFPA 13R systems.

23.11.905.3.8 International Fire Code Section 905.3 – High-rise building standpipes.

Section 905.3 of the International Fire Code as adopted by this chapter is amended by the addition of a new subsection 905.3.8 to read as follows:

905.3.8 High Rise Building Standpipes. Standpipe risers shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 inch. One 2-1/2 inch hose connection shall be provided on every intermediate floor level landing in every required stairway and elsewhere as required by NFPA 14. Where, and only where, static or residual water pressures at any hose outlet exceeds 175 psi (1207 kPa), approved pressure-regulating devices shall be installed to limit the pressure to 175 psi (1207 kPa). Such devices shall be adjusted to provide 175 psi (1207 kPa), or as close to that pressure as the adjustment will permit while flowing 300 gpm, without exceeding 200 psi (1207 kPa). The pressure on the inlet side of the pressure-regulating device shall not exceed the rated working pressure of the device. An equally sized bypass around the pressure regulating device with a normally closed control valve shall be provided. Signage in accordance with NFPA 14 and Section 912.4 shall be provided.

Point of Information

Additional flow and pressure requirements are contained in NFPA 14. Designers should be cognizant of space considerations within stair shafts and additional signage needed for the PRV by-pass control valves. For city wide uniformity, the City of Bellevue desires the PRV settings to be such that the required flow is available at 175psi. However, a range of up to 200psi is provided to allow for design flexibility.

23.11.905.4 International Fire Code Section 905.4 – Location of Class I standpipe hose connections.

Section 905.4 of the International Fire Code as adopted by this chapter is amended to read as follows:

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

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors. Where stairs are required to provide roof access, the standpipe roof connections shall be located adjacent to the stair opening on the roof.

2. On each side of the wall adjacent to the exit opening of a horizontal exit.

   Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the horizontal exit.

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

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall and at each intermediate landing within required enclosed stairways unless otherwise approved by the fire code official.

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), at least one standpipe shall be provided with a 2 ½ in. hose connection located on the roof at least 10 feet (3048 mm) from the roof edge, skylight, light well or other similar openings, unless otherwise approved by the fire code official. All roof hose connections shall be arranged to be operable without entering the building. Roof connections in high-rise buildings are allowed to be located at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) of hose travel distance from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) of hose travel distance from a hose connection, additional hose connections shall be provided in vertical exit

enclosures or protected locations that are accessed through protected enclosures. The protected enclosure shall be a corridor constructed as a smoke barrier from the exit enclosure to the standpipe connection.

Exception: Hose connections in parking garages must be located in vertical exit enclosures, protected locations, immediately adjacent to exterior exit doors, loading docks or other areas as approved by the fire code official. Subject to the approval of the fire code official the travel distance may also be increased to a maximum distance of 240 feet.

7. Additional roof connections shall be provided so that all portions of the roof are within 200 feet (60 960 mm). of hose travel distance from a standpipe hose connection. Roof hose connections shall be arranged to be operable without entering the building.

Point of Information
Chapter 10 of this code outlines the requirements for stairways to the roof and roof access. This section, 905.4, identifies the locations of standpipes and hose connections, but does not dictate the need for additional stairways to the roof or roof access.

23.11.905.8 International Fire Code Section 905.8 – Dry standpipes.
Section 905.8 of the International Fire Code as adopted by this chapter is amended to read as follows:

905.8 Dry standpipes. Dry standpipes when approved by the Fire Code Official may be installed in other than high rise buildings.

23.11.906.1 International Fire Code Section 906.1 – Portable fire extinguishers.
Section 906.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In all Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

2. Within 30 feet of commercial cooking equipment.

3. In areas where flammable or combustible liquids are stored, used or dispensed.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 1415.1.

5. Where required by the sections indicated in Table 906.1.

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the Fire Code Official.

23.11.907.1 International Fire Code Section 907.1 – Fire alarm and detection systems.
Section 907.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures and new fire alarm systems including replacement of existing fire alarm control panels being installed in existing structures. The requirements of Section 907.3 are applicable to existing buildings and structures.

For the purposes of this section, fire walls shall not be considered to create a separate building.

Buildings required by this section to be provided with a fire alarm system shall be provided with a single fire alarm system unless otherwise approved by the fire code official.

23.11.907.2.12.1 International Fire Code Section 907.2.12.1– Automatic fire detection.
Section 907.2.12.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

907.2.12.1 Automatic fire detection. Smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this section, other than duct smoke detectors, shall operate the emergency voice/alarm communication system. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, elevator machine rooms, and in elevator lobbies.
2. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
3. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a listed smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm (2.4m3/s) and serving not more than 10 air-inlet openings.
4. Within 5 feet (1524 mm) of doors opening into stairways that are smoke proof enclosures, or are pressurized stairways.

Point of Information
Devices shall be installed in accordance with their listing. Smoke Detectors for example must normally be installed in areas not subject to freezing, humidity, or exhaust gases and in cases such as these as code alternates may be required. Additional information can be found in NFPA 72 Section 5.7.1.8, 5.7.1.9 and Chapter 8 of the Bellevue Fire Department Development Standards available online at www.bellevuewa.gov/pdf/Fire/BFDDS_2004_Edition.pdf.

23.11.907.2.18.1 International Fire Code Section 907.2.18.1 – Smoke Detectors.
Section 907.2.18.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

907.2.18.1 Smoke detectors. A minimum of one smoke detector listed for the intended purpose shall be installed in the following areas:

1. Electrical, Non-Utility owned transformer vault rooms, telephone equipment, elevator machine or similar rooms.
2. Elevator lobbies.
3. The main return and exhaust air plenum of each air-conditioning system serving more than one story and located in a serviceable area downstream of the last duct inlet.
4. Each connection to a vertical duct or riser serving two or more floors from return air ducts or plenums of heating, ventilating and air-conditioning systems, except that in Group R occupancies, a listed smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm (2.4 m3/s) and serving not more than 10 air inlet openings.
5. Within 5 ft. of doors opening into stairways that are smokeproof enclosures, or are pressurized stairways.

Point of Information

Devices shall be installed in accordance with their listing. Smoke Detectors for example must normally be installed in areas not subject to freezing, humidity, or exhaust gases and in cases such as these as code alternates may be required.

Additional information can be found in NFPA 72 Section 5.7.1.8, 5.7.1.9 and Chapter 8 of the Bellevue Fire Department Development Standards available online at www.bellevuewa.gov/pdf/Fire/BFDDS_2004_Edition.pdf.

23.11.907.7 International Fire Code Section 907.7 – Activation.

Section 907.7 of the International Fire Code as adopted by this chapter is amended to read as follows:

907.7 Activation. Where an alarm notification system is required by another section of this code, it shall be activated by:

1. Automatic-heat and smoke detectors, other than duct smoke detectors, and dwelling unit smoke alarms.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Any other fire suppression system installed within the building.

23.11.907.9.1 International Fire Code Section 907.9.1 – Annunciator Panel.

Section 907.9.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

907.9.1 Annunciator Panel All fire alarm systems shall include either an annunciator or the main control panel located inside the building at the main building entrance. The fire code official may approve exterior annunciator panels designed specifically for the that purpose. Graphic annunciators, when provided, shall be mounted to maintain the viewer's directional orientation. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of an audible-alarm silencing switch.

Alarm panels and annunciators shall not be installed where they would obstruct exiting. The required exit width plus 12 inches shall be provided when the panel is located in a means of

egress. Alarm panels shall not be installed in an exit enclosure providing the sole exit from any space.

23.11.909.1 IFC Section 909.1– Scope and Purpose

Section 909.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

909.1 Scope and purpose. This section applies to mechanical or passive smoke control systems when they are required by other provisions of this code and Sections 707.14.2.1 and 909.20. The purpose of this section is to establish minimum requirements for the design, installation and acceptance testing of smoke control systems that are intended to provide a tenable environment for the evacuation or relocation of occupants. These provisions are not intended for the preservation of contents, the timely restoration of operations, or for assistance in fire suppression or overhaul activities. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-venting provisions found in Section 910. Mechanical smoke control systems shall not be considered exhaust systems under Chapter 5 of the International Mechanical Code.

23.11.909.10.3 IFC Section 909.10.3 – Equipment, inlets and outlets.

Section 909.10.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

909.10.3 Equipment, inlets and outlets. Equipment shall be located so as to not expose uninvolved portions of the building to an additional fire hazard. Outside air inlets shall be located a minimum distance of 20 feet from any air exhaust system or outlet so as to minimize the potential for introducing smoke or flame into the building. Exhaust outlets shall be so located as to minimize reintroduction of smoke into the building and to limit exposure of the building or adjacent buildings to an additional fire hazard.

23.11.909.11 IFC Section 909.11 – Power Systems

Section 909.11 of the International Fire Code as adopted by this chapter is amended as follows:

909.11 Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be from the normal building power system. Secondary power shall be from an approved standby source complying with NFPA 70 (National Electrical Code). The standby power source and its transfer switches shall be in a separate room from the normal power transformers and switch gear and shall be enclosed in a room constructed of not less than 1-hour fire barriers, except 2-hour for high rise and underground buildings per Sections 403 and 405 respectively, ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes. Transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with this code and NFPA 70 (National Electrical Code).

23.11.912.4 IFC Section 912.4 – Signs.

Section 912.4 of the International Fire Code as adopted by this chapter is amended to read as follows:

912.4 Signs. A metal sign with raised letters at least 1 inch (25mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: SPRINKLERS, ~~or~~ STANDPIPES, COMBINED, DRY S/PIPES, DRY S/P & SPKRS, BOOST TO _____ (as specified by the fire code official) PSI, or TEST CONNECTION or a combination thereof as applicable. Systems utilizing Pressure Reducing Valves (PRV's) must note the required boosted pressure at the Fire Department Connection, in order to overcome the PRV setting.

Point of Information
Additional information can be found in Chapter 7 of the Bellevue Fire Department Development Standards available online at www.bellevuewa.gov/pdf/Fire/BFDDS_2004_Edition.pdf

23.11.1404.5 International Fire Code Section 1404.5– Fire watch.

Section 1404.5 of the International Fire Code as adopted by this chapter is amended to read as follows:

1404.5 Fire watch. When required by the fire code official for building construction or demolition that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.

23.11.2206.2.3 Above-ground tanks located outside, above grade

Section 2206.2.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

2206.2.3 Above-ground tanks located outside, above grade. Above-ground tanks shall not be used for the storage of Class I, II or IIIA liquid fuels except as provided by this section.

1. The storage of Class I and Class II liquids in above ground tanks outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited. Districts for which this prohibition applies include areas zoned as other than LI (Light Industrial) and GC (General Commercial) as defined in City of Bellevue Land Use Code and designated on the City's official zoning map.

2. Above-ground tanks used for outside, above-grade storage of Class I liquids shall be listed and labeled as protected above-ground tanks and be in accordance with Chapter 34. Such tanks shall be located in accordance with Table 2206.2.3.

3. Above-ground tanks used for above-grade storage of Class II or IIIA liquids are allowed to be protected above-ground tanks or, when approved by the fire code official, other above-ground tanks that comply with Chapter 34. Tank locations shall be in accordance with Table 2206.2.3.

4. Tanks containing fuels shall not exceed 12,000 gallons (45,420 L) in individual capacity or 48,000 gallons (181,680 L) in aggregate capacity. Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30,480 mm).

5. Tanks located at farms, construction projects, or rural areas shall comply with Section 3406.2.

23.11.3301.2.3 International Fire Code Section 3301.2.3 – Storage of explosives and blasting agents.

Section 3301.2.3 of the International Fire Code as adopted by this chapter is amended to read as follows:

3301.2.3 Permit restrictions. The storage of explosive materials is prohibited within the limits of the City. The fire code official is authorized to limit the quantity of fireworks permitted at a given location. No person, possessing a permit for storage of fireworks at any place, shall keep or store an amount greater than authorized in such permit. Only the kind of fireworks specified in such a permit shall be kept or stored.

23.11.3308.2 International Fire Code Section 3308.2 – Fireworks – Discharge prohibited.

Section 3308.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

Fireworks Discharge Prohibited. No person shall ignite or discharge any fireworks at any time.

Exceptions:

1. Public displays authorized by permit issued by the city pursuant to RCW 70.77.260(2) now or as hereafter amended;

2. Use by a group or individual for religious or other specific purposes on an approved date at an approved location pursuant to a permit issued pursuant to RCW 70.77.311(2)(c) now or hereafter amended and (d);

3. Use of trick and novelty devices as defined in WAC 212-17-030, as amended, and as hereafter amended and use of agricultural and wildlife fireworks as defined in WAC 212-17-045, as amended and as hereafter amended.

23.11.3404.2.9.5.1 International Fire Code Section 3404.2.9.5.1 – Locations where above ground tanks are prohibited or restricted.

Section 3404.2.9.5.1 of the International Fire Code as adopted by this chapter is amended to read as follows:

3404.2.9.5.1 Locations where above-ground tanks are prohibited or restricted. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited unless screened in accordance with the City of Bellevue Land Use Code (LUC) Section 20.20.525 as now or hereafter amended.

Exception: Areas zoned as LI (Light Industrial) and GC (General Commercial) as defined in the LUC and designated on the City's official zoning map.

23.11.3804.2 International Fire Code Section 3804.2 amended – Maximum capacity within established limits.

Section 3804.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

3804.2. Maximum Capacity. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested commercial areas, the aggregate capacity of any one installation shall not exceed 2,000 gallons water capacity, except that in particular installations this capacity limit may be altered at the discretion of the chief after consideration of special features such as topographical conditions, nature of occupancy and proximity to buildings, capacity of proposed tanks, degree of private fire protection to be provided, and facilities of the local fire department. The storage of liquefied petroleum gas shall conform to the provisions of the local zoning ordinance. Districts for which this prohibition applies includes areas zoned as other than LI (Light Industrial) and GC (General Commercial) as defined in the City of Bellevue Land Use Code and designated on the City's official zoning map.

23.11.45 International Fire Code Chapter 45 amended – Referenced Standards

The following referenced standards identified on page 388 are hereby amended as follows:

13—07	Installation of Sprinkler Systems	Table 704.1, 903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.5.2, 904.11, 905.3.4, 907.9, 2301.1, 2304.2, Table 2306.2, 2306.9, 2307.2, 2307.2.1, 2308.2.2, 2308.2.2.1, 2310.1, 2501.1, 2804.1, 2806.5.7, 3404.3.3.9, Table 3404.3.6.3(7), 3404.3.7.5.1, 3404.3.8.4
13D—07	Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes	903.3.1.3, 903.3.5.1.1
13R—07	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height	903.3.1.2, 903.3.5.1.1, 903.3.5.1.2
14—07	Installation of Standpipe and Hose Systems	905.2, 905.3.4, 905.4.2, 905.8
20—07	Installation of Stationary Pumps for Fire Protection	913.1, 913.2, 913.5.1
72—07	National Fire Alarm Code	509.1, Table 901.6.1, 903.4.1, 904.3.5, 907.2, 907.2.1.1, 907.2.10, 907.2.10.4, 907.2.11.2, 907.2.11.3, 907.2.12.2.3, 907.2.12.3, 907.3, 907.5, 907.6, 907.10.2, 907.11, 907.15, 907.17, 907.18, 907.20, 907.20.2, 907.20.5

Section 4. International Fire Code Appendix Chapter B amended, is hereby enacted to read as follows:

23.11.50 Appendix B International Fire Code Appendix Chapter B amended – Fire Flow Requirements for Buildings

Appendix Chapter B of the International Fire Code as adopted by this chapter is amended to read as follows:

APPENDIX B
FIRE-FLOW REQUIREMENTS FOR BUILDINGS

SECTION B101 GENERAL

B101.1 Scope. The procedure for determining fire-flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with this appendix. This appendix does not apply to structures other than buildings.

SECTION B102 DEFINITIONS

B102.1 Definitions. For the purpose of this appendix, certain terms are defined as follows:

FIRE-FLOW. The flow rate of a water supply, measured in accordance with WAC 246-290-230 as now or hereafter amended (Minimum Pressure) & WAC 246-290-420 as now or hereafter amended (Maximum Velocity).

FIRE-FLOW CALCULATION AREA. The floor area, in square feet (m2), used to determine the required fire flow.

SECTION B103 MODIFICATIONS

B103.1 Decreases. The fire chief code official is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.

B103.2 Increases. The fire chief code official is authorized to increase the fire-flow requirements where conditions indicate an unusual susceptibility to group fires or conflagrations. An increase shall not be more than twice that required for the building under consideration.

B103.3 Areas without water supply systems. For information regarding water supplies for fire-fighting purposes in rural and suburban areas in which adequate and reliable water sup-ply systems do not exist, the fire code official is authorized to utilize NFPA 1142 or the International Wildland-Urban Inter-face Code.

SECTION B104 FIRE-FLOW CALCULATION AREA

B104.1 General. The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, except as modified in Section B104.3.

B104.2 Area separation. Portions of buildings which are separated by fire walls without openings, constructed in accordance with the International Building Code, are allowed to be considered as separate fire-flow calculation areas.

B104.3 Type IA and Type IB construction. The fire-flow calculation area of buildings constructed of Type IA and Type IB construction shall be the area of the three largest successive floors.

Exception: Fire-flow calculation area for open parking garages shall be determined by the area of the largest floor.

SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS

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

Exception: A reduction in required fire flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system.

B105.2 Buildings other than one- and two-family dwellings. The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

Exceptions:

1. A reduction in required fire-flow of up to 75 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting fire-flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105.1.
2. The resulting fire-flow shall not be less than 1,000 gallons per minute (3790 L/min) for the prescribed duration as specified in Table B105.1 for a building that consists only of group R-2 and its associated parking.

SECTION B106 REFERENCED STANDARDS

ICC	IBC	International Building Code	B104.2, Table B105.1
ICC	IWUIC	International Wildland-Urban Interface Code	B103.3
NFPA	1142	Standard on Water Supplies for Suburban and Rural Fire Fighting	B103.3

APPENDIX B

TABLE B105.1
MINIMUM REQUIRED FIRE-FLOW AND FLOW DURATION FOR BUILDINGS[a]

FIRE-FLOW CALCULATION AREA (square feet)					FIRE-FLOW (gallons per minute)[c]	FLOW DURATION (hours)
Type IA and IB[b]	Type IIA and IIIA[b]	Type IV and V-A[b]	Type IIB and IIIB[b]	Type V-B[b]		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
—	—	191,401-Greater	138,301-Greater	85,101-Greater	8,000	

For SI: 1 square foot = 0.0929 m^2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895kPa.

a. The minimum required fire flow shall be allowed to be reduced by 25 percent for Group R.

b. Types of construction are based on the International Building Code.

c. Measured at 20 psi. and in accordance with WAC 246-290-230 as now or hereafter amended WAC 246-290-420 as now or hereafter amended.

Section 5. This ordinance shall take effect and be in force five (5) days after passage by the City Council and legal publication.

Passed by the City Council this 25th day of June, 2007, and signed in authentication of its passage this 25th day of June, 2007.

(SEAL)

Grant S. Degginger, Mayor

Approved as to form:

Lori M. Riordan, City Attorney

Darcie E. Chinn, Assistant City Attorney

Attest:

Myrna L. Basich, City Clerk

Published June 28, 2007