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23.11.105.1.1 International Fire Code Section 105.1.1 amended – Permits required.
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23.11.105.7 International Fire Code Section 105.7 amended – Required construction permits.
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23.11.~~108~~ 109 International Fire Code Section ~~108~~ 109 amended – Appeals.
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23.1.304.1.2 International Fire Code Section 304.1.2 amended - Vegetation
23.11.307~~.1.1~~ International Fire Code Section 307~~.1.1~~ amended – ~~Open burning prohibited.~~ Open Burning, Recreational Fires and Portable Outdoor Fireplaces
23.11.315.3.2.1 International Fire Code Section 315.3.2.1 added – Storage under stairways.
~~23.11.319 International Fire Code Section 319 added – Fixed guideway transit and passenger rail systems.~~
23.11.320 International Fire Code Section 320 added – Road tunnels, bridges and other limited access highways.
~~23.11.321 International Fire Code Section 321 added – Mobile food vending.~~
23.11.401.9 International Fire Code Section 401.9 added – Evacuation required.
23.11.503.1 International Fire Code Section 503.1 amended – Where required.
23.11.503.2 International Fire Code Section 503.2 amended – Specifications.
23.11.503.3 International Fire Code Section 503.3 amended – Markings.
23.11.503.4 International Fire Code Section 503.4 amended – Obstruction of fire apparatus access roads.
23.11.503.6 International Fire Code Section 503.6 amended – Security gates.
23.11.504.4 International Fire Code Section 504.4 added – Buildings with enclosed interior courtyards.
23.11.505 International Fire Code Section 505 amended – Premises Identification
23.11.507.1 International Fire Code Section 507.1 amended – Required water supply.
23.11.507.3 International Fire Code Section 507.3 amended – Fire flow.
23.11.507.5.1 International Fire Code Section 507.5.1 amended – Where required.
23.11.507.5.3 International Fire Code Section 507.5.3 amended – Private fire service mains and water tanks.
23.11.508.1.2 International Fire Code Section 508.1.2 amended – Separations and penetrations.
23.11.510 International Fire Code Section 510 amended – Emergency responder radio coverage.
23.11.602 International Fire Code Section 602 amended - Definitions
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23.11.~~605.3~~604.3 International Fire Code Section ~~605.3~~ 604.3 amended – Working space and clearance.
23.11.~~605.4~~ 604.4 International Fire Code Section ~~605.4~~ 604.4 amended – Multiplug adapters.
23.11.~~605.9~~ 604.9 International Fire Code Section ~~605.9~~ 604.9 amended – Temporary wiring.
23.11.~~606.16~~ 605.16 International Fire Code Section ~~606.16~~ 605.16 amended – Electrical equipment.
23.11.606.9 International Fire Code Section 606.9 added – Elevator Maintenance
23.11.901.5 International Fire Code Section 901.5 amended – Installation acceptance testing.

23.11.901.6 International Fire Code Section 901.6 amended – Inspection, Testing and Maintenance.

23.11.901.6.4 International Fire Code Section 901.6.4 added – Certification

~~23.11.901.7 International Fire Code Section 901.7 amended – Systems out of service.~~

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

23.11.903.2.11 International Fire Code Section 903.2.11 amended – Specific building areas and hazards.

23.11.903.3.1 International Fire Code Section 903.3.1 amended – Standards.

23.11.903.3.1.1.1 International Fire Code Section 903.3.1.1.1 amended – Exempt locations.

23.11.903.3.1.1.2 International Fire Code Section 903.3.1.1.2 amended – Bathrooms

23.11.903.3.1.1.3 International Fire Code Section 903.3.1.1.3 added – Seismic coefficient.

23.11.903.3.1.2 International Fire Code Section 903.3.1.2 amended – NFPA 13R sprinkler systems.

~~23.11.903.3.3 International Fire Code Section 903.3.3 amended – Obstructed locations.~~

23.11.903.3.9 International Fire Code Section 903.3.9 added – Fire Sprinkler Zones

23.11.903.4.3 International Fire Code Section 903.4.3 amended – Floor control valves.

23.11.903.5 International Fire Code Section 903.5 amended – Testing and maintenance.

23.11.905.3.1 International Fire Code Section 905.3.1 amended – Height.

23.11.905.3.9 International Fire Code Section 905.3.9 added – High-rise building standpipes.

23.11.905.3.10 International Fire Code Section 905.3.10 added – Vertical standpipes served by fire pumps.

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

23.11.905.8 International Fire Code Section 905.8 amended – Dry standpipes.

23.11.907.1 International Fire Code Section 907.1 amended – General.

23.11.907.2.~~13.1.1~~ 12.1.1 International Fire Code Section 907.2.~~13.1.1~~ 12.1.1 amended – Area smoke detection.

23.11.907.2.~~13.2~~ 12.2 International Fire Code Section 907.2.~~13.2~~ 12.2 amended – Fire department communication system.

23.11.907.2.~~18.1~~ 17.1 International Fire Code Section 907.2.~~18.1~~ 17.1 amended – Smoke detectors.

~~23.11.907.5 International Fire Code Section 907.5 amended – Occupant notification system.~~

23.11.907.5.2.1.1 International Fire Code Section 907.5.2.1.1 amended – Average sound pressure.

23.11.907.5.2.2 International Fire Code Section 907.5.2.2 amended – Emergency voice/alarm communication systems.

23.11.907.5.2.3 International Fire Code Section 907.5.2.3 amended – Visible alarms.
23.11.907.6.3.1 International Fire Code Section 907.6.3.1 amended – Annunciator panel.
23.11.907.6.4~~.1~~ International Fire Code Section 907.6.4~~.1~~ amended – ~~Graphic annunciator.~~ Zones.
23.11.909.1 International Fire Code Section 909.1 amended – Scope and purpose.
23.11.909.4.6 International Fire Code Section 909.4.6 amended – Duration of operation.
23.11.909.10.2 International Fire Code Section 909.10.2 amended – Ducts.
23.11.909.10.3 IFC Section 909.10.3 amended – Equipment, inlets and outlets.
23.11.909.11 IFC 909.11 amended – Power systems.
23.11.909.12 International Fire Code Section 909.12 amended – Detection and control systems.
23.11.909.17 IFC Section 909.17 amended – System response time.
23.11.909.18.8.3.2 International Fire Code Section 909.18.8.3.2 amended – Certificate of compliance.
23.11.909.21.3 International Fire Code Section 909.21.3 amended – Ducts for system.
23.11.909.21.4.4 International Fire Code Section 909.21.4.4 amended – Fan capacity.
23.11.912.5 International Fire Code Section 912.5 amended – Signs.
23.11.913.1 International Fire Code Section 913.1 amended – General.
23.11.913.2 International Fire Code Section 913.2 amended – Protection against interruption of service.
23.11.914.2.1 International Fire Code Section 914.2.1 amended – Automatic sprinkler system – Covered and open mall buildings.
23.11.914.3.1 International Fire Code Section 914.3.1 amended – Automatic sprinkler system – High-rise buildings.
23.11.914.3.1.2 International Fire Code Section 914.3.1.2 amended – Water supply to required fire pumps.
23.11.914.3.1.3 International Fire Code Section 914.3.1.3 added – High-rise building sprinkler system design.
23.11.914.3.2 International Fire Code Section 914.3.2 amended – Secondary water source.
23.11.~~917~~ 919 International Fire Code Section ~~917~~ 919 added – Firefighter air Replenishment systems.
23.11.1008.3.4 International Fire Code Section 1008.3.4 amended – Duration.
23.11.1009.8.1 International Fire Code Section 1009.8.1 amended – System Requirements
23.10.1010.1.7 International Fire Code Section 1010.1.7 amended – Thresholds.
23.11.1011.7 International Fire Code Section 1011.7 amended – Stairway construction.
23.11.1011.12.2 International Fire Code Section 1011.12.2 amended – Roof access.
23.11.1026 International Fire Code Section 1026 added – Fire Alarm and Sprinkler Zones

23.11.1103.2 International Fire Code Section 1103.2 amended – Emergency responder radio coverage in existing buildings.
23.11.1103.8 International Fire Code Section 1103.8 amended – Single- and multiple-station smoke alarms.
23.11.1103.11 International Fire Code Section 1103.11 added – Building information card.
23.11.1107 International Fire Code Section 1107 added – Address identification.
23.11.~~604.1~~ 1203.1 International Fire Code Section ~~604.1~~ 1203.1 amended – Emergency and standby power systems.
23.11.2306.2.3 International Fire Code Section 2306.2.3 amended – Above-ground tanks located outside, above grade.
23.11.3308 International Fire Code Section 3308 amended – Owner's responsibility for fire protection.
23.11.5003.9 International Fire Code Section 5003.9 amended – General safety.
23.11.5003.9.11 International Fire Code Section 5003.9.11 added – Manufacturer's limitations.
23.11.5307.3 International Fire Code Section 5307.3 amended – Insulated liquid carbon dioxide or nitrogen system used in beverage dispensing applications
23.11.5601.2.2 International Fire Code Section 5601.2.2 amended – Sale and retail display.
23.11.5601.2.3 International Fire Code Section 5601.2.3 amended – Permit restrictions.
23.11.5601.9 International Fire Code Section 5601.9 added – Violations and penalties.
23.11.5608.2 International Fire Code Section 5608.2 amended – Fireworks discharge prohibited.
23.11.5608.2.3 International Fire Code Section 5608.2.3 added – Standards for fireworks displays.
23.11.5704.2.7.2 International Fire Code Section 5704.2.7.2 amended – Pressure limitations for tanks.
23.11.5704.2.9.6.1 International Fire Code Section 5704.2.9.6.1 amended – Locations where above-ground tanks are prohibited or restricted.
23.11.5704.2.13 International Fire Code Section 5704.2.13 amended – Abandonment and status of tanks.
23.11.5707 International Fire Code Section 5707 amended – On-Demand Mobile Fueling Operations
23.11.6104.2 International Fire Code Section 6104.2 amended – Maximum capacity.
23.11.80 International Fire Code Chapter 80 amended – Reference Standards

23.11.100 Adoptions – International Fire Code.

The International Fire Code~~, 2015~~ 2018 Edition, and Appendices B and C, all published by the International Code Council, as adopted by the State Building Code Council in Chapter 51-54A 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, 109.3~~, 109.3.1, 109.3.2, 109.3.3, 109.3.4, 109.4~~ 110.1, 110.3, 110.3.1, 110.3.2, 110.3.3, 110.3.4,

110.4, 905.3.4, 905.3.4.1, 907.2.7.1 and 909.11.1, are 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 they were adopted, shall be filed in the city clerk's office and shall be available for use and examination by the public. As used in this code the designation [WS] indicates a Washington State amendment to the International Fire Code.

23.11.101 Definitions.

As used in this chapter:

A. "*Fire code official*" means the fire marshal or his or her 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.

C. Point of Information. Text marked "Point of Information" is for guidance only and does not have the force of law.

23.11.102 Violations.

A. Unless otherwise provided for herein, 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, or 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.

9. Suppression and investigation of fires where the responsible party committed acts or omissions that constitute willful and wanton misconduct or gross negligence.

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, costs 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.

23.11.102.5 International Fire Code Section 102.5 amended – Application of residential code.

Section 102.5 of the International Fire Code is hereby amended to read as follows:

102.5 Where structures are designed and constructed in accordance with the International Residential Code, the provisions of this code shall apply as follows:

1. Construction and design provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access and water supplies. Where interior or exterior systems or

devices are installed, construction permits required by Section 105.7 of this code shall apply.

Exception: Additions to existing structures of up to 500 square feet for other than adult family homes are not required to comply with fire apparatus access or water supply requirements.

For other than adult family homes, additions greater than 500 square feet are allowed, provided the following criteria are met:

1. When there is inadequate fire department access (Section 503), distance to fire hydrants and/or inadequate fire flow (Section 507) and a proposed addition to a dwelling is less than 25% of the existing total living area square footage, interconnected carbon monoxide and smoke alarm devices shall be installed in accordance with Section 907.2.11.2 and International Residential Code Section 315.1 throughout the dwelling.

2. When there is inadequate fire department access (Section 503), distance to fire hydrants and/or inadequate fire flow (Section 507) and a proposed addition to a dwelling is greater than 25% but less than 50% of the existing total living area, interconnected carbon monoxide and smoke alarm devices* shall be installed in accordance with Section 907.2.11.2 and the International Residential Code Section 315.1 standards throughout the dwelling and monitored by an *approved* central station provided there is a minimum available fire flow of 1,000 G.P.M. If the available fire flow is less than 1,000 G.P.M., item #3 shall apply.

3. When there is inadequate fire department access (Section 503), distance to fire hydrants and/or inadequate fire flow (Section 507) and a proposed addition to a dwelling is greater than 50% of the existing total living area an automatic fire sprinkler system installed in accordance with NFPA standard 13D standard shall be installed throughout the dwelling.

   *UL 217 listed wireless devices are *approved* for installation.

2. Administrative, operational and maintenance provisions of this code shall apply.

23.11.102.7 International Fire Code Section 102.7 amended – Referenced codes and standards.

Section 102.7 of the International Fire Code is hereby amended to read as follows:

102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80 of the International Fire Code, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.7.1 and 102.7.2.

Point of Information

When allowed by the *fire code official*, editions of standards not herein referenced may be utilized provided the entire standard is utilized.

102.7.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.7.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

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

Section 104.1 of the International Fire Code is hereby 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.

23.11.104.1.2 International Fire Code Section 104.1.2 added – Indigent housing guidelines.

Section 104 of the International Fire Code is hereby amended by the addition of a new subsection 104.1.2 to read as follows:

104.1.2 Indigent housing guidelines. The *fire code official* is hereby authorized to develop a policy regarding application and exemption of construction codes for temporary homeless shelters in accordance with WAC 51-16-030 Exemptions for indigent housing guidelines, now or as hereafter amended.

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

Section 104.10.1 of the International Fire Code is hereby 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 amended – Obstructing operations.

Section 104.11.2 of the International Fire Code is hereby 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.

23.11.105.1.1 International Fire Code Section 105.1.1 amended – Permits required.

Section 105.1.1 of the International Fire Code is hereby amended to read as follows:

105.1.1 Permits required. Any property owner or authorized agent who intends to conduct an operation or business or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the *fire code official* and obtain the required permit. Permit fees, if any, may be required to be paid prior to issuance of the permit. Failure to pay the required permit fee may result in cancellation of the permit.

23.11.105.2.3 International Fire Code Section 105.2.3 amended – Time limitation of application.

Section 105.2.3 of the International Fire Code is hereby amended to read as follows:

105.2.3 Time limitation of application.

1. Applications for which no permit is issued within one year following the date of application shall expire. Plans and other data submitted with the application may thereafter be returned to the applicant or destroyed in accordance with state law by the *fire code official*. The *fire code official* may, prior to expiration, extend the time for action by the applicant for a period not to exceed 180 days.

2. Applications may be canceled for inactivity if an applicant fails to respond to the department's written request for revisions, corrections, actions or additional information within 90 days of the date of request. The *fire code official* may extend the response period beyond 90 days if, within the original 90-day time period, the applicant provides and subsequently adheres to an *approved* schedule with specific target dates for submitting the full revisions, corrections or other information needed by the department.

3. In addition to the extension allowed in subsection (1) of this section, the *fire code official* may extend the life of an application if any of the following conditions exist:

a. Compliance with the State Environmental Policy Act is in progress; or

b. Any other city review is in progress; provided the applicant has submitted a complete response to city requests or the *fire code official* determines that unique or unusual circumstances exist that warrant additional time for such response, and the *fire code official* determines that the review is proceeding in a timely manner toward final city decision; or

c. Litigation against the city or the applicant is in progress, the outcome of which may affect the validity, or the provisions of any permit issued pursuant to such application.

In no event may the *fire code official* extend the application for a period of more than 180 days following the conclusion of any of the conditions described in subsection (3).

23.11.105.3.1 International Fire Code Section 105.3.1 amended – Expiration.

Section 105.3.1 of the International Fire Code is hereby amended to read as follows:

105.3.1 Expiration. An operational permit shall remain in effect until reissued, renewed, or revoked or for such a period of time as specified in the permit.

Construction permits issued by the *fire code official* under the provisions of this chapter shall expire by limitation and become null and void if the work authorized by such permit is not commenced within one year from the date of such permit, or if work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days except that the *fire code official* may extend permits associated with single-family construction for an additional period of up to 180 days at his or her sole discretion.

Construction permits issued under which work is continuously performed and the necessary periodic inspections are completed shall be extended beyond the one-year period by the *fire code official* for a period of no more than one year. No more than two one-year extensions shall be granted except that the *fire code official* may extend permits associated with single-family construction for an additional period of up to 90 days at his or her sole discretion.

Before such work recommences, a new permit shall be first obtained. Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

23.11.105.6.8 International Fire Code Section 105.6.8 amended – Compressed Gases.

Section 105.6.8 of the International Fire Code is hereby amended to read as follows:

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

Exception: Vehicles equipped for and using *compressed gas* as a fuel for propelling the vehicle.

TABLE 105.6.8
PERMIT AMOUNTS FOR COMPRESSED GASES

TYPE OF GAS	AMOUNT (cubic feet at NTP)
Carbon dioxide used in carbon dioxide enrichment systems	875 (100 lbs.)
Carbon dioxide or nitrogen used in insulated liquid carbon dioxide beverage dispensing, food or beverage applications	875 (100 lbs.)
Corrosive	200
Flammable (except cryogenic fluids and liquefied petroleum gases)	200
Highly toxic	Any Amount
Inert and simple asphyxiant	6,000

Oxidizing (including oxygen)	504
Pyrophoric	Any Amount
Toxic	Any Amount

For SI: 1 cubic foot – 0.02832 m^3.

~~23.11.105.6.50 International Fire Code Section 105.6.50 added – Emergency responder radio coverage system.~~

~~Section 105.6 of the International Fire Code is hereby amended by the addition of a new subsection 105.6.50 to read as follows:~~

~~105.6.50 Emergency responder radio coverage system. An operational permit is required to operate an Emergency Responder Radio Coverage System as prescribed in Bellevue City Code 23.11.510.~~

23.11.105.6.30 International Fire Code Section 105.6.30 amended – Mobile food preparation vehicles.

Section 105.6.30 of the International Fire Code is hereby amended to read as follows:

[WS] 105.6.30 Mobile food preparation vehicles. A permit is required for mobile food preparation vehicles equipped with appliances that produce smoke or grease-laden vapors or utilize LP-gas systems or CNG systems.

Valid operational permits issued by any King County Fire Agency are recognized provided that the vehicle and appliances are maintained in accordance with conditions of the permit.

23.11.105.6.51 International Fire Code Section 105.6.51 added – Positive alarm sequence.

Section 105.6 of the International Fire Code is hereby amended by the addition of a new subsection 105.6.51 to read as follows:

105.6.51 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.

23.11.105.7 International Fire Code Section 105.7 amended – Required construction permits.

Section 105.7 of the International Fire Code is hereby amended to read as follows:

Permits referenced in Section 105.7 are issued by the Development Services Department when authorized to do so by the *fire code official*.

23.11.105.7.27 International Fire Code Section 105.7.27 added – Refrigeration Equipment

Section 105.7.27 of the International Fire Code is hereby added to read as follows:

105.7.27 Refrigeration Equipment

A construction permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6 of the International Fire Code.

~~23.11.105.7.21~~ 23.11.105.7.28 International Fire Code Section ~~105.7.21~~105.7.28 added – Firefighter air systems.

Section ~~105.7.21~~105.7.28 of the International Fire Code is hereby added to read as follows:

~~105.7.21~~105.7.28 Firefighter Air Systems.

A construction permit is required to install a firefighter air system.

23.11.~~113~~.106 International Fire Code Section 106 amended – Fees.

Section ~~113~~ 106 of the International Fire Code is hereby amended to read as follows:

~~113~~ 106.1 Fees. A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

~~113 .2~~ 106.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with Table ~~113~~ 106.6.

These fees shall be reviewed annually, and, effective January 1 of each year, administratively increased or decreased to the nearest whole dollar by an adjustment to reflect the current published annual change in the Seattle Consumer Price Index for Wage Earners and Clerical Workers – June to June timeframe. This does not apply to the Inspection Fee (23.11.~~113~~ 106.6.8) which is to be reviewed and adjusted by City Council every two years.

A fee schedule (Fire Prevention Fee Schedule) reflecting the base fees in Table ~~113~~ 106.6 and any applicable administrative adjustment pursuant to this section will be made available to the public.

106.3 Work commencing before permit issuance. Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall reimburse the City for all expenses related to any enforcement proceedings and be subject to a penalty levied in an amount up to double the fee required for the work,

activity or operation commenced prior to obtaining the necessary permits which shall be in addition to the required permit fees.

This provision does not apply to emergency work, activity or operations when it is proved to the satisfaction of the Fire Marshal that such work, activity or operation was urgently necessary and that it was not practical to obtain a permit before commencement of the work, activity or operation.

In all such cases, a permit must be obtained as soon as it is practical to do so; and if there is an unreasonable delay in obtaining the permit, a double fee (as provided for in this ordinance) will be charged. The payment of this double fee does not relieve any person from fully complying with the requirements of the Bellevue City Code in the execution of the work or from any other penalties prescribed by law. Such person may also be required to reimburse the City for all expenses related to any enforcement proceedings as determined by the Fire Marshal.

~~113.4~~ 106.4 Related fees. The payment of the fee for the construction, alteration, removal or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

~~113.5~~ 106.5 Refunds. The applicable governing authority is authorized to establish a refund policy.

Table ~~113~~ 106.6

~~113.6.1~~ 106.6.1 Operational permit fees. A base fee of $127.00, subject to adjustment as specified in BCC 23.11.~~113.2~~106.2, shall be charged annually for each type of operational permit (as defined in International Fire Code Section 105.6).

Exceptions:

1. Tenants requiring multiple operational permits in the same building shall be charged only one permit fee per calendar year.

2. No fees shall be charged for candles in a place of assembly or parade floats.

3. Fees shall be waived for:

    1. Government agencies
    2. Non-profit organizations exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code.

~~113.6.2~~106.6.2. Pyrotechnical effects permits. A base fee of $232.00, subject to adjustment as specified in BCC 23.11.~~113~~106.2, shall be charged for pyrotechnical effects permits.

~~113.6.3~~ 106.6.3 Construction permit fees. The fee for each permit shall be as set forth in the fee ordinance, as now or hereafter amended.

~~113.6.4~~ 106.6.4 Re-inspection fee. A re-inspection fee may be assessed when all of the following criteria have been met:

- Code violations have been identified by the *fire code official*.
- A written notice has been issued to the responsible party, identifying the code violations and a time period to make corrections.
- The code violations have not been corrected within the specified period.

The fee shall be $173.00/hour, subject to adjustment as specified in BCC 23.11.~~113~~ 106.2, with a one hour minimum.

~~113.6.5~~ 106.6.5 Event Fee. When the fire chief determines it is necessary to preserve the public health, safety and welfare, event sponsors may be required to compensate the department for staffing and equipment in an amount calculated according to the Washington State Fire Chiefs Association's fee schedule together with Fire Prevention hourly staffing rate as published in Development Services Fee Ordinance 6263 or as amended.

~~113.6.6~~ 106.6.6 Confidence Test Report Filing Fee. Effective January 1, 2017 confidence test reports must be filed with "The Compliance Engine" (www.thecomplianceengine.com). A $25.00 filing fee remitted to Brycer L.L.C is required at the time of filing. Brycer L.L.C will retain $10.00 and 6% of the total filing fee and return ~~$13.90~~ the balance to the City of Bellevue to partially offset an incremental increase in staffing required to fully implement this program.

106.6.6.1 Late Report Filing Fee. Confidence test reports that are not filed within five business days of the inspection or maintenance completion are subject to an additional $10.00 fee in accordance with BCC 23.11.108.3.1

106.6.7 Insufficient Funds. Any applicant whose payment of fees is returned to the City for Non-Sufficient Funds, or whose credit card payment is denied, will be charged the City standard insufficient funds fee. The original fees and the returned check fee are due and payable within five (5) working days of notification.

~~113.6.7~~ 106.6.8 Late Fee. All balances 30 days or greater past the invoice date are assessed a late charge of 1%, with a minimum charge of $25 per month.

~~113.6.8~~ 106.6.9 Inspection fee.

The fire chief, or their designee, is authorized to assess a fire inspection fee for inspections made of commercial and multifamily buildings under International Fire Code

Chapter 1, Section 104. The fire inspection fee shall be assessed at the time the inspection is made. The fire chief or their designee shall calculate the inspection fee based on the following formula for each building or occupancy:

(Square Foot Factor)* multiplied by (Occupancy Factor)** multiplied by (Base Rate)*** = Inspection Fee

The Square Foot Factor and Occupancy Factor shall be determined by the fire chief, or their designee performing the inspection. The Base Rate shall be set by city council.

~~113.6.8.1~~ 106.6.9.1 Square Foot Factor

The *Square Foot Factor shall be determined as follows:

#0 = Under 1,000 Sq. Ft.
#1 = 1,000 Sq. Ft. or larger up to;
#2 = 3,000 Sq. Ft. or larger up to;
#3 = 10,000 Sq. Ft. or larger up to;
#4 = 40,000 Sq. Ft. or larger up to;
#5 = 80,000 Sq. Ft. or larger up to;
#6 = 100,000 Sq. Ft. or larger.

~~113.6.8.1.1~~ 106.6.9.1.1 Covered Mall Buildings

The square footage for *Covered Mall Buildings* shall not include *anchor buildings,* which will be assessed separately. *For Covered Mall Building* 500,000 sq. ft or larger the square footage factor shall be as follows:

#7= 500,000 Sq. Ft. or larger up to;
#8 = 750,000 Sq. Ft. or larger up to;
#9 = 1,000,000 Sq. Ft. or larger.

~~113.6.8.2~~ 106.6.9.2 Occupancy Factor

The ** Occupancy Factor shall be determined as follows:

.1 *Group R* Townhomes & single-story *Group S* self-storage warehouses.

.3 Group R Buildings not exceeding 3 stories in height; Group S Self-storage warehouses not exceeding 3 stories in height; Group S stand-alone parking garages and covered boat moorage.

1.0 All buildings or portions of buildings classified as Group A Division 3, B, M, R (not to include Group R Division 3) and U occupancies.

2.0 All buildings or portions of buildings classified as Group A Division 1, 2 and 4, E, S or LC occupancies.

3.0 All buildings classified as high-rise buildings; all covered mall buildings not to include anchor buildings; all buildings or portions of buildings classified as Group F, H or I occupancies.

~~113.6.8.2.1~~ 106.6.9.2.1 High-Rise Buildings with common podiums

When multiple High-Rise buildings are located above a common podium, the associated parking garage and podium areas shall be assigned an occupancy factor of 2 and treated as one building.

~~113~~ 106.6.~~8~~9.2.2 Mixed Occupancy Buildings

All occupancy classifications are in accordance with the International Building Code (IBC) as amended by Chapter 51-50 WAC. Mixed occupancy buildings shall be classified for the purpose of the occupancy factor based upon the predominate occupancy of the building by square footage.

~~113.6.8.3~~ 106.6.9.3 Base Rate

*** Base Rate = $180.00 commencing January 1, 2020.

~~113.6.9~~ 106.6.10 Maximum Fee

Where multiple buildings have a single owner and comprise a single complex, the maximum fee for a single complex containing *Group E or R occupancies* that do not exceed 4 stories in height shall be $3,240.00

~~113.6.10~~ 106.6.11 Exemptions from inspection fee.

Buildings owned by nonprofit organizations exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code, buildings owned by the federal government, and buildings less than 1,000 square feet are exempt from the fire inspection fees established in BCC ~~23.11.113.6.8~~ 23.11.106.6.9. This exemption does not apply to nonprofit organizations when a majority of the building is occupied by tenants not exempt from federal income tax under Section 501 (c)(3).

~~113.6.11~~ 106.6.12 Reinspection and special inspections.

The fire inspection fee shall cover the initial inspection and one follow-up visit, if necessary, to determine correction of any violations. Any additional follow-up inspections necessitated by noncompliance or inspections for which no fee is specifically indicated, shall be assessed a fee at the time of the inspection and at the rates established in BCC ~~23.11.113.6.4~~ 23.11.106.6.4.

~~113.6.12~~ 106.6.13 Adjustment to base rate.

The base rate used in BCC ~~23.11.113.6.8.3~~ 23.11.106.6.9.3 shall be set by city council and reviewed in 2020 and every two years thereafter, or as otherwise necessary, to accomplish cost recovery for the fire inspection program. The base rate shall be adjusted to account for inflation, additional commercial and multifamily square footage subject to fire inspection which has been added within the city, and additional fire inspection resources or personnel necessary to perform fire inspections on a regular basis.

~~113~ 106.6.~~13~~14 Inspection fee – Payment obligation.

The obligation to pay the fee assessed pursuant to BCC ~~23.11.113.6.8~~ 23.11.106.6.9 or ~~23.11.113.6.11~~ 23.106.6.12 shall be the responsibility of the building or complex owner.

~~113.6.14~ 106.6.15 Inspection fee – Collection procedure.

The fees established in BCC ~~23.11.113.6.9~~ 23.11.106.6.9 and ~~23.11.113.6.12~~ 23.11.106.6.12 shall be billed to the party responsible. All balances 30 days or greater past the date of original assessment shall incur late charges pursuant to BCC ~~23.11.113.6.8~~ 23.11.106.6.8.

The director of finance and asset management, or their designee, may use any lawful means to collect the balance or write off the obligation.

~~23.11.107.3~ 23.11.108.3 International Fire Code Section ~~107.3~~ 108.3 amended – Recordkeeping.

Section ~~107.3~~ 108.3 International Fire Code is hereby amended to read as follows:

~~107.3~~ 108.3 Recordkeeping. A record of periodic inspections, test, servicing and other operations and maintenance shall be maintained on the premises or other *approved* location for not less than 3 years, or a different period of time where specified in this code or referenced standards. Records shall be made available for inspection by the *fire code official*, and a copy of the records shall be provided to the *fire code official* upon request.

The *fire code official* is authorized to prescribe the form and format of such recordkeeping. The *fire code official* is authorized to require that certain required records be filed with the *fire code official*.

Point of Information
Effective January 1, 2017 all confidence test reports must be filed with the Compliance Engine (www.thecomplianceengine.com)

108.3.1 Timeliness of report filing. Fire/life safety system confidence test reports must be submitted within five business days of the inspection or maintenance completion.

Systems with impairments or red-tagged systems must also be reported immediately using the current mandatory impaired systems reporting process.

Reports that are not submitted in a timely manner are subject to an additional $10 fee for each late report.

~~23.11.107.6~~ 23.11.108.6 International Fire Code Section 107.6 amended – Overcrowding.

Section ~~107.6~~ 108.6 of the International Fire Code is hereby amended to read as follows:

~~107.6~~ 108.6 Overcrowding. Overcrowding or admittance of any person beyond the *approved* capacity of a building or a portion thereof shall not be allowed. The *fire code official*, upon finding any overcrowding conditions or obstructions in aisles, passageways or other means of egress, or upon finding any condition which constitutes a life safety hazard, shall be authorized to direct actions be taken to reduce the overcrowding or to cause the event to be stopped until such condition or obstruction is corrected.

~~23.11.107.7 International Fire Code Section 107.7 added – Unauthorized tampering.~~

~~Section 107 of the International Fire Code is hereby amended by the addition of a new subsection 107.7 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~~ 23.11.109 International Fire Code Section ~~108~~ 109 amended – Appeals.

Section ~~108~~ 109 of the International Fire Code is hereby amended to read as follows:

~~108.1~~ 109.1 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;

D. Formal written interpretations of the fire code by the *fire code official*.

E. 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 prosecuted as a civil violation under Chapter 1.18 BCC.

2. The applicant in A or B above, the responsible party in C above, or an aggrieved party in D 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.

~~23.11.109.4.1~~ 23.11.110.4.1 International Fire Code Section ~~109.4.1~~ 110.4.1 amended – Abatement of violations.

Section ~~109.4.1~~ 110.4.1 of the International Fire Code is hereby amended to read as follows:

~~109.4.1~~ 110.4.1 Abatement of violation. In addition to the enforcement provisions of 23.11.102, 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.

~~23.11.113 International Fire Code Section 113 amended – Fees.~~

~~Section 113 of the International Fire Code is hereby amended to read as follows:~~

~~113.1 Fees. A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.~~

~~113.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with Table 113.6.~~

~~These fees shall be reviewed annually, and, effective January 1 of each year, administratively increased or decreased to the nearest whole dollar by an adjustment to reflect the current published annual change in the Seattle Consumer Price Index for Wage Earners and Clerical Workers.~~

~~A fee schedule (Fire Prevention Fee Schedule) reflecting the base fees in Table 113.6 and any applicable administrative adjustment pursuant to this section will be made available to the public.~~

~~113.3 Work commencing before permit issuance. Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall reimburse the City for all expenses related to any enforcement proceedings and be subject to a penalty levied in an amount up to double the fee required for the work, activity or operation commenced prior to obtaining the necessary permits which shall be in addition to the required permit fees.~~

~~This provision does not apply to emergency work, activity or operations when it is proved to the satisfaction of the Fire Marshal that such work, activity or operation was urgently necessary and that it was not practical to obtain a permit before commencement of the work, activity or operation.~~

~~In all such cases, a permit must be obtained as soon as it is practical to do so; and if there is an unreasonable delay in obtaining the permit, a double fee (as provided for in this ordinance) will be charged. The payment of this double fee does not relieve any person from fully complying with the requirements of the Bellevue City Code in the execution of the work or from any other penalties prescribed by law. Such person may also be required to reimburse the City for all expenses related to any enforcement proceedings as determined by the Fire Marshal.~~

~~113.4 Related fees. The payment of the fee for the construction, alteration, removal or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.~~

~~113.5 Refunds. The applicable governing authority is authorized to establish a refund policy.~~

~~Table 113.6~~

~~113.6.1 Operational permit fees. A base fee of $121.00, subject to adjustment as specified in BCC 23.11.113.2, shall be charged annually for each type of operational permit (as defined in International Fire Code Section 105.6).~~

~~**Exceptions:**~~

~~1. Any hazardous material with multiple classifications shall be charged only once.~~

~~2. No fees shall be charged for candles in a place of assembly or parade floats.~~

~~3. Fees shall be waived for government agencies and non-profit organizations.~~

~~113.6.2. Pyrotechnical effects permits. A base fee of $220.00, subject to adjustment as specified in BCC 23.11.113.2, shall be charged for pyrotechnical effects permits.~~

~~113.6.3 Construction permit fees. The fee for each permit shall be as set forth in the fee ordinance, as now or hereafter amended.~~

~~113.6.4 Re-inspection fee. A re-inspection fee may be assessed when all of the following criteria have been met:~~

- ~~Code violations have been identified by the *fire code official*.~~
- ~~A written notice has been issued to the responsible party, identifying the code violations and a time period to make corrections.~~
- ~~The code violations have not been corrected within the specified period.~~

~~The fee shall be $156.00/hour, subject to adjustment as specified in BCC 23.11.113.2, with a one hour minimum.~~

~~113.6.5 Event Fee. When the fire chief determines it is necessary to preserve the public health, safety and welfare, event sponsors may be required to compensate the department for staffing and equipment in an amount calculated according to the Washington State Fire Chiefs Association's fee schedule together with Fire Prevention hourly staffing rate as published in Development Services Fee Ordinance 6263 or as amended.~~

~~113.6.6 Confidence Test Report Filing Fee. Effective January 1, 2017 confidence test reports must be filed with "The Compliance Engine" (www.thecomplianceengine.com). A $25.00 filing fee remitted to Brycer L.L.C is required at the time of filing. Brycer L.L.C will retain $10.00 and 6% of the balance and return $13.90 to the City of Bellevue to partially offset an incremental increase in staffing required to fully implement this program.~~

~~113.6.7 Late Fee. All balances 30 days or greater past the invoice date are assessed a late charge of 1%, with a minimum charge of $25 per month.~~

~~23.11.113.6.8 Inspection fee.~~

~~The fire chief, or their designee, is authorized to assess a fire inspection fee for inspections made of commercial and multifamily buildings under International Fire Code Chapter 1, Section 104. The fire inspection fee shall be assessed at the time the inspection is made. The fire chief or their designee shall calculate the inspection fee based on the following formula for each building or occupancy:~~

~~(Square Foot Factor)* multiplied by (Occupancy Factor)** multiplied by (Base Rate)*** = Inspection Fee~~

~~The Square Foot Factor and Occupancy Factor shall be determined by the fire chief, or their designee performing the inspection. The Base Rate shall be set by city council.~~

~~23.11.113.6.8.1 Square Foot Factor~~

~~The *Square Foot Factor shall be determined as follows:~~

~~#0 = Under 1,000 Sq. Ft.~~
~~#1 = 1,000 Sq. Ft. or larger up to;~~
~~#2 = 3,000 Sq. Ft. or larger up to;~~
~~#3 = 10,000 Sq. Ft. or larger up to;~~
~~#4 = 40,000 Sq. Ft. or larger up to;~~
~~#5 = 80,000 Sq. Ft. or larger up to;~~
~~#6 = 100,000 Sq. Ft. or larger.~~

~~23.11.113.6.8.1.1 Covered Mall Buildings~~

~~The square footage for *Covered Mall Buildings* shall not include *anchor buildings,* which will be assessed separately. *For Covered Mall Building* 500,000 sq. ft or larger the square footage factor shall be as follows:~~

~~#7= 500,000 Sq. Ft. or larger up to;~~
~~#8 = 750,000 Sq. Ft. or larger up to;~~
~~#9 = 1,000,000 Sq. Ft. or larger.~~

~~23.11.113.6.8.2 Occupancy Factor~~

~~The ** Degree of Difficulty Occupancy Factor shall be determined as follows:~~

~~.1 *Group R* Townhomes & single-story *Group S* self-storage warehouses.~~

~~.3 Group R Buildings not exceeding 3 stories in height; Group S Self-storage warehouses not exceeding 3 stories in height~~

~~1.0 All buildings or portions of buildings classified as Group B, M, R (not to include Group R Division 3) and U occupancies.~~

~~2.0 All buildings or portions of buildings classified as Group A, E, S or LC occupancies.~~

~~3.0 All buildings classified as high-rise buildings; all covered mall buildings not to include anchor buildings; all buildings or portions of buildings classified as Group F, H or I occupancies.~~

~~23.11.113.6.8.2.1 High-Rise Buildings with common podiums~~

When multiple High-Rise buildings are located above a common podium, the associated parking garage and podium areas shall be assigned an occupancy factor of 2 and treated as one building.

23.11.113.6.8.2.2 Mixed Occupancy Buildings

All occupancy classifications are in accordance with the International Building Code (IBC) as amended by Chapter 51-50 WAC. Mixed occupancy buildings shall be classified for the purpose of the occupancy factor based upon the predominate occupancy of the building by square footage.

23.11.113.6.8.3 Base Rate

*** Base Rate = $180.00 commencing January 1, 2020.

23.11.113.6.9 Maximum Fee

Where multiple buildings have a single owner and comprise a single complex, the maximum fee for a single complex containing *Group E or R occupancies* that do not exceed 4 stories in height shall be $3,240.00

23.11.113.6.10 Exemptions from inspection fee.

Buildings owned by nonprofit organizations exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code, buildings owned by the federal government, and buildings less than 1,000 square feet are exempt from the fire inspection fees established in BCC 23.11.113.6.8. This exemption does not apply to nonprofit organizations when a majority of the building is occupied by tenants not exempt from federal income tax under Section 501 (c)(3).

23.11.113.6.11 Reinspection and special inspections.

The fire inspection fee shall cover the initial inspection and one follow-up visit, if necessary, to determine correction of any violations. Any additional follow-up inspections necessitated by noncompliance or inspections for which no fee is specifically indicated, shall be assessed a fee at the time of the inspection and at the rates established in BCC 23.11.113.6.4.

23.11.113.6.12 Adjustment to base rate.

The base rate used in BCC 23.11.113.6.8.3 shall be set by city council and reviewed in 2020 and every two years thereafter, or as otherwise necessary, to accomplish cost recovery for the fire inspection program. The base rate shall be adjusted to account for inflation, additional commercial and multifamily square footage subject to fire inspection which has been added within the city, and additional fire inspection resources or personnel necessary to perform fire inspections on a regular basis.

~~23.11.113.6.13 Inspection fee – Payment obligation.~~

~~The obligation to pay the fee assessed pursuant to BCC 23.11.113.6.8 or 23.11.113.6.11 shall be the responsibility of the building or complex owner.~~

~~23.11.113.6.14 Inspection fee – Collection procedure.~~

~~The fees established in BCC 23.11.113.6.8 and 23.11.113.6.11 shall be billed to the party responsible. All balances 30 days or greater past the date of original assessment shall incur late charges pursuant to BCC 23.11.113.6.7.~~

~~The director of finance and asset management, or their designee, may use any lawful means to collect the balance or write off the obligation.~~

23.11.202 International Fire Code Section 202 amended – Definitions.

Section 202 of the International Fire Code is hereby amended to include the following additional definitions:

High-rise Building. Buildings having occupied floors or occupied roof located more than 75 feet (22,860 mm) above the lowest level of fire department vehicle access.

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 equipped with overcurrent protections

Public Safety Radio System Operator. Eastside Public Safety Communications Agency (EPSCA), its successor agency – Puget Sound Emergency Radio Network (PSERN) and any future successor agency.

~~STANDBY POWER SYSTEM~~ Standby Power System. All references to Standby Power System shall be considered to indicate Legally Required Power in accordance with the Washington Cities Electrical Code, and NFPA 70 (National Electrical Code), and shall be in accordance with Chapter 27 Legally Required Standby Power, as a source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Water Supply. The source and delivery system supplying the required flow (gpm) and pressure (psi) to a sprinkler system or other fire protection system/equipment.

23.11.304.1.2 International Fire Code Section 304.1.2 amended – Vegetation

Section 304.1.2 of the International Fire Code is hereby amended to read as follows:

Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the *owner* or occupant on building lots that are either open or contain an occupied or vacant dwelling.

Point of Information

Refer to Public Information Sheet F-14 for additional information

23.11.307~~.1.1~~ International Fire Code Section 307~~.1.1~~ amended – Open Burning, Recreational Fires and Portable Outdoor Fireplaces

Section 307~~.1.1~~ of the International Fire Code is hereby amended to read as follows:

~~307.1.1 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.~~

307.1 General. A person shall not kindle or maintain or authorize to be kindled or maintained any fire unless conducted in accordance with Sections 307.1.1. through 307.8

307.1.1 Prohibited open burning.

Open burning shall be prohibited at all times in compliance with a permanent ban on open burning established by the Puget Sound Clean Air Agency in September of 1992.

Exceptions:

1. Bonfires
2. Recreational Fires
3. Portable outdoor fireplaces

307.2 Permit required.

A permit shall be obtained from the *fire code official* in accordance with Section 105.6 prior to conducting a bonfire. Application for such approval shall only be presented by and permit issued to the owner of the land upon which the bonfire is to be conducted.

A permit is not required for a recreational fire or portable outdoor fireplace.

307.3. Bans on fires due to air quality or fire danger.

If the Puget Sound Clean Air Agency issues a burn ban due to air quality, or if a fire safety burn ban is issued by the Bellevue Fire Marshal, all fires are prohibited. It is the

responsibility of the property owner where the fire is to be conducted to ensure no such ban exists prior to starting any fire.

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) 343-8800.

307.4 Extinguishment authority.

When any fire creates or adds to a hazardous situation, or a required permit has not been obtained, the *fire code official* is authorized to order the extinguishment of the fire.

307.5 Location.

The location for fires shall be as follows:

307.5.1 Bonfires.

A bonfire shall not be conducted within 50 feet (15 240 mm) of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions which could cause a fire to spread within 50 feet (15 240 mm) of a structure shall be eliminated prior to ignition.

307.5.2 Recreational fires.

Recreational fires shall not be conducted within 25 feet (7620 mm) of a structure or combustible material. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition. [WS] See also Chapter 173-425 WAC

307.5.3 Portable outdoor fireplaces.

Portable outdoor fireplaces shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet (3048 mm) of a structure or combustible material.

~~Exception: Portable outdoor fireplaces used at one- and two-family dwellings.~~

307.6 Attendance.

Bonfires, recreational fires and use of portable outdoor fireplaces shall be constantly attended until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other *approved* on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

307.8 LPG containers.

Portable outdoor barbecues used on occupied roofs of Group R-2 occupancies shall be limited to portable outdoor barbecues designed for use with LPG containers with a capacity of 16.4 ounces (0.465 kg).

307.8.1 Cleaning.

Portable outdoor barbecues shall be periodically cleaned by removing grease or fat accumulations from grills and in trays below the grill.

23.11.315.3.2.1 International Fire Code Section 315.3.2.1 added – Storage under stairways.

Section 315.3.2 of the International Fire Code is hereby amended by the addition of a new subsection 315.3.2.1 to read as follows:

315.3.2.1 Storage under stairways. Storage is prohibited under exit stairways.

Exception: Enclosures under stairways in accordance with Sections 1011.7.3 or 1011.7.4 as applicable.

~~23.11.319 International Fire Code Section 319 added~~

~~23.11.319 International Fire Code Section 319 added – Fixed guideway transit and passenger rail systems.~~

~~Chapter 3 of the International Fire Code is hereby amended by the addition of a new Section 319 to read as follows:~~

~~SECTION 319~~

~~FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS~~

~~319.1 Fixed guideway transit and passenger rail systems. Fixed guideway transit and passenger rail systems shall be in accordance with NFPA 130 as amended in Chapter 23.85 BCC.~~

23.11.320 International Fire Code Section 320 added – Road tunnels, bridges and other limited access highways.

Chapter 3 of the International Fire Code is hereby amended by the addition of a new Section 320 to read as follows:

SECTION 320

ROAD TUNNELS, BRIDGES AND OTHER LIMITED ACCESS HIGHWAYS

320.1 Road tunnels, bridges and other limited access highways. Road tunnels, bridges, and other limited access highways shall be in accordance with NFPA 502.

~~23.11.321 International Fire Code Section 321 added – Mobile food vending.~~

~~Chapter 3 of the International Fire Code is hereby amended by the addition of a new Section 321 to read as follows:~~

~~Section 321~~

~~Mobile Food Vending~~

~~321.1 Egress and Emergency Access. Mobile food vending vehicles, trucks, trailers, carts or the like shall not obstruct or interfere with fire lanes, fire department connections, fire hydrants or egress from any building.~~

~~321.2 Fire Protection Systems~~

~~321.2.1 Fire Extinguishers. Portable fire extinguishers are required for all mobile food vendor operations. All fire extinguishers shall be maintained and inspected on an annual basis and the pressure gauge reading or indicator shall be in the operable range or position. A fire extinguisher (having a minimum size of 2-A: 10-B:C classification) will be required in addition to any Class K extinguisher. If deep fat fryers are used operators shall have and maintain a Class K portable fire extinguisher.~~

~~All fire extinguishing systems shall be inspected by a certified fire protection company every 6 months.~~

~~321.2.2 Type I Hood. All Mobile Food Trucks that have any commercial cooking equipment producing grease laden vapors shall be required to have a Type I hood which must be serviced and inspected every 6 months or less.~~

~~321.3 Propane (LPG)~~

~~321.3.1 LP vessels shall be affixed and secure to the portable food service platform in a manner that provides a reasonable expectation of security while parked or in transit. All applicable DOT regulations shall be followed.~~

~~321.3.2 LP-gas shall not be used for the purpose of operating devices or equipment unless such device or equipment is *approved* for use with LP-gas.~~

~~321.3.3 Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made ineffective. All LP-gas supply hoses shall be inspected by the operator for tight-fitting connections.~~

~~321.4 Portable Generators~~

~~320.4.1 Portable generators and other internal combustion power sources shall not be located within 20' of Mobile Food Vending while in operation, and shall be isolated from contact with the public by fencing, enclosure or other *approved* means.~~

~~Exception: Portable generators not exceeding 6,500 watts when located in an area not readily accessible to the public.~~

~~321.4.2 Portable generators and other combustion power sources shall not be refueled while the generator or other internal combustion power source is operating.~~

~~321.5 Inspections. The *Fire code official* is authorized to conduct such inspections as deemed necessary to determine the extent of compliance with the provisions of the Code.~~

23.11.401.9 International Fire Code Section 401.9 added – Evacuation required.

Section 401 of the International Fire Code is hereby amended by the addition of a new subsection 401.9 to read as follows:

401.9 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.

Section 503.1 of the International Fire Code is hereby amended to read as follows:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3 and the City of Bellevue Transportation Department Design Standards and Manual.

503.1.1 Buildings and facilities. *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

Exceptions: The *fire code official* is authorized to increase the distance:

1. Up to 200 feet where the building is equipped throughout with an *approved* automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

2. Where fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.

   Alternate means may include installation of stairs that extend to the roof, sprinkler system, fire alarm system, standpipes, smoke control system, ready access to fire service elevators and others (sometimes in combination) to mitigate the additional access distance.

3. There are not more than two Group R-3 or Group U occupancies.

503.1.2 Additional access. The *fire code official* is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

503.1.3 High-piled storage. Fire department vehicle access to buildings used for high-piled combustible storage shall comply with the applicable provisions of Chapter 32.

23.11.503.2 International Fire Code Section 503.2 amended – Specifications.

Section 503.2 of the International Fire Code is hereby amended to read as follows:

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.8, and the City of Bellevue Transportation Department Design Standards and Manual.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6,096 mm), exclusive of shoulders, except as modified in the City of Bellevue Transportation Department Design Standards and Manual, and an unobstructed vertical clearance of not less than 13 ft. 6 in.

Exceptions:

1. Access roads serving not more than two Group R-3 or U occupancies shall have an unobstructed width of not less than 16 feet.

2. Public streets shall be in accordance with the City of Bellevue Transportation Department Design Standards and Manual.

3. When all structures served by the fire apparatus access roads are equipped with *approved* automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 the *fire code official* may approve reduced widths.

503.2.2 Authority. The *fire code official* shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities.

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be 28 feet minimum inside curb and 48 feet minimum outside curb.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45,720 mm) in length shall be provided with a turnaround in accordance with the City of Bellevue Transportation Department Design Standards and Manual.

Exception: The *fire code official* is authorized to increase the length up to 300 feet (45,720 mm) for driveways serving only one Group R-3 occupancy.

503.2.6 Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with the City of Bellevue Transportation Department Design Standards and Manual. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the *fire code official*. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, *approved* barriers, *approved* signs or both shall be installed and maintained when required by the *fire code official*.

503.2.7 Grade. The grade of the fire apparatus access road shall be in accordance with the City of Bellevue Transportation Department Design Standards and Manual. Access roads, including public and private roads and driveways shall comply with the following.

1. The grade of access for non-sprinklered properties shall not exceed 12%.

2. The grade of access for sprinklered properties shall not exceed 15%.

3. All grades of access in excess of 15% require approval by the fire department.

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be in accordance with the City of Bellevue Transportation Department Design Standards and Manual.

23.11.503.3 International Fire Code Section 503.3 amended – Markings.

Section 503.3 of the International Fire Code is hereby amended to read as follows:

503.3 Marking. Where required by the *fire code official* fire apparatus access roads shall be marked as follows:

1. FIRE LANE – NO PARKING Signs shall be mounted a minimum of 7' from bottom of the sign to the street or sidewalk. Signs must be a type “R8-31” or equivalent reflective sign no less than 12" x 18" in size, with a white background and the wording “No Parking Fire Lane” in red letters. When in a straight line of sight, these signs shall be no further than one hundred fifty feet (150') apart. This distance may be reduced when curves, corners, or other adverse sighting conditions restrict the line of sight.

2. Curbs along designated Fire Department Access Roads (Fire Lanes) shall also be painted red. This shall include both the vertical and horizontal portions of the curb. Minimum three-inch (3") white lettering which shall read: NO PARKING – FIRE LANE, shall be placed every fifty feet (50') or portion thereof on the vertical portion of the curb. The entire curb length shall be painted. If there are rolled curbs or no curbs, stenciling shall be placed on pavement.

   Where no curbs exists, stenciling shall be placed on the pavement with minimum 10" white block lettering on continuous 16" red background to read NO PARKING FIRE LANE at 50 foot intervals.

   Exception: Variations to Fire Lanes markings may be *approved* when in the opinion of the *Fire code official* the proposed signage and markings achieve the same outcome. The Fire Chief retains the right to revoke the variations for cause.

Point of Information
See Public Information Sheet F-11 for additional information (http://www.bellevuewa.gov/pdf/Fire/F-11_FireLanes.pdf).

23.11.503.4 International Fire Code Section 503.4 amended – Obstruction of fire apparatus access roads.

Section 503.4 of the International Fire Code is hereby amended to read as follows:

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including 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 503.5 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~~ violation. 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~~ violation. ~~to which the provisions of Chapter 7.80 RCW shall apply.~~ The monetary 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 the same as for a class 1 civil infraction pursuant to the provisions of Chapter 7.80 RCW ~~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 or her 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.

23.11.503.6 International Fire Code Section 503.6 amended – Security gates.

Section 503.6 of the International Fire Code is hereby amended to read as follows:

503.6 Security gates, Bollards or other Obstructions. The installation of security gates, bollards or other obstructions across a fire apparatus access road shall be reviewed and *approved* by the *fire code official*. The use of directional-limiting devices (tire spikes) is prohibited. Where security gates, bollards or other obstructions are installed, they shall have an *approved* means of emergency operation. The security gates, bollards or other obstruction and the emergency operation shall be maintained operational at all times.

Electric gate operators, where provided, shall be listed in accordance with UL 325.

Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200 and must be equipped with Click 2 Enter or other authorized equipment that allows for operation of the gate by Fire & Police personnel from their vehicle.

Exception: Single family residential buildings located 50' or less from edge of curb when access is provided via a Knox Box.

Gates shall be at a minimum as wide as the required access road width. Gates, bollards or other obstructions on commercial properties must be set back 30 ft. from roadway edge of pavement. Where a fence is provided on each side of a gate for a commercial property, a man door shall be provided at an *approved* location with a Knox key for access to the man door.

Exception: Automated gates equipped with Click 2 Enter or other authorized equipment that allows for operation of the gate by Fire and Police personnel from their vehicle are not required to be set back 30 ft. from the roadway edge of pavement provided the roadway is not an arterial, residential collector street or a street with lane markers.

23.11.504.4 International Fire Code Section 504.4 added – Buildings with enclosed interior courtyards.

Section 504 of the International Fire Code is hereby amended by the addition of a new subsection 504.4 to read as follows:

504.4. Buildings with enclosed interior courtyards. New buildings with enclosed interior courtyards shall have a straight/direct access corridor and/or stairway from the exterior to the courtyard at a location acceptable to the *fire code official*. If a stairway is used it shall comply with International Fire Code Section 1011 and a corridor shall comply with International Fire Code Section 1020. The access shall have a minimum width of 4 feet, (or as directed by the *fire code official*) and be large enough to carry a 35-foot-long sectional ladder (minimum folded length 20 feet) directly from the exterior to the courtyard without obstructions. The access door shall be marked at the street as "Direct access to courtyard".

23.11.505 International Fire Code Section 505 amended – Premises Identification.

Section 505 of the International Fire Code is hereby amended to read as follows:

505.1 Address identification. New and existing buildings shall be provided with *approved* address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of

1/2 inch (12.7 mm). Where required by the *fire code official*, address identification shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

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

Streets and addresses to include floor numbers and unit/suite numbers shall be in accordance with Bellevue City Code 14.02 and any associated policy as currently exists or hereafter amended.

23.11.507.1 International Fire Code Section 507.1 amended – Required water supply.

Section 507.1 of the International Fire Code is hereby amended to read as follows:

507.1 Required Water Supply. An *approved* water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

All underground piping shall be designed, constructed and installed in accordance with NFPA 24 for Private fire service mains and NFPA 13 for water-based fire protection systems. In addition to the requirements of these standards, two forms of joint restraint shall be used.

Exception: Underground piping that is threaded, welded, heatfused or utilizes chemical or solvent cemented connections provided that such joints can pass the hydrostatic test without shifting of the piping.

Point of Information

Piping systems under the control of the Bellevue Utilities Department shall be installed in accordance with the Bellevue Utilities Engineering Standard.

23.11.507.3 International Fire Code Section 507.3 amended – Fire flow.

Section 507.3 of the International Fire Code is hereby amended to read as follows:

507.3 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*.

[WS] Exception: Fire flow is not required for structures under 500 square feet with a B, U or R-1 occupancy where structures are a least 30 feet from an other structure and are used only for recreation.

Point of Information

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

23.11.507.5.1 International Fire Code Section 507.5.1 amended – Where required.

Section 507.5.1 of the International Fire Code is hereby amended to read as follows:

507.5.1 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*.

Exception: For Group R-3 and U occupancies equipped throughout with an *approved* automatic sprinkler system installed in accordance with International Fire Code Section 903.3.1.3, the distance requirement shall be 600 feet.

23.11.507.5.3 International Fire Code Section 507.5.3 amended – Private fire service mains and water tanks.

Section 507.5.3 of the International Fire Code is hereby amended to read as follows:

507.5.3 Private fire service mains and water tanks. Private fire service mains and water tanks shall be periodically inspected, tested and maintained in accordance with NFPA 25 at the following intervals:

1. Private fire hydrants (all types): Inspection annually and after each operation; flow test and maintenance annually. Property owners with private hydrants are responsible to obtain annual, satisfactory inspection of their private hydrant(s) from a qualified inspector. Inspection procedures and forms for inspection by the City or others are set by the *fire code official*. The fire official may order additional inspections as he deems necessary.

2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.

3. Fire service main piping strainers: Inspection and maintenance after each use.

507.5.3.1 Private Hydrants – Use

1. Fire hydrant protection may be provided by private fire hydrants.

2. No person may open, damage, interfere with, or otherwise use a private hydrant, except in a manner and subject to such conditions as the fire official may require.

507.5.3.2 Private Hydrants – regulations. The *fire code official*, with the assistance of the City of Bellevue Utilities Department, is authorized to establish regulations and design standards for private hydrants. These officials have the authority to interpret and apply the regulations and standards and to make rulings and orders consistent with the purpose of this chapter.

Point of Information

Hydrants shall be 5 1/4" M.V.O. Hydrant with 2-2 1/2 N.S.T. and 1-4" Pumper Ports, City of Seattle Standard Thread – M.J. Inlet with lugs, brass to brass sub-seat. (Ref.: http://www.bellevuewa.gov/pdf/Utilities/2016_W-13.pdf).

507.5.3.3 Private Hydrants – Inspection reports. Inspection reports of private hydrants must be submitted to www.TheComplianceEngine.com within five working days of the date of inspection by the servicing inspector.

507.5.3.4 Private Hydrants – damage – malfunction. Property owners, their agents and tenants with private hydrants shall immediately contact the fire department in the event a private hydrant is damaged, malfunctions, or is otherwise out of order. “Immediately” means not more than forty-eight hours after a problem is noticed or should have been noticed in the exercise of reasonable care.

507.5.3.5 Private Hydrants – maintenance and repair. All maintenance and repair of private hydrants shall be solely the responsibility of the property owner. Obligations imposed upon property owners apply also to their managers and other authorized agents.

507.5.3.6 Private hydrants – access. Roads and access to the fire hydrant must be provided in accordance with International Fire Code Sections 503 and 507.

23.11.508.1.2 International Fire Code Section 508.1.2 amended – Separations and penetrations.

Section 508.1.2 of the International Fire Code is hereby amended to read as follows:

508.1.2 Separation & Penetrations. Fire command center shall be separated from the remainder of the building by not less than a 2-hr. fire barrier constructed in accordance

with section 707 of the International Building Code (IBC) or horizontal assembly constructed in accordance with section 711 of the IBC, or both.

Penetrations into and openings through a fire command center are prohibited except for required exit doors, equipment and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, electrical raceway for fire department communication and control and electrical raceway serving the fire command center or being controlled from the fire command center. Such penetrations shall be protected in accordance with International Building Code Section 714.

Exception: Metallic piping, with no joints or openings within the fire command center, is allowed if penetrations are protected in accordance with Section 714.

23.11.510 International Fire Code Section 510 amended – Emergency Responder Radio Coverage.

Section 510 of the International Fire Code is hereby amended to read as follows:

510.1 Emergency responder radio coverage in new buildings. *Approved* radio coverage for emergency responders shall be provided within ~~the~~ buildings that meet any one of the following conditions:

1. High rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more; or
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge.
5. Buildings or structures where the Fire or Police Chief determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

The radio coverage system shall be installed in accordance with Sections 510.4 through 510.5.5 of this code and with the provisions of NFPA 1221 (2019). This section shall not require improvement of the existing public safety communication systems.

Point of Information

When determining if the minimum signal strength referenced 510.4.1.1 exists at a subject building, the signal strength shall be measured at any point on the exterior of the building up to the highest point on the roof.

Exceptions:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the building in accordance with Section 510.4.1 without the use of a radio coverage system.
2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the *fire code official* shall have the authority to accept an automatically activated emergency responder radio coverage system.
3. One- and two-family dwellings and townhouses.
4. Subject to the approval of the fire code official, buildings other than high-rise buildings, colleges, universities and buildings primarily occupied by Group E or I occupancies that have completed a Mobile Emergency Responder Radio Coverage application and submitted payment as outlined in the application.

510.1.1 Occupancy**.** It shall be unlawful to occupy any portion of a building or structure until Emergency Responder Radio Coverage have been tested and *approved* in accordance with the provisions of Section 510.

510.2 Emergency responder radio coverage in existing buildings.

Existing buildings shall have *approved* radio coverage for emergency responders as required in Chapter 11.

510.3 Permit required.

A construction permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required as specified in Section 105.7.6. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Point of Information

Prior coordination and approval from the Public Safety Radio System Operator is required before installation of an Emergency Responder Radio System. Until 2022, such approval is required from EPSCA, King County, Seattle or ValleyCom depending on the location of the installation. In 2022 PSERN will be the single operator of a county wide system.

In order to be forward compatible, designers and contractors should be aware of PSERN's requirements for Distributed Antenna Systems which can be found via https://psern.org/requirements/

510.4 Technical requirements.

Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.8.

510.4.1 Emergency responder communication enhancement system signal strength. The building shall be considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections 510.4.1.1 through 510.4.1.3.

Exception: Critical areas, such as the fire command center(s), the fire pump room(s), interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas required by the *fire code official*, shall be provided with 99 percent floor area radio coverage.

[W]510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the *fire code official*. The inbound signal level shall be a minimum of -95dBm in 95% of the coverage area and 99% in critical areas and sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.

510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the *fire code official*. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals. A minimum signal strength of -95 dBm shall be received by the King County Regional 800 MHz Radio System when transmitted from within the building.

510.4.1.3 System performance. Signal strength shall be sufficient to meet the requirements of the applications being utilized by public safety for emergency operations through the coverage area as specified by the Public Safety Radio System Operator in Section 510.4.2.2.

510.4.2 System design.

The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221 (2019).

510.4.2.1 Amplification systems and components. Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in Sections 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be allowed by the radio system manager. Prior to installation, all

RF-emitting devices shall have the certification of the radio licensing authority and be suitable for public safety use.

510.4.2.2 Technical criteria. The Public Safety Radio System Operator shall provide the various frequencies required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design upon request by the building owner or owner's representative.

510.4.2.3 Power supply sources. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating the emergency responder radio coverage system at 100-percent system capacity for a duration of not less than 12 hours.

[W]510.4.2.4 Signal booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4, IP66-type waterproof cabinet or equivalent.

   Exception: Listed battery systems that are contained in integrated battery cabinets.

2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher-rated cabinet, IP65-type waterproof cabinet or equivalent.

3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use prior to installation.

4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB greater than the system gain under all operating conditions.

5. Bi-Directional Amplifiers (BDAs) used in emergency responder radio coverage systems shall be fitted with anti-oscillation circuitry and per-channel AGC.

6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and *approved* by the Public Safety Radio System Operator.

7. Unless otherwise *approved* by the Public Safety Radio System Operator, only channelized signal boosters shall be permitted.

Exception: Broadband BDA's may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.

Point of Information

BDA's must also comply with PSERN's (www.psern.org/requirements) detailed requirements, which include channelized, minimum of 28 channels, supporting analog, P25 Phase I (FDMA), and P25 Phase II (TDMA).

510.4.2.5 System monitoring. The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 72. The following conditions shall be separately annunciated by the fire alarm system, or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:

1. Loss of normal AC power supply.
2. System battery charger(s) failure.
3. Malfunction of the donor antenna(s).
4. Failure of active RF-emitting device(s).
5. Low-battery capacity at 70-percent reduction of operating capacity.
6. Active system component malfunction.
7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system.

510.4.2.6 Additional frequencies and change of frequencies.

The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority.

510.4.2.7 Design documents.

The *fire code official* shall have the authority to require "as-built" design documents and specifications for emergency responder communications coverage systems. The documents shall be in a format acceptable to the *fire code official*.

510.4.2.8 Radio communication antenna density.

Systems shall be engineered to minimize the near-far effect. Radio enhancement system designs shall include sufficient antenna density to address reduced gain conditions.

Exceptions:

1. Class A narrow band signal booster devices with independent AGC/ALC circuits per channel.
2. Systems where all portable devices within the same band use active power control

[W]510.5 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with NFPA 1221 (2019) and Sections 510.5.1 through 510.5.7.

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Public Safety Radio System Operator.

510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio telephone operators license.
2. Certification of in-building system training issued by an *approved* organization or *approved* school, or a certificate issued by the manufacturer of the equipment being installed.

510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is in accordance with Section 510.4.1. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6,400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed for a test area.
2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in Section 510.5.3(1), and including signal strengths and frequencies for each test area. Indicate all critical areas.

3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment *approved* by the *fire code official*. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by section 510.5.3(2): each grid square on each floor; between each critical area and a radio outside the building; between each critical area and the fire command center or fire alarm control panel; between each landing in each stairwell and the fire command center or fire alarm control panel.

4. Failure of more than 5% of the test areas on any floor shall result in failure of the test.

   Exception: Critical areas shall be provided with 99 percent floor area coverage.

5. In the event that two of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95-percent coverage requirement.

6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.

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

8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.

9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously conducting subjective voice quality checks. One portable radio shall be positioned not greater than 10 feet (3048 mm) from the

indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in Sections 510.4.1.1 and 510.4.1.2.

10. Documentation maintained on premises. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the building engineer's office. The records shall be available to the *fire code official* and maintained by the building owner for the life of the system:

    a. A certification letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.
    b. The grid square diagram created as part of testing in Sections 510.5.3(2) and 510.5.3(3).
    c. Data sheets and/or manufacturer specifications for the emergency responder radio coverage system equipment; back up battery; and charging system (if utilized).
    d. A diagram showing device locations and wiring schematic,
    e. A copy of the electrical permit.

11. Acceptance test reporting to *fire code official*. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall submit to the *fire code official* a report of the acceptance test by way of the department's third-party vendor thecomplianceengine.com.

510.5.4 FCC compliance.

The emergency responder radio coverage system installation and components shall comply with all applicable federal regulations including, but not limited to, FCC 47 CFR Part 90.219.

[WS] 510.5.5 Mounting of the donor antenna (s). To maintain proper alignment with the system designed donor site, donor antennas shall be permanently affixed on the highest possible position on the building or where *approved* by the *fire code official*. A clearly visible sign shall be placed near the antenna stating, "movement or repositioning of this antenna is prohibited without approval from the *fire code official*." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.

510.5.6 Wiring. The backbone, antenna distribution, radiating, or any fiber-optic cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating, or copper cables using hybrid coupler devices of a value determined by the overall design. Backbone cables shall be routed through an enclosure that matches the building's required fire-resistance rating for shafts or interior exit stairways. The connection between the backbone cable and the antenna cables shall be made within an enclosure that matches the building's fire-resistance rating for shafts or interior exit stairways, and passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration per the International Building Code.

510.5.7 Identification Signs. Emergency responder radio coverage systems shall be identified by an *approved* sign located on or near the Fire Alarm Control Panel or other *approved* location stating "This building is equipped with an Emergency Responder Radio Coverage System. Control Equipment located in room (insert information provided by owner)".

A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components.

510.6 Maintenance.

The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1through 510.6.4~~4~~7.

[WS]510.6.1 Testing and proof of compliance. The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following items (1) through (7):

1. In-building coverage test as required by the *fire code official* as described in Section 510.5.3 "Acceptance test procedure" or 510.6.1.1 "Alternative in-building coverage test".

   Exception: Group R Occupancy annual testing is not required within dwelling units.

2. Signal boosters shall be tested to verify that the gain/output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system.

3. Backup batteries and power supplies shall be tested under load of a period of ~~1~~ 2 hours to verify that they will properly operate during an actual power outage. If within the ~~1~~ 2-hour test period the battery exhibits symptoms of failure, the test

shall be extended for additional 1-hour periods until the integrity of the battery can be determined.

4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in Section 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in Section 510.5.2 are sufficient for the personnel performing this testing.

5. Other active components shall be checked to verify operation within the manufacturer's specifications.

6. At the conclusion of the testing, a report, which shall verify compliance with Section 510.6.1, shall be submitted to the *fire code official* by way of the department's third-party vendor thecomplianceengine.com

7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical area shall be added to the documentation maintained on the premises in accordance with Section 510.5.3.

510.6.1.1 Alternative In-building coverage test. When the comprehensive test documentation required by Section 510.5.3 is available, or the most recent full five-year test results are available if the system is older than six years, the in-building coverage test required by the *fire code official* in Section 510.6.1(1), may be conducted as follows:

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment *approved* by the *fire code official*. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; between the fire alarm control panel and each landing in each stairwell.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

   (a) Three grid areas per floor. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent; and

   (b) Each of the critical areas identified in acceptance test documentation required by Section 510.5.3, or as modified by the *fire code official*, and

   (c) One grid square per serving antenna.

3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test, or as modified by the *fire code official*. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in Critical Areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the *fire code official*, the radio coverage verification testing described in 510.5.3 shall be conducted.

Point of Information

The alternative in-building coverage test provides an alternative testing protocol for the in-building coverage test in subsection (1) of section 510.6.1. There is no change or alternative to annual testing requirements enumerated in subsections (2) – (7) of Section 510.6.1, which must be performed at the time of each annual test.

510.6.2 Additional frequencies.

The building owner shall modify or expand the emergency responder radio coverage system at his or her expense in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC public safety radio system operator or FCC license holder. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

510.6.3 Nonpublic safety system.

Where other nonpublic safety amplification systems installed in buildings reduce the performance or cause interference with the emergency responder communications coverage system, the nonpublic safety amplification system shall be corrected or removed.

510.6.4 Field testing.

Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that due to malfunction or poor maintenance has the potential to impact the emergency responder radio system in the region.

<u>23.11.602 International Fire Code Section 602 amended – Definitions</u>

<u>Section 602 of the International Fire Code is hereby amended as follows:</u>

SECTION 602
DEFINITIONS

602.1 Definitions. The following terms are defined in Chapter 2:

COMMERCIAL COOKING APPLIANCES.
CRITICAL CIRCUIT.
HOOD.
Type I.
Type II.
Power Tap
REFRIGERANT.
REFRIGERATING (REFRIGERATION) SYSTEM.

~~23.11.604.1 International Fire Code Section 604.1 amended – Emergency and standby power systems.~~

~~Section 604.1 of the International Fire Code is hereby amended as follows:~~

~~604.1 General. Emergency power systems and standby power systems required by this code shall comply with International Building Code chapter 27 as amended by the City of Bellevue.~~

~~23.11.605.3~~ 23.11.604.3 International Fire Code Section ~~605.3~~ 604.3 amended – Working space and clearance.

Section ~~605.3~~ 604.3 of the International Fire Code is hereby amended as follows:

~~605.3~~ 604.3 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 (1,981 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~~ 23.11.604.4 International Fire Code Section ~~605.4~~ 604.4 amended – Multiplug adapters.

Section ~~605.4~~ 604.4 of the International Fire Code is hereby amended as follows:

~~605.4~~ 604.4 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~~ 23.11.604.9 International Fire Code Section ~~605.9~~ 604.9 amended – Temporary wiring.

Section ~~605.9~~ 604.9 of the International Fire Code is hereby amended as follows:

~~605.9~~ 604.9 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~~ 23.11.605.16 International Fire Code Section ~~606.16~~ 605.16 amended – Electrical equipment.

Section ~~606.16~~ 605.16 of the International Fire Code is hereby amended as follows:

~~606.16~~ 605.16 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 ~~NFPA 70~~ the electrical code as adopted by the City.

Exceptions:

1. Ammonia machinery rooms that are provided with ventilation in accordance with Section 1106.3 of the *International Mechanical Code*
2. Machinery rooms for systems containing Group A2L *refrigerants that are provided with ventilation in accordance with Section 605.17*

23.11.606.9 International Fire Code Section 606.9 added – Elevator Maintenance

Section 606 of the International Fire Code is hereby amended with a new Section 606.9 to read as follows:

606.9 Duty of building operators to repair elevator and give notice.

Any owner or lessor of the entirety of a building subject to this chapter, or any agent thereof with the responsibility for managing such building (hereafter "building operator") shall ensure that the elevator is accessible, usable and in good working order at all times.

606.9.1 Communication

Whenever an elevator is out of service, the building operator shall provide notice to all occupants in the building via text, e-mail, or phone call as well as a written notice posted on or adjacent to the elevator on each floor. The notice shall contain at least the following information:

1. The anticipated date and time that elevator service will resume;
2. Accommodations available for occupants that are dependent on elevator; and
3. Contact information if occupants have any questions.

Exception: Non-residential buildings may limit the notice to a written notice posted with the above information on or adjacent to the elevator on each floor.

606.9.2 Residential Buildings Served by a Single Elevator Level of Service

Buildings served by a single elevator shall maintain a full-service maintenance contract with a Washington State Licensed Elevator Company that provides the industries' highest-level service.

606.9.3 Accommodations for Residential Buildings Served by a Single Elevator

Residential building served by a single elevator shall maintain a plan to address out of service conditions for mobility impaired occupants at no cost to the occupant. Such plan shall include at least the following elements:

1. Transportation in and out of the building. Building operators shall maintain a list of companies qualified to transport mobility impaired individuals in and out of the building up to once per day at no expense to the individual when elevator is out of service for up to 24 hours.
2. Alternate housing. When the elevator is out of service for longer than 72 hours, the building operator shall provide upon request alternative housing for any person residing in the building who needs to use the elevator to gain access to or egress from his or her unit because of such person's impaired ability to climb stairs as a result of such person's physical disability, medical condition, infirmity, illness or other disability. Such alternative housing shall be decent, safe, sanitary and provide reasonable accommodation for the persons disability. Any alternate housing shall be provided at the building operator's expense. The duty to provide alternative housing shall not arise if the building operator is prevented from repairing the elevator within seventy-two hours or any time thereafter due to a natural disaster or an act of God.

606.9.4 Failure to timely repair--Civil remedies.

A. Where the failure to timely repair an elevator or to provide alternative housing, as required by Section 606.9 results in any person residing in the building having substantially restricted access to or egress from his or her unit because of such person's impaired ability to climb stairs as a result of such person's physical disability, medical condition, infirmity, illness or other similar circumstance, the person whose access to or egress from such building has been substantially restricted as set forth in this subsection may request the City of Bellevue initiate a code compliance investigation. If upon investigation the City of Bellevue determines a building operator has violated a provision of BCC 11.23.606 it may issue a civil violation pursuant to BCC 1.18 and also pursue such other legal remedies as may be appropriate.

606.9.5 Prohibition on retaliation and discrimination in renting.

A. No landlord or building operator may bring or threaten to bring an action to recover possession, cause a tenant to quit the unit involuntarily, serve any notice to quit or notice of termination of tenancy, decrease any services or increase the rent where the landlord's intention is retaliation against the tenant for the tenant's assertion or exercise of rights under this chapter by reason of their disability. Such retaliation shall be a defense to an action to recover possession, or it may serve as a basis for an affirmative suit by the tenant for actual and punitive damages and injunctive relief as may be available through the Human Rights Commission pursuant to RCW 49.60.

B. It shall be illegal for any landlord to refuse to rent to any persons on the grounds that they may assert their rights under this chapter because they require an elevator for access to or egress from the building. Any such claim may be made to the Human Rights Commission pursuant to RCW 49.60.

606.9.6 Remedies cumulative.

The remedies provided by this chapter are in addition to all other remedies available to any party with respect to ensuring accessibility and usability of elevators.

<u>23.11.901.5 International Fire Code Section 901.5 amended – Installation acceptance testing.</u>

<u>Section 901.5 of the International Fire Code is hereby amended to read as follows:</u>

901.5 Installation acceptance testing. Fire detection and alarm systems, emergency alarm systems, gas detection systems, fire-extinguishing systems, firefighter air replenishment system, fire hydrant systems, fire standpipe systems, fire pump systems, private fire service mains and all other *fire protection systems* and appurtenances thereto shall be subject to acceptance tests as contained in the installation standards and as *approved* by the *fire code official*. The *fire code official* shall be notified before any required acceptance testing.

901.5.1 Occupancy**.** It shall be unlawful to occupy any portion of a building or structure until the required fire detection, alarm and suppression systems have been tested and *approved*.

23.11.901.6 International Fire Code Section 901.6 amended – Inspection, Testing and Maintenance.

Section 901.6 of the International Fire Code is hereby amended to read as follows:

901.6 Inspection, testing and maintenance. Fire detection and alarm systems, emergency alarm systems, gas detection systems, fire-extinguishing systems, firefighter air replenishment systems, mechanical smoke exhaust systems and smoke and heat vents shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. Nonrequired *fire protection systems* and equipment shall be inspected, tested and maintained or removed.

23.11.901.6.4 International Fire Code Section 901.6.4 added – Certification

Section 901 of the International Fire Code is hereby amended with a new Section 901.6.4 to read as follows:

Section 901.6.4 Certification. Individuals who install, inspect, test or maintain *fire protection systems* or portable fire extinguishers shall obtain the proper certificate from the *fire code official* in accordance with Administrative Rule 9.01.20 and any future revisions of this rule adopted by the *fire code official*.

[WS] In addition for fire alarm systems, all installation, inspecting, testing, maintenance, and programming not defined as “Electrical Work” by chapter 19.28 RCW shall be completed by a NICET II in fire alarms (effective July 1, 2017)

~~23.11.901.7 International Fire Code Section 901.7 amended – Systems out of service.~~

~~Section 901.7 of the International Fire Code is hereby amended to read as follows:~~

~~901.7 Systems out of service. Where a fire protection system is out of service, the fire department and the *fire code official* shall be notified immediately and, where required by the *fire code official*, the building shall either be evacuated or an *approved* fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service.~~

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

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

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

901.11 Preventable responses to fire alarms – scope. This section shall apply to activation of a fire alarm system resulting in unwarranted 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 un*approved* or incompatible components), programming or maintenance of fire ~~alarm~~ protection 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.

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

1. Any actual fire, explosion or equipment malfunction ~~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.

901.11.1 Fees.

1. Exempt Alarms.

a. The first preventable fire department response to fire alarms from any one system during a calendar year quarter 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~~ Newly installed alarm systems are allowed a grace period of 30 days or up to , ~~the first~~ five preventable ~~responses to fire~~ to debug the system. ~~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 $150.00 shall be charged for the first nonexempt preventable fire department response to a fire alarm during a calendar year quarter from any one system.

b. A fee of $200.00 shall be charged for all subsequent nonexempt preventable fire department responses to a fire alarm from any system during the same ~~a~~ calendar year quarter.

901.11.1.1 Late Charges. All balances 30 days or greater past the invoice date are assessed a late charge of 1%, with a minimum charge of $25 per month.

Point of Information
Preventable responses beyond five in a calendar year quarter are subject to the full cost of the response. See BMC 23.11.102 for further information.

901.11.2. 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 respond as directed by the fire department, within ~~30~~ 5 business 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 and any supporting documentation.

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.

23.11.903.2.11 International Fire Code Section 903.2.11 amended – Specific building areas and hazards.

Section 903.2.11 of the International Fire Code is hereby amended to read as follows:

903.2.11 All occupancies. In all occupancies other than Group U, an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Section 903.2.11.1 through 903.2.11.8.

903.2.11.1 Stories and basements without openings. An automatic sprinkler system shall be installed throughout all stories, including basements, 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 1011 or an outside ramp complying with Section 1012. Openings shall be located in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15,240 mm).

2. Openings entirely above the adjoining ground level totaling at least 20 square feet (1.86 m2) in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15,240 mm). The height of the bottom of the clear opening shall not exceed 44 inches (1,118 mm) measured from the floor.

903.2.11.1.1 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 firefighting or rescue cannot be accomplished from the exterior.

903.2.11.1.2 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.

903.2.11.1.3 Basements. Where any portion of a basement is located more than 75 feet (22,860 mm) from openings required by Section 903.2.11.1, or where new walls, partitions or other obstructions are installed that increase the exit access travel distance to more than 75 feet, the basement shall be equipped throughout with an *approved* automatic sprinkler system.

903.2.11.2 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 shall have additional sprinkler heads installed at alternate floors and at the lowest intake. Where a rubbish chute extends through a building more than one floor below the lowest intake, the extension shall have sprinklers installed that are recessed from the drop area of the chute and protected from freezing in accordance with Section 903.3.1.1. Such sprinklers shall be installed at alternate floors beginning with the second level below the last intake and ending with the floor above the discharge. Chute sprinklers shall be accessible for servicing.

903.2.11.3 Buildings 55 feet or more in height. An automatic sprinkler system shall be installed throughout buildings with a floor level having an occupant load of 30 or more that is located 55 feet (16,764 mm) or more above the lowest level of fire department vehicle access.

903.2.11.4 Ducts conveying hazardous exhausts. Where required by the International Mechanical Code, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, flammable or combustible materials.

> **Exception:** Ducts where the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

903.2.11.5 Commercial cooking operations. An automatic sprinkler system shall be installed in a commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

903.2.11.6 Other required suppression systems. In addition to the requirements of Section 903.2, the provisions indicated in Table 903.2.11.6 also require the installation of a fire suppression system for certain buildings and areas.

[WS] 903.2.11.7 903.2.11.7 Relocatable buildings within buildings. Relocatable buildings or structures located within a building with an *approved* fire sprinkler system shall be provided with fire sprinkler protection within the occupiable space of the building and the space underneath the relocatable building.

Exceptions:

1. Sprinkler protection is not required underneath the building when the space is separated from the adjacent space by construction resisting the passage of smoke and heat and combustible storage will not be located there.

2. If the building or structure does not have a roof or ceiling obstructing the overhead sprinklers.

3 Construction trailers and temporary offices used during new building construction prior to occupancy.

4. Movable shopping mall kiosks with a roof or canopy dimension of less than 4 feet (1219 mm) on the smallest side.

903.2.11.8 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,~~ An *automatic sprinkler system* shall be installed throughout all newly constructed buildings where the total floor area exceeds 10,000 square feet including basements.

An *automatic sprinkler system* shall also be installed throughout existing buildings when an addition is made to the building and the total floor area, including the basements, of 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.

For purposes of this ~~paragraph~~ section, portions of buildings separated by one or more *fire walls* will not be considered a separate building.

To the extent this section conflicts with any other provision of the *International Building Code* or the *International Fire Code* adopted by the City, this section shall control.

23.11.903.3 International Fire Code Section 903.3 amended - Installation Requirements

Section 903.3 of the International Fire Code is hereby amended to read as follows:

Installation requirements. *Automatic sprinkler systems* shall be designed and installed in accordance with Sections 903.3.1 through ~~903.3.8~~ 903.3.9.

23.11.903.3.1 International Fire Code Section 903.3.1 amended – Standards.

Section 903.3.1 of the International Fire Code is hereby amended to read as follows:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 and other chapters of this code, as applicable. In ~~addition~~ addition, sprinkler systems shall be designed with a buffer to account for water system fluctuations to include a low reservoir condition. Such buffer shall be 5% for static pressures less than 50 p.s.i. and 10% for static pressures above 50 p.s.i.

Exception: Buffers are not required for systems designed in accordance with Section 903.3.1.3 (NFPA 13 D).

Permit applicants shall independently verify site specific static pressure:

- Prior to initiating sprinkler system.
- Prior to installing any sprinkler piping, including the underground supply.
- Prior to requesting any cover inspections.

23.11.903.3.1.1~~.1~~ International Fire Code Section 903.3.1.1~~.1~~ amended – ~~Exempt locations~~ NFPA 13 Sprinkler Systems and seismic coefficient.

Section 903.3.1.1~~.1~~ of the International Fire Code is hereby amended to read as follows:

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an *automatic* sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1, ~~and~~ 903.3.1.1.2 and 903.1.1.3.

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.

4. Fire service access elevator machine rooms and machinery spaces.
5. Machine rooms and machinery spaces associated with occupant evacuation elevators designed in accordance with Section 3008 of the International Building Code.
6. Elevator machine rooms, elevator machinery spaces, control spaces, or hoistways of traction elevators that comply with NFPA 13 (2013) Section 8.15.5.3.

903.3.1.1.2 Bathrooms. In Group R occupancies, sprinklers shall not be required in bathrooms that do not exceed 55 square feet (5 m2) in area and are located within individual *dwelling units* or *sleeping units*, provided that walls and ceilings, including the walls and ceilings behind a shower enclosure or tub,

are of noncombustible or limited-combustible materials with a 15-minute thermal barrier rating.

23.11.903.3.1.1.3 International Fire Code Section 903.3.1.1.3 added – Seismic coefficient.

Section 903.3.1.1 of the International Fire Code is hereby amended by the addition of a new subsection 903.3.1.1.3 to read as follows:

903.3.1.1.3 Seismic Coefficient. The coefficient Cp for seismic bracing design calculations in accordance with NFPA 13 shall either use a value of ~~0.70, or~~ 0.70 or shall use a value based on site specific USGS data.

23.11.903.3.1.2 International Fire Code Section 903.3.1.2 amended – NFPA 13R sprinkler systems.

Section 903.3.1.2 of the International Fire Code as adopted by this chapter is amended to read as follows:

903.3.1.2 NFPA 13 R Sprinkler Systems. Automatic sprinkler systems in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R.

Buildings designed in accordance with Washington Administrative Code 51-50-0504, 0510 or Section 510.4 of the International Building Code shall be designed in accordance with NFPA 13 throughout.

~~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 (1,219 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.~~

23.11.903.3.9 International Fire Code Section 903.3.9 added – Fire Sprinkler Zones

Section 903.3.9 International Fire Code is hereby amended by the addition of a new section 903.3.9 – Fire Sprinkler Zones

903.3.9 Zones. When fire walls and/or horizontal exits are provided the sprinkler system shall be zoned to coincide with the fire walls and/or horizontal exits.

Exception: Sprinkler zoning is not required in existing construction, provided that fire alarm initiating devices are provided that would provide the same level of occupant notification that a zoned sprinkler system would.

23.11.903.4.3 International Fire Code Section 903.4.3 amended – Floor control valves.

Section 903.4.3 of the International Fire Code is hereby 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. The floor control valves shall be located within interior exit stairway and within 6' of floors or landings unless chains or other *approved* devices are readily available.

Exception: In buildings without interior exit stairways, the location of the floor control valves shall be determined by the *Fire code official*.

23.11.903.5 International Fire Code Section 903.5 amended – Testing and maintenance.

Section 903.5 of the International Fire Code is hereby amended to read as follows:

903.5 Testing and maintenance. Sprinkler systems shall be tested and maintained in accordance with Section 901.

903.5.1 Fire Sprinkler and Standpipe main/express drains. Fire Sprinkler and standpipe main/express drains shall be positioned to drain to the sanitary sewer. ~~Additionally~~ Additionally, maintenance or testing discharges from fire pumps shall be treated in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements.

Point of Information

Water drained or otherwise discharged from a fire sprinkler system, standpipe or fire pump in the course of testing and maintenance is considered an “illicit discharge” and must drain to the sanitary sewer or be treated in order to discharge to storm drains, ditches, or water bodies. ~~See handout (http://www.bellevuewa.gov/pdf/Utilities/Fire_Confidence-WQ_3-14-12.pdf) for addition information.~~

23.11.905.3.1 International Fire Code Section 905.3.1 amended – Height.

Section 905.3.1 of the International Fire Code is hereby amended to read as follows:

905.3.1 Height. Class I standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet (9,144 mm) above the lowest level of the fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet (9,144 mm) below the highest level of fire department vehicle access.

Exceptions:

1. In determining the lowest level of fire department vehicle access, it shall not be required to consider:

    1.1. Recessed loading docks for four vehicles or less, and

    1.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.

23.11.905.3.9 International Fire Code Section 905.3.9 added – High-rise building standpipes.

Section 905.3 of the International Fire Code is hereby amended by the addition of a new subsection 905.3.9 to read as follows:

905.3.9 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 (1,207 kPa), *approved* pressure-regulating devices shall be installed to limit the pressure to a range between 125 and 175 psi at not less than 300 gpm. The pressure on the inlet side of the pressure-regulating device shall not exceed the rated working pressure of the device. An additional non-regulated hose connection located directly below the PRV or an equally sized bypass around the pressure regulating device with a normally closed control valve shall be provided at each reduced pressure connection.

Each non-regulated hose connection shall be labeled “High Pressure – No PRV”. The sign shall have 1/2" white letters on a red background.

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.

23.11.905.3.10 International Fire Code Section 905.3.10 added – Vertical standpipes served by fire pumps in high-rise buildings.

Section 905.3 of the International Fire Code is hereby amended by the addition of a new subsection 905.3.10 to read as follows:

905.3.10 Vertical Standpipes served by Fire Pumps in high-rise buildings. Where vertical standpipes are served by fire pumps, a check valve shall be installed at the base of vertical standpipe.

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

Section 905.4 of the International Fire Code is hereby 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:

a. In every required interior exit 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.

   Exception: A single hose connection shall be permitted to be installed in the open corridor or open breezeway between open stairs that are not greater than 75 feet (22 860 mm) apart.

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

   Exceptions:

   1. Where floor areas adjacent to a horizontal exit are reachable from an interior exit stairway hose connections by a 30-foot (9,144 mm) hose stream from a nozzle attached to 100 feet (30,480 mm) of hose, a hose connection shall not be required at the horizontal exit.

   2. When the *Fire code official* determines that standpipe connection is not needed.

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

   Exception: Where floor areas adjacent to an exit passageway are reachable from an interior exit stairway hose connections by a 30-foot (9,144 mm) hose stream from a nozzle attached to 100 feet (30,480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered and open mall buildings, adjacent to each exterior public entrance to the mall, adjacent to each entrance from an exit passageway or exit corridor to the mall, at each intermediate landing within required enclosed stairways, and at other locations as necessary so that the distance to reach all portions of a tenant space does not exceed 200 feet (60,960 mm) from a hose connection.

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 1/2 in. hose connection located on the roof. Additional hose connections shall be provided so that all portions of the roof are within 200 feet of hose travel distance from a standpipe hose connection. The hose connection(s) shall be at least 10 feet (3,048 mm) from the roof edge, skylight, light well or other similar openings, unless protected by a 42-inch-high (1,067 mm) guardrail or equivalent. 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 interior exit stairway 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 interior exit stair, 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.

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 amended – 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 shall not be installed.

Exception: Where subject to freezing and in accordance with NFPA 14 when *approved* by the *fire code official*.

23.11.907.1 International Fire Code Section 907.1 amended – General.

Section 907.1 of the International Fire Code is hereby 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 building and structures:

1. The requirements of Section 907.2 are applicable to new buildings and structures, new fire alarm systems, and replacement of existing fire alarm control panels being installed in existing structures.

2. When an existing fire alarm control unit~~s~~ is replaced in existing structures, the entire fire alarm system shall comply with the requirements of Section 907.2

Point of Information

See Public Information Sheet F-75 “Fire Alarm Panel Replacement” for additional information

Fire alarm systems upgrades shall not require upgrades to other building systems, unless necessary to meet the requirements of Section 907.2.

Pursuant to Section 104.8 and subject to the approval of the *fire code official*, fire alarm system upgrades may be phased in over a time period not to exceed 5 years. Approval of a phased alarm system upgrade must be documented in an executed agreement between the applicant and city of Bellevue and shall contain measurable milestones, insurance requirements, and indemnity provisions.

3. The requirements of Section 907.9 are applicable to existing buildings and structures ~~aside from~~ <u>in addition to</u> the condition described in item 2.

4. For the purpose of this section, fire barriers shall not be considered to create a separate building.

5. Building 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*.

907.1.2 Fire alarm shop drawings.

Shop drawings for fire alarm systems shall be prepared in accordance with NFPA 72 and submitted for review and approval prior to system installation. In addition, the submittal documents shall include~~, and shall include, but not be limited to, all of the following:~~

~~1. A floor plan that indicates the use of all rooms.~~

~~2. Locations of alarm-initiating devices.~~

~~3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.~~

~~4. Design minimum audibility level for occupant notification.~~

~~5. Location of fire alarm control unit, transponders and notification power supplies.~~

~~6. Annunciators.~~

~~7. Power connection.~~

~~8. Battery calculations.~~

~~9. Conductor type and sizes.~~

~~10. Voltage drop calculations.~~

~~11. Manufacturers' data sheets indicating model numbers and listing information for equipment, devices and materials.~~

~~12. Details of ceiling height and construction.~~

~~13. The interface of fire safety control functions.~~

~~14. Classification of the supervising station.~~

~~15. A~~ a narrative and input/output matrix that supports the *approved* exiting plan for the building.

23.11.907.2.~~13.1.1~~ 12.1.1 International Fire Code Section 907.2.~~13.1.1~~ 12.1.1 amended – Area smoke detection.

Section 907.2.~~13.1.1~~ 12.1.1 of the International Fire Code is hereby amended to read as follows:

907.2.~~13.1.1~~ 12.1.1 Area smoke detection. Area 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 activate the emergency voice/alarm communication system in accordance with Section 907.5.2.2. In addition to smoke detectors required by Sections 907.2.1 through 907.2.~~10~~9, smoke detectors ~~(Where such locations are within unconditioned spaces, other devices may be installed in accordance with 907.4.3)~~ shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection.
2. In each elevator machine room, machinery space, control room and control space and in elevator lobbies.
3. Within 5 feet (1,524 mm) of doors opening into stairways that are smoke proof enclosures or are pressurized stairways.

Where such locations are within unconditioned spaces, other devices may be installed in accordance with 907.4.3.

23.11.907.2.~~13.2~~ 12.2 International Fire Code Section 907.2.~~13.2~~ 12.2 amended – Fire department communication system.

Section 907.2.~~13.2~~ 12.2 of the International Fire Code is hereby amended to read as follows:

907.2.~~13.2~~ 12.2 Fire department communication system. An *approved* two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 508, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the interior exit stairway.

~~23.11.907.2.18.1~~ 23.11.907.2.17.1 International Fire Code Section ~~907.2.18.1~~ 907.2.17.1 amended – Smoke detectors.

Section ~~907.2.18.1~~ 907.2.17.1 of the International Fire Code is hereby amended to read as follows:

~~907.2.18.1~~ 907.2.17.1 Smoke detectors. A minimum of one smoke detector ~~(Where such locations are within unconditioned spaces, other devices may be installed in accordance with 907.4.3.)~~ 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~~ five ~~ft.~~ feet of doors opening into stairways that are smoke proof enclosures, or that are pressurized stairways.

Where smoke detectors cannot be utilized due to ambient conditions, *approved* automatic heat detectors shall be ~~permitted~~ installed in accordance with Section 907.4.3

Exception: ~~Where any such locations in items 1 through 5 are within unconditioned spaces, other devices may be installed in accordance with 907.4.3.~~

~~23.11.907.5 International Fire Code Section 907.5 amended – Occupant notification system.~~

~~Section 907.5 of the International Fire Code is hereby amended to read as follows:~~

~~907.5 Occupant notification systems.~~

~~A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.3. Where a fire alarm system is required by another section of this code, it shall be activated by:~~

~~1. Automatic fire detectors.~~

~~2. Automatic sprinkler system waterflow devices.~~

~~3. Manual fire alarm boxes.~~

~~4. Automatic fire-extinguishing systems.~~

23.11.907.5.2.1.1 International Fire Code Section 907.5.2.1.1 amended – Average sound pressure.

Section 907.5.2.1.1 of the International Fire Code is hereby amended to read as follows:

907.5.2.1.1 Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound

level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupiable space within the building, or in the case of a partial alarm system, throughout the space that is ~~being~~ provided with the fire alarm system. The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. In occupancies with high sound levels, such as nightclubs, bars, theaters, auditoriums, sanctuaries, etc. an interface shall be provided between the fire alarm system and the noise source to eliminate the noise source upon activation of the fire alarm system.

Exception: Private mode signaling in accordance with NFPA 72 shall be allowed in areas of group I-2 and I-3 occupancies where occupants are not expected to self-evacuate.

23.11.907.5.2.2 International Fire Code Section 907.5.2.2 amended – Emergency voice/alarm communication systems.

Section 907.5.2.2 of the International Fire Code is hereby amended to read as follows:

907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler water flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404. In high-rise buildings, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Interior exit stairways.
3. Each floor.
4. Areas of refuge as defined in Chapter 2.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended location and a general occupant notification shall be broadcast over the overhead page.

907.5.2.2.1 Manual override. A manual override for emergency voice communication shall be provided on a selective and all-call basis for all paging zones.

907.5.2.2.2 Live voice messages. The emergency voice/alarm communication system shall also have the capability to broadcast live voice messages by paging zones on a selective and all-call basis.

Point of Information

See Emergency Voice Alarm public information sheet F-44 for detailed messaging requirements.

907.5.2.2.3 Alternate uses. The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.

907.5.2.2.4 Emergency voice/alarm communication captions. Where stadiums, arenas and grandstands have 15,000 fixed seats or more and provide audible public announcements, the emergency voice/alarm communication system shall provide prerecorded or real-time captions. Prerecorded or live emergency captions shall be from an *approved* location constantly attended by personnel trained to respond to an emergency.

907.5.2.2.5 Emergency power. Emergency voice/alarm communications systems shall be provided with emergency power in accordance with International Building Code Section 2702 and Table 2702. ~~The system shall be capable of powering the required load for a duration of not less than 24 hours, as required by NFPA 72.~~

907.5.2.2.6 Phased Evacuation. All buildings more than 10 stories above ~~grade plane~~ the lowest level of fire department vehicle access shall utilize an *approved* phased evacuation plan.

Exceptions:

1. When an additional exit stairway meeting the requirements of Sections IBC 1011 and 1023 are provided in addition to the minimum number of exits required by Section IBC 1006.
2. Where the width of each required exit stairway is as specified in Section 1011.2 is increased by not less than 24" of additional width.
3. Where occupant self-evacuation elevators in accordance with IBC Section 3008 have been installed.
4. Where full tenant evacuation can be demonstrated to be accomplished in less than 7 minutes.

Point of Information

These provisions are intended to facilitate the simultaneous building evacuation and firefighter response into the building.

23.11.907.5.2.3 International Fire Code Section 907.5.2.3 amended – Visible alarms.

Section 907.5.2.3 of the International Fire Code is hereby amended to read as follows:

907.5.2.3 Visible alarms. Visible alarm notification appliances shall be provided in accordance with Sections 907.5.2.3.1 through 907.5.2.3.3.

Exceptions:

1. Visible alarm notification appliances are not required in alterations, except where an existing fire alarm system is replaced, or a new fire alarm system is installed.
2. Visible alarm notification appliances shall not be required in exits as defined in Chapter 2.
3. Visible alarm notification appliances shall not be required in elevator cars.
4. Visual alarm notification appliances are not required in critical care areas of Group I-2 Condition 2 occupancies that are in compliance with Section 907.2.6 Exception 2.

23.11.907.6.3.1 International Fire Code Section 907.6.3.1 amended – Annunciator panel.

Section 907.6.3.1 of the International Fire Code is hereby amended to read as follows:

907.6.3.1 Annunciator panel. All fire alarm systems in buildings without a fire command center shall be provided with an annunciator panel (or the main fire alarm control panel) located inside the building at the main addressed building entrance.

Exception: Other *approved* locations.

23.11.907.6.4~~.1~~ International Fire Code Section 907.6.4~~.1~~ amended – ~~Graphic annunciator~~ Zones.

Section 907.6.4~~.1~~ of the International Fire Code is hereby amended to read as follow

907.6.4 Zones. Each floor shall be zoned separately, and a zone shall not exceed 22,500 square feet (2090 m2). The length of any zone shall not exceed 300 feet (91 440 mm) in any direction. Floors shall be further zoned to coincide with any fire walls and/or horizontal exits.

Exceptions:

1. *Automatic sprinkler system* zones shall not exceed the area permitted by NFPA 13.

2. Fire alarm zones that coincide with fire walls and/or horizontal exits are not required in existing buildings except:

    a. When a change of use occurs

b. The exiting or evacuation plan is modified and depends on the use of the fire wall or horizontal exit
c. When fire alarm panels are replaced (ref.: BCC 23.11.907.1 (2)

23.11.907.6.4.1 International Fire Code Section 907.6.4.1 amended – Graphic annunciator.

Section 907.6.4.1 of the International Fire Code is hereby amended to read as follows:

907.6.4.1 Graphic Annunciator. Graphic annunciators, when provided, shall be mounted to maintain the viewer's directional orientation. The visual zone indication on the annunciator panel 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.

907.6.4.2 High-rise buildings. In high-rise buildings, a separate zone by floor shall be provided for each of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes.
4. Other *approved* types of automatic fire detection devices or suppression systems.

23.11.909.1 International Fire Code Section 909.1 amended – Scope and purpose.

Section 909.1 of the International Fire Code is hereby 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. 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, or the timely restoration of operations. 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.

23.11.909.4.6 International Fire Code Section 909.4.6 amended – Duration of operation.

Section 909.4.6 of the International Fire Code is hereby amended to read as follows:

909.4.6. Duration of operation. All portions of active or passive smoke control systems shall be capable of continued operation after detection of the fire event for a period of not less than ~~either 20 minutes or 1.5 times the calculated egress time, whichever is less, except that for smoke control in high-rise buildings, the emergency generator shall have fuel capacity for no less than that~~ the time stipulated in International Building Code

Section 2702., ~~and in non-high-rise buildings, the emergency generator shall have fuel capacity for no less than 2 hours.~~

23.11.909.10.2 International Fire Code Section 909.10.2 amended – Ducts.

Section 909.10.2 of the International Fire Code is hereby amended to read as follows:

909.10.2 Ducts. Duct materials and joints, including shafts acting as ducts ~~and joints~~ shall be capable of withstanding the probable temperatures and pressures to which they are exposed as determined in accordance with Section 909.10.1. Ducts shall be constructed and supported in accordance with the International Mechanical Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the documentation procedure. Ducts shall be supported directly from fire resistance-rated structural elements of the building by substantial, noncombustible supports.

Exception: Flexible connections (for the purpose of vibration isolation) complying with the International Mechanical Code and which are constructed of *approved* fire-resistance-rated materials.

23.11.909.10.3 IFC Section 909.10.3 amended – Equipment, inlets and outlets.

Section 909.10.3 of the International Fire Code is hereby amended to read as follows:

909.10.3 Equipment, inlets and outlets. Equipment shall be located so as not to expose uninvolved portions of the building to additional fire hazard. Outdoor air inlets shall be located so as to minimize reintroduction of smoke into the building and to limit exposure of the building or adjacent buildings to an additional fire hazard. In addition, supply air shall be taken directly from an outside, uncontaminated source located a minimum distance of 20 feet from any air exhaust system or outlet.

23.11.909.11 IFC 909.11 amended – Emergency Power systems.

Section 909.11 of the International Fire Code is hereby amended to read as follows:

909.11 Emergency Power. Smoke control systems, including energy management systems used for smoke control or smoke removal, shall be provided with emergency power in accordance with International Building Code Section 2702.

Exception: In other than high-rise buildings, underground buildings, atriums and covered mall buildings, smoke control systems shall be provided with legally required standby power in accordance with International Building Code Section 2702.

909.11.1 Power Sources and power surges. Elements of the smoke control system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of

the smoke control system susceptible to power surges shall be suitably protected by conditioners, suppressors or other *approved* means.

23.11.909.12 International Fire Code Section 909.12 amended – Detection and control systems.

Section 909.12 of the International Fire Code is hereby amended to read as follows:

909.12 Detection and control systems. Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Section 907. Such systems shall be equipped with a control unit complying with UL 864 and listed as smoke control.

Exception: Shaft pressurization equipment in buildings constructed in accordance with Washington Administrative Code 51-50-0504, 0510 or Section 510.4 of the International Building Code may utilize a fire detection system that is listed as releasing equipment.

909.12.1 Verification. Control systems for mechanical smoke control systems shall include provisions for verification. Verification shall include positive confirmation of actuation, testing, manual override and the presence of power downstream of all disconnects. A preprogrammed weekly test sequence shall report abnormal conditions audibly, visually and by printed report or other *approved* means. The preprogrammed weekly test shall operate all devices, equipment, and components used for smoke control.

Exception: Where verification of individual components tested through the preprogrammed weekly testing sequence will interfere with, and produce unwanted effects to, normal building operation, such individual components are permitted to be bypassed from the preprogrammed weekly testing, where *approved* by the *fire code official* and in accordance with both of the following:

1. Where the operation of components is bypassed from the preprogrammed weekly test, presence of power downstream of all disconnects shall be verified weekly by a listed control unit.
2. Testing of all components bypassed from the preprogrammed weekly test shall be in accordance with Section 909.20.6.

23.11.909.17 IFC Section 909.17 amended – System response time.

Section 909.17 of the International Fire Code is hereby amended to read as follows:

909.17 System response time. Smoke-control system activation shall be initiated immediately after receipt of an appropriate automatic or manual activation command. Smoke control systems shall activate individual components (such as dampers and fans) in the sequence necessary to prevent physical damage to the fans, dampers,

ducts and other equipment. For purposes of smoke control, the fire-fighter's smoke control panel response time shall be the same for automatic or manual smoke control action initiated from any other building control point. The total response time, including that necessary for detection, shut-down of operating equipment and smoke control system startup, shall allow for full operational mode to be achieved before the conditions in the space exceed the design smoke condition. Upon receipt of an alarm condition at the fire alarm control panel, fans, dampers and automatic doors shall have achieved their expected operating state and confirmation of proper operation shall be indicated at the smoke control panel within 60 seconds. Documentation shall be provided in the required final report.

23.11.909.18.8.3.2 International Fire Code Section 909.18.8.3.2 amended – Certificate of compliance.

Section 909.18.8.3.2 of the International Fire Code is hereby amended to add the following subsection:

909.18.8.3.2 Certificate of compliance. A certificate of compliance shall be provided by the special inspector and responsible registered design professional certifying that the referenced property is in substantial compliance. The certificate shall identify the company, designer, special inspector that performed the testing and shall identify the name, date and address of the property being tested. The following statement must also be included in the certificate: "I have reviewed the report and by personal knowledge and on-site observation certify that the smoke control system is in substantial compliance with the *approved* design documents, and to the best of my understanding complies with requirements of the applicable codes as identified in the smoke control report."

23.11.909.21.3 International Fire Code Section 909.21.3 amended – Ducts for system.

Section 909.21.3 of the International Fire Code is hereby amended to read as follows:

909.21.3 Ducts for system. Any duct system that is part of the pressurization system shall be protected with the same fire-resistance rating as required for the elevator shaft enclosure, and equipment, control wiring, power wiring, and ductwork shall comply with one of the methods specified in *International Building Code* Section 909.20.6.1. Ducts shall be in accordance with Section 909.10.2.

23.11.909.21.4.4 International Fire Code Section 909.21.4.4 amended – Fan capacity.

Section 909.21.4.4 of the International Fire Code is hereby amended to read as follows:

909.21.4.4 Fan Capacity. The supply fan shall be either adjustable with a capacity of not less than 1,000 cfm (.4719m3/S) per door, or that specified by a registered design professional to meet the requirements of a designed pressurization system. Fans shall be in accordance with Section 909.10.5.

23.11.912.5 International Fire Code Section 912.5 amended – Signs.

Section 912.5 of the International Fire Code is hereby amended to read as follows:

912.5 Signs. A red metal sign with white raised letters at least 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: SPRINKLERS, 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.

If it is not readily apparent which building or portion the fire department connection serves, the sign shall also include the premises address or building identification, and the portion of the building protected.

Exception: A metal sign with letters at least 1 inch (25 mm) in size may match the fire department connection where chrome, brass or other *approved* decorative finish is utilized.

912.5.1 Markings. The fire department connection stand-alone pipe shall be painted red for greater visibility.

Exception: Fire department connections such as chrome, brass, or other *approved* decorative finish.

Point of Information:
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.

23.11.913.1 International Fire Code Section 913.1 amended – General.

Section 913.1 of the International Fire Code is hereby amended to read as follows:

913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20.

913.1.1 Fire Pump Controls. Fire pump controllers supplying standpipes in excess of 130 p.s.i. shall be soft start.

23.11.913.2 International Fire Code Section 913.2 amended – Protection against interruption of service.

Section 913.2 of the International Fire Code is hereby amended to read as follows:

913.2 Protection against interruption of service.

The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

913.2.1 Protection of fire pump rooms and access. In high-rise buildings fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour fire barriers constructed in accordance with Section 707 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both. In other than high-rise buildings separation shall consist of 1-hour fire barriers constructed in accordance with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711, or both.

Fire pump rooms not directly accessible from the outside shall be accessible through an enclosed passageway from an interior exit stairway or exterior exit. The enclosed passageway shall have a fire-resistance rating not less than the fire-resistance rating of the fire pump room ~~(See NFPA 20 Section 4.12.2.1.2).~~

Exception: Where a fire pump is installed in a parking garage separated from the rest of the building by fire-rated construction equivalent to the pump room, and the portion of the building containing the fire pump is protected by a sprinkler system that does not rely on the fire pump, the protected access to the pump room shall not be required.

Rooms containing fire pumps shall be free from storage, equipment, and penetrations not essential to the operation of the pump and related components.

Exception: Equipment related to domestic water distribution shall be permitted to be located within the same room as the fire pump equipment.

Point of Information

These provisions originate in NFPA 20 (~~2013~~ 2019) and are intended to facilitate fire department access to the fire pump room. Ideally fire pump rooms are located on the perimeter of the building affording direct access. Where that is not possible, a protected passageway is required. This passageway is not synonymous with an exit passageway and therefore not subject to the significant limitations of allowable penetrations. Fire pump rooms are not permitted to open directly into an exit passageway or interior exit stairway; rather the fire pump room must open into a vestibule before access to an exit passageway or an interior exit stairway.

23.11.914.2.1 International Fire Code Section 914.2.1 amended – Automatic sprinkler system – Covered and open mall buildings.

Section 914.2.1 of the International Fire Code is hereby amended to read as follows:

914.2.1 Automatic sprinkler system. Covered and open mall buildings and buildings connected shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.1.1, which shall comply with the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the mall building prior to occupancy of any of the tenant

spaces. Unoccupied tenant spaces shall be similarly protected unless provided with *approved* alternative protection.

2. Sprinkler protection for the mall of a covered mall building shall be independent from that provided for tenant spaces or anchors. Where tenant spaces are supplied by the same system, they shall be independently controlled.

3. Sprinkler protection for the tenant spaces of an open mall building shall be independent from that provided for anchor buildings.

4. Sprinkler protection shall be provided beneath exterior circulation balconies located adjacent to an open mall.

5. Where tenant spaces are supplied by the same system, they shall be independently controlled.

23.11.914.3.1 International Fire Code Section 914.3.1 amended – Automatic sprinkler system – High-rise buildings.

Section 914.3.1 of the International Fire Code is hereby amended to read as follows:

914.3.1 Automatic sprinkler system – High rise building. Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 914.3.2.

23.11.914.3.1.2 International Fire Code Section 914.3.1.2 amended – Water supply to required fire pumps.

Section 914.3.1.2 of the International Fire Code is hereby amended to read as follows:

914.3.1.2 Water supply to required fire pumps. In buildings that are more than ~~450~~ 420 feet in building height, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets and shall not serve other buildings. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: When *approved* by the *Fire code official*, two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through no fewer than one of the connections.

23.11.914.3.1.3 International Fire Code Section 914.3.1.3 added – High-rise building sprinkler system design.

Section 914.3.1 of the International Fire Code is hereby amended by the addition of a new subsection 914.3.1.3 to read as follows:

914.3.1.3 High-rise building sprinkler system design. Combination standpipe/sprinkler risers using 6 in. pipe minimum, shall be used. 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.

23.11.914.3.2 International Fire Code Section 914.3.2 amended – Secondary water source.

Section 914.3.2 of the International Fire Code is hereby amended to read as follows:

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

1. High-rise buildings containing R 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 that are less than ~~450'~~ 420 feet in height may share a common secondary water source 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 prove 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 the 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 building with ordinary hazard occupancies as defined by NFPA 13.

Exception: Existing building, including those undergoing substantial renovation.

~~23.11.917 International Fire Code Section 917 added – Firefighter air systems.~~

~~Chapter 9 of the International Fire Code is hereby amended by the addition of a new Section 917 to read as follows:~~

~~SECTION 917~~

~~FIREFIGHTER AIR SYSTEMS~~

~~917.1 Scope. The design, installation, and maintenance of firefighter air systems shall be in accordance with this section.~~

~~917.2 Required installations. Firefighter air system shall be installed in the following buildings:~~

~~1. Buildings classified as high-rise in accordance with the International Building Code.~~

~~2. Transportation tunnels constructed in accordance with NFPA 130 or 502 that exceed 300' in length.~~

~~917.3 Plans and contractor qualifications.~~

~~917.3.1 Plans. Prior to the installation of a firefighter air system, a minimum of two sets of plans and specifications shall be submitted to the Bellevue Fire Department for review and approval. Plans shall demonstrate compliance with the requirements of this section and shall include calculations prepared by a registered professional engineer demonstrating that the design criteria for all pressure containing components is satisfied plus a minimum safety factor of 25 percent.~~

~~The plans submittal shall also include specifications for the tubing, fittings, and manufacturer data sheets for valves, pressure regulators, pressure relief devices, gauges, RIC universal air connections and cylinder filling hoses.~~

~~917.3.2 Contractor qualification. The firefighter air system shall be installed by Washington State licensed contractors. Proof of licensure shall be provided with the plan submittal.~~

~~917.4 Design criteria.~~

~~917.4.1 The system shall be designed to fill, at each interior cylinder filling panel, two empty 66 standard cubic foot compressed breathing air cylinders to a maximum pressure of 5,500 psig (37 921.17 kPa).~~

~~917.4.2 The filling operation shall be completed in not more than two minutes upon connection of the cylinders to the fill hose.~~

~~917.4.3 The minimum design flow of the breathing air piping system shall be calculated using two interior cylinder filling panels operating simultaneously and located at the highest level above the most remote location from the base station exterior fire department connection panel and enclosure base.~~

~~The relief valve, piping, pressure regulator, pressure gauges, fittings and connection hoses shall meet the requirement of the ASME Boiler and Pressure Code, 7 Section VIII, Unified Pressure Vessel Code. The installation of the piping system, as a minimum, will be based on ASME B31.3-2012 2016.~~

917.9.2 Tubing. Piping shall be constructed of stainless steel or other *approved* materials that are compatible with breathing air. The use of nonmetallic materials shall be compatible with breathing air. When stainless steel tubing is used, it shall meet ASTM A-269, Grade 316 or an equal standard. Stainless steel fitting shall be Grade 316 and a minimum, 0.375 inch (9.5 mm) outside diameter by .065 inch (1.6 mm) wall Grade 316 fully annealed seamless. Stainless steel fittings shall be at least Grade 316 and meet the requirements of ASTMA 479 or equal. Routing of tubing and bends shall be such as to protect the tubing from mechanical damage.

917.9.3 Support. Piping shall be supported at maximum intervals of 5 feet (1524 mm). Individual tubing clamps and mounting components shall be mechanically secured to the building support members in accordance with the manufacturer's specifications.

917.9.4 Fittings. Fittings shall be constructed of stainless steel or other *approved* materials that are compatible with breathing air. The use of nonmetallic materials shall be compatible with breathing air. Stainless steel fittings shall be at least Grade 316 and meet the requirements of ASTMA 479 or an equal standard.

917.9.5 Prohibition. The use of carbon steel, iron pipe, malleable iron, high-strength gray iron or alloy steel is prohibited.

917.10 System assembly requirements. The system shall be welded except where the tubing joints are readily accessible and at the individual air fill panels. When mechanical high-pressure tube fittings are used, they shall be *approved* for the type of materials to be joined and rated for the maximum pressure of the system. Welding procedures shall meet ASME B31.1-2010, Part 4 and Chapter V (Exhibit VI). Prior to and during the welding of sections of tubing, a continuous, regulated dry nitrogen or argon purge at 3 psig (20.68 kPa) shall be maintained to eliminate contamination with products of the oxidation or welding flux. The purge shall commence a minimum of 2 minutes prior to welding operations and continue until the welded joint is at an ambient temperature between 60° F and 80°F (15.5°C and 26.6°C).

917.11 Prevention of contamination. The installing contractor shall ensure that, at all times, the system components are not exposed to contaminants, including, but not limited to, oils, solvents, dirt and construction materials. When contamination of system components has occurred, the effected component shall not be installed in the system.

917.5 Operating pressure. All components used in the system shall be rated to operate at a minimum pressure of 5,500 psig (37 921.17 kPa) at 70°F (21°C).

917.6 Marking. System piping, gauges, valves and air outlets shall be clearly marked by means of steel or plastic labels or tags indicating their function. Markings used for piping systems shall consist of the content's name and include a direction of flow arrow. Markings shall be provided at each valve; at wall, floor or ceiling penetrations; at each

~~change of direction; and at a minimum of every 20 feet (6096 mm) or fraction thereof throughout the piping system.~~

~~917.7 Base station exterior fire department connection panel and enclosure.~~

~~917.7.1 Location.~~

~~A fire department connection panel shall be attached to the building or on a remote monument at the exterior of the building. The panel shall be secured inside of a weather-resistant enclosure. The panel shall be within 50 feet (15 240 mm) of an *approved* roadway or driveway, or other location *approved* by the Bellevue Fire Department. The enclosure shall be visible and accessible on approach to the building.~~

~~917.7.2 Construction.~~

~~The fire department connection panel shall be installed in a cabinet constructed of minimum 18-gauge carbon steel. When constructed of steel, the cabinet shall be provided with coating to protect the cabinet from corrosion. When the enclosure is constructed of nonmetallic materials, the enclosure shall be resistant to ultraviolet and infrared solar radiation.~~

~~917.7.3 Vehicle protection.~~

~~When the panel is located in an area subject to vehicle traffic, impact protection shall be provided in accordance with this code.~~

~~917.7.4 Base station enclosure marking.~~

~~The front of the enclosure shall be marked "FIRE-FIGHTER AIR SYSTEM" on securely attached steel, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the enclosure front and in letters that are a minimum of 2 inches (51 mm) high with 3/8-inch (9053 mm) brush stroke. The marking of the enclosure shall be visible.~~

~~917.7.5 Base station enclosure components.~~

~~The components in the base station panel shall consist of the necessary components to provide air to the air substations located on upper and/or lower building levels. The fire department air supply source shall be designed to connect to the base station panel. The following components shall be installed in the base station enclosure.~~

1. ~~Two Male Rapid Intervention Crew (RIC) Universal Air Connection (UAC) fittings. When connected to a female fitting, the assembled UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.~~
2. ~~One downstream shut-off valve.~~

3. One pressure gauge to check pressure of the piping distribution to air substations located on upper and lower building levels.

4. One pressure relief valve designed for 1.25 times the design discharge of the fire department air supply or air supply trucks. All fittings, hoses and hard piping in the base station supply panel and distribution piping to air substations supply panels, shall be designed for an air pressure of 1.5 times the pressure of the fire department air delivery system.

5. Base station can be designed for an air pressure supply piping system for supply of air to air substations.

   The air supply lines will require an intermediate regulator to provide air pressure for a 5,500 psi (37 921.17 kPa), for a 5.5 air pack system. The air supply lines will be fitted with separate pressure relief valves set at 1.25 times the working pressure of the air supply line and the operating pressure of the pressurized lines.

7. Mechanical supports for piping, hoses, gauges and pressure components, will be designed and built to provide a solid rigid structure.

917.7.6 Security.

To prevent unauthorized access to or tampering with the system, the fire department connection panel enclosure shall remain locked by an *approved* means.

917.7.7 Fire department key box.

A fire department key box shall be provided adjacent to the fire department connection panel and enclosure. A key for the enclosure shall be provided in the key box.

Connections to a FARS shall be safeguarded from unauthorized access in an *approved* manner.

917.8 Interior cylinder fill panels and enclosure – air substation

917.8.1 Location. Cylinder fill panels shall be installed in the interior of buildings as follows:

1. Aboveground structure. An interior air substation cylinder fill panel and enclosures shall be installed on floor landings. In buildings classified as high-rise in two stairwells as *approved* by the *fire code official* regardless of height of buildings commencing on the second floor landing above grade, below grade and every other floor thereafter. *Approved* stairwells must extend the full height of the building and separated in accordance with International Building Code Section 403.5.1

2. Underground structure. An interior air substation cylinder fill panel and enclosure shall be installed in two stairwells as *approved* by the *fire code official* on the floor

landing on the third level below grade and every other below-grade level thereafter. The panel shall be located a minimum of 36 inches (914 mm) but not more than 60 inches (1524 mm) above the finished floor or a stairway landing. *Approved* stairwells must extend the full height of the underground structure and separated in accordance with International Building Code Section 1007.1.1

3. Transportation tunnels. An interior air substation cylinder fill panel and enclosure shall be installed within 200' of the tunnel entrance and then at intervals not exceeding 400' thereafter. All fill panels shall be located within 10' of standpipe hose connections. The panel shall be located a minimum of 36 inches (914 mm) but not more than 60 inches (1524 mm) above the finished floor.

917.8.2 Cabinet requirements.

Each air substation cylinder fill panel shall be installed in a cabinet constructed of minimum 18-gauge carbon steel. The depth of the cabinet shall not create an exit obstruction when installed in building stairways. All components, with the exception of the shut-off valve, pressure gauges, fill hoses and ancillary components, shall be contained behind a minimum 18-gauge interior panel.

917.8.3 Door.

Hinges for the cabinet door shall be located inside of the cabinet. The door shall be arranged such that when the door is open, it does not reduce the required exit width or create an obstruction in the path of egress. A minimum of 80 percent of the door surface area shall be constructed of tempered glass. The thickness of the glass shall not be greater than 1/8 inch (3.17 mm).

917.8.4 Cabinet marking.

The front of each cylinder fill panel shall be marked "FIREFIGHTER AIR SYSTEM." The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2 inches (50mm) high with 3/8-inch (5 mm) brush stroke. The marking of the cabinet shall be visible to emergency response personnel.

917.8.5 Air substation cabinet components.

The cabinet shall be of sufficient size to allow for the installation of the following components:

1. One-isolation valve located between the air discharge line to the next air substation and the downstream line to the air base station supply or the air substation immediately below to the next substation above the air base station.

2. The fill hoses and isolation valves shall be installed between the air bottle connection line and the fresh air supply.

3. Excess bleed valves shall be located between the air bottle fill hose and the next air substation.

4. Four SCBA fill hoses are required at a single air substation, the air supply lines shall be identified as 5,500 psig (37 921.17 kPa) pressure and shall be controlled by a single valve between the air supply and air bottle. The SCBA fill hoses shall be designed with RIC UAC fittings. A protective cap shall be provided for each hose.

5. Mechanical supports for piping, hoses, gauges and pressure components shall be designed and built to provide a solid rigid structure.

917.8.6 Cylinder filling hose.

The design of the cabinet shall provide a means for storing the hose to prevent kinking. When the hose is coiled, the brackets shall be installed so that the hose bend radius is maintained at 4 inches (102 mm) or greater.

The discharge outlet of each cylinder filling hose shall have a female RIC UAC. The female fitting shall be designed to connect to a male RIC UAC. The assembled RIC UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, Standard on Open Breathing Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.

917.8.7 Security.

To prevent unauthorized access to or tampering with the system, each panel cover shall remain locked by an *approved* means.

917.9 Installation of components.

917.9.1 Air monitoring system. An *approved* air monitoring system shall be provided. The system shall automatically monitor air quality, moisture and pressure on a continual basis. The air monitoring system shall be equipped with not less than two content analyzers capable of detecting carbon monoxide, carbon dioxide, nitrogen, oxygen, moisture and hydrocarbons.

917.9.1.1 Alarm conditions.

The air monitoring system shall transmit a supervisory signal when any of the following levels are detected:

1. Carbon monoxide exceeds 5 ppm.

2. Carbon dioxide exceeds 1,000 ppm.

3. An oxygen level below 19.5 percent or above 23.5 percent.

4. A nitrogen level below 75 percent or above 81 percent.

5. Hydrocarbon (condensed) content exceeds 5 milligrams per cubic meter of air.

6. The moisture concentration exceeds 24 ppm by volume.

7. The pressure falls below 4,950 psig (34 129.05 kPa) at 70°F (21°C)

917.9.1.2 Alarm supervision, monitoring and notification.

The air monitoring system shall be electrically supervised and monitored by an *approved* supervising station.

917.9.1.3 Air quality status display.

Air quality status shall be visually displayed at within the fire command center.

917.12 Testing and inspection.

917.12.1 Testing.

Following fabrication, assembly, and installation of the piping distribution system, exterior connection panel and interior cylinder fill panels, the Bellevue Fire Department shall witness the pneumatic testing of the complete system at a minimum test pressure of 6,050 psi (41 368.54 kPa) using oil-free dry air, nitrogen or argon. A minimum 24-hour pneumatic or hydrostatic test shall be performed. During this test all fittings, joints and system components shall be inspected for leaks. A solution compatible with the system component materials shall be used on each joint and fitting. Any defects in the system or leaks detected shall be documented on an inspection report, repaired or replaced. As an alternate, a pressure decay test in accordance with ASME B31.3 is allowed. A test of the low-pressure monitoring switch shall be performed. Each air fill panel shall be tested for compatibility with the fire department's SCBA RIC UAC. The pipe or tubing manufacturer mill report shall be provided to the Bellevue Fire Department.

917.12.2 Air samples.

A minimum of two samples shall be taken from separate air fill panels and submitted to an independent, certified gas analysis laboratory to verify the system's cleanliness and that the air is certified as breathing air. The laboratory shall submit a written report of the analysis to the Bellevue Fire Department documenting that the breathing air complies with this section.

917.12.3 Quality analysis.

During the period of air quality analysis, the air fill panel inlet shall be secured so that no air can be introduced into the system and each air fill panel shall be provided with a sign stating: "AIR QUALITY ANALYSIS IN PROGRESS, DO NOT FILL OR USE ANY AIR FROM THIS SYSTEM." This sign shall be a minimum of 8 1/2 by 11 inches (215 mm by 279 mm) with a minimum of 1-inch (25 mm) lettering.

917.12.4 Periodic Inspection, Testing and Maintenance.

The Firefighter Air System shall be continuously maintained in an operative condition and shall be inspected not less than annually. Annually two air samples shall be taken

~~from two separate filling stations and tested to verify compliance with NFPA 1989. The laboratory test results shall be maintained on site and readily available for review by the Bellevue Fire Department.~~

~~917.13 System acceptance and certification.~~

~~Prior to the final acceptance of the air system, the building owner shall provide for the testing and certification of the system. As a minimum, this shall include verifying the system's compatibility with the fire department's SCBA apparatus; the system's ability to maintain 5,500 psi (37 921.17 kPa) working pressure; the operability of the low-pressure monitoring switch and that the system's air quality complies with the requirements of Section 917.12. Prior to final acceptance, the building owner shall provide the Bellevue Fire Department with written verification of a testing and certification contract. Upon satisfactory completion of all tests and verification of air quality, the system shall be considered complete.~~

23.11.919 International Fire Code Section 919 added – Firefighter Replenishment Air System.

Chapter 9 of the International Fire Code is hereby amended by the addition of a new Section 919 to read as follows:

SECTION 919
FIREFIGHTER AIR REPLENSHMENT SYSTEMS

919.1 Scope. The design, installation, and maintenance of firefighter air replenishment systems shall be in accordance with this section.

919.2 Required installations. Firefighter air replenishment systems shall be installed in the following buildings and structures:

1. Buildings classified as high-rise in accordance with the International Building Code.

2. Transportation tunnels constructed in accordance with NFPA 130 or NFPA 502 that exceed 300 feet in length.

3. Underground pedestrian tunnels that exceed 300 feet in length.

919.3 Certificate of compliance

1. No certificate of occupancy shall be issued for a high-rise building or underground transportation and pedestrian tunnel unless a *certificate of compliance*, as described in section 919.15.3.2, is first issued.
2. The following elements for the life safety system shall be installed in accordance with *approved* plans and specifications and shall be tested, certified and proved

to be in proper working condition to the satisfaction of the *fire code official* before issuance of the *certificate of compliance*.

919.4 Firefighter air replenishment system. The firefighter air replenishment system is a complete, self-contained breathing air replenishment system, permanently installed within a structure, consisting of external mobile air connection panels, interior air fill stations, interconnected piping distribution system and an air storage system, and final locations shall be *approved* by the *fire code official*.

919.4.1 Purpose. The firefighter air replenishment system allows firefighters and other first responders to replenish empty breathing air cylinders within close proximity of the incident, reducing the amount of travel distance, time and personnel needed for logistical support, to maximize firefighter safety and effectiveness.

919.4.2 Scope. The design, installation, testing and certification of the firefighter air replenishment system shall be in accordance with this section.

919.4.3 Safety. The firefighter air replenishment system is a life-safety system. The system shall provide a safe and reliable source of clean breathable air to firefighters and other first responders performing fire suppression, evacuation, search and rescue, and other types of emergency response tasks at incidents requiring the use of self-contained breathing apparatus. Nothing within this specification shall be reduced in quality in any manner, including but not limited to system design criteria, system performance criteria, components, materials, installation procedures, testing procedures, commissioning requirements and certification.

919.4.4 Quality assurance. Plans, specifications, equipment, product data sheets and system calculations for the firefighter air replenishment system shall be prepared, reviewed and stamped by a Washington State licensed engineer knowledgeable and qualified in high pressure breathing air replenishment systems, who can demonstrate prior experience with such systems.

919.4.5 Contractor qualifications. The firefighter air replenishment system shall be installed by a Washington State licensed contractor with a minimum 3 years of experience specializing in fire department high pressure breathing air field. The installation contractor shall have a Bellevue business license.

919.5 Performance and design criteria.

919.5.1 The firefighter air replenishment system shall allow firefighters to replenish a minimum of two 66 cubic foot breathing air cylinders at 5,500 PSIG simultaneously within two minutes or less. All components of the system shall be rated to operate at a minimum working pressure of 5,500 PSIG at 70^0F with a 4:1 safety factor.

919.5.2 The air storage system shall be capable of replenishing not less than 50 breathing air cylinders at a rate of 2 simultaneously, each pair within 2 minutes or

less (25 repetitions) without fire department supplementation, based on fire department standard breathing air cylinders of 66 cubic feet at 5,500 PSIG.

919.5.3 The interconnected piping distribution system shall have a minimum calculated design flow using one (1) interior fill station and panel, totaling four 66 cubic foot 5,500 PSIG breathing air cylinders operating simultaneously at the farthest point from the fire department access.

919.5.4 When air supplementation becomes available by the fire department mobile air unit, the external mobile air connection panel shall allow the mobile air unit operator to connect and begin augmentation of the system, providing for a constant source of breathing air replenishment to all interior fill stations and panels.

919.5.5 The interconnected piping distribution system shall be designed so that the external mobile air connection panel may be isolated from the air storage system and routed directly to the interior air fill stations and panels via the system main distribution line. This shall be accomplished through the means of check valves and actuator selector valves readily accessible by fire department personnel, to allow breathing air to be supplied directly from the fire department mobile air unit to the interior fill stations and panels.

919.6 Permits, plans and fees.

919.6.1 Permits. A permit is required to install and repair a firefighter air replenishment system.

919.6.2 Plans. Prior to the installation of a firefighter air replenishment system, plans, calculations and specifications shall be submitted to the *fire code official* for review and approval in accordance with City of Bellevue permit submittal requirements. Plans and calculations shall be stamped by a Washington State licensed engineer and shall demonstrate compliance with the requirements of this section and demonstrate that the design criteria for all pressure containing components is satisfied with a minimum working pressure of 5,500 PSIG at 700F with a minimum 4:1 safety factor.

919.6.2.1 The plans submittal shall also include manufacturer mill report for the tubing, fittings, valves, pressure regulators, pressure relief devices, pressure gauges, cylinder filling hoses and all other components that may be required for a complete firefighter air replenishment system installation.

919.6.2.2 The *fire code official* is authorized to require additional information that is necessary for ensuring the proposed design meets the requirements of this section.

919.6.2.3 The installation of the firefighter air replenishment system shall not commence until complete plans, specifications and calculations have been submitted, *approved* and a permit issued by the *fire code official*.

919.6.3 Fees. Fees shall be submitted to the *fire code official* at the time of plan submittal.

919.6.4 Codes and standards. The firefighter air replenishment system shall conform to all current national standards and this Section 919. Construction requirements shall follow the currently adopted editions of the IBC and IFC. Where applicable all components of the firefighter air replenishment system shall meet the minimum requirements of the NFPA, OSHA, ASTM, ASME, ANSI and Bellevue Building, Fire, Plumbing and Mechanical codes.

919.7 System components. All pressurized breathing air components of the firefighter air replenishment system shall be listed by a nationally recognized testing laboratory or agency and *approved* by the *fire code official*. The system shall contain, at a minimum, the following components.

1. External mobile air connection panel;
2. Air storage system;
3. Air monitoring system;
4. Interior air fill station;
5. Interior air fill panel; and
6. Interconnected piping distribution system

919.7.1 Protection**.** All components of the firefighter air replenishment system shall be protected from physical damage and the piping, storage equipment, monitoring wiring and power wiring shall be separated from the remainder of the building by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.

Exception: Piping, monitor wiring and power wiring located outside of a 2-hour *fire barrier* construction shall be protected using any one of the following methods:

1. Cables listed in accordance with UL 2196 having a *fire-resistance rating* of not less than 2 hours;
2. Piping or cables encased with not less than 2 inches (51 mm) of concrete; or
3. Electrical circuit protective systems having a *fire-resistance rating* of not less than 2 hours. Electrical circuit protective systems shall be installed in accordance with their listing requirements.

919.7.2. Electrical power. The following features serving the firefighter air replenishment system shall be supplied by both the primary power and *legally required standby power*:

1. Air monitoring system – Section 919.14;
2. Air storage system – Section 919.12.3; and

3. External mobile air connection panel – Section 919.8.6

919.7.3 Materials of construction. All breathing air components used in the construction of the firefighter air **r**eplenishment system shall be *listed* by a nationally recognized testing laboratory or agency and *approved* by the *fire code official*. All pressurized components shall be compatible for use with high pressure breathing air equipment and self-contained breathing air apparatus. All pressurized breathing air components shall be rated for a minimum working pressure of 5,500 PSIG at 70^0F with a minimum 4:1 safety factor.

919.7.4 Markings. All components of the firefighter air replenishment system shall be clearly identified by means of stainless steel or plastic labels or tags indicating their function. This shall include as a minimum all fire department connection panels, air fill stations, air storage system, piping, gauges, valves, air connections, air outlets, enclosures, and doors.

919.8 Exterior fire department connection panel and enclosure.

919.8.1 Location. A minimum of two external mobile air connection panels shall be attached to the building or on a remote monument at the exterior of the building and shall be interconnected to the air monitoring system, air storage system, air fill stations and air fill panels. The external mobile air connection panels shall be secured inside of a weather resistant NEMA 4 enclosure. The panels shall be within 50 feet of an *approved* roadway or driveway, or other location *approved* by the *fire code official*. The enclosures shall be visible and accessible on approach to the building and shall be maintained with a minimum of 6 feet clear distance that provides a 180-degree clear unobstructed access to the front of the panels.

Exception: When the *fire code official* determines that it is impractical to provide two panels, only one external mobile air connection panel will be required

919.8.2 Purpose. The external mobile air connection panel shall provide the fire department mobile air operator access to the firefighter air replenishment system and shall be compatible with the fire department mobile air unit.

919.8.3 Non-metallic materials. When the enclosures are constructed of non-metallic materials, the enclosures shall be resistant to ultraviolet and infrared solar radiation.

919.8.4 Vehicle protection. When the panels are located in an area subject to vehicle traffic, impact protection shall be provided in accordance with *International Fire Code* Section 312.

919.8.5 Enclosure marking. The front of the enclosures shall be marked FIREFIGHTER AIR REPLENSHMENT SYSTEM on a securely attached stainless steel engraved, plastic engraved or painted plate. The lettering shall be in a color

that contrasts with the enclosure front and in letters that are a minimum of 2-inches high with 3/8-inch brush stroke. The marking of the enclosures shall be immediately visible and accessible to emergency response personnel.

919.8.6 Enclosure components. The external mobile air connection panel shall contain all of the necessary gauges, isolation valves, pressure relief valves, pressure regulating valves, check valves, tubing, fittings, supports, connectors, adapters, air monitoring displays, tamper devices, storage bypass and other necessary components as may be required to allow the fire department mobile air unit to connect and augment the system with a constant source of breathing air.

919.8.7 Fire department key box. A fire department key box shall be provided adjacent to the external mobile air connection panel and enclosure. A key for the enclosure shall be provided in the key box.

Exception: Subject to the approval of the *fire code official*, the key may be located in a fire department key box that also provides access keys for entry into the building, when it is nearby, the key is clearly marked, and there is sufficient room in the fire department key box.

919.9 Interior air fill station and air fill panel.

919.9.1 Location. Air fill stations shall be installed within buildings and structures as follows:

919.9.2 Above grade structure. An air fill station and enclosure shall be installed on the fifth floor above grade and every third floor thereafter. The air fill station shall be located at an *approved* location between the fire service access elevator and an approved enclosed *interior exit stairway*. Features of the approved stairway shall include access to all above grade floor levels of the building and proximity to the fire service access elevator. The specific location on the floors shall be *approved* by the *fire code official*.

919.9.3 Underground structure. An interior air fill panel shall be located in all required *interior exit stairways* on the floor landing commencing at the second level below grade and every other level below grade thereafter. The panel shall be located a minimum of 36 inches but not more than 60 inches above finished floor or stair landing.

919.9.4 Transportation and pedestrian tunnels. An interior air fill panel shall be located within 200 feet of the tunnel entrance and at intervals not exceeding 400 feet thereafter as *approved* by the *fire code official*. The panel shall be located a minimum of 36 inches but not more than 60 inches above finished floor.

919.9.5 Purpose. Air fill stations shall provide firefighters and other first responders the ability to safely and reliably replenish empty breathing air cylinders.

919.9.6 Performance. Air fill stations shall be capable of replenishing a minimum of two 66 cubic foot, 5,500 PSIG breathing air cylinders at 25 percent capacity within two minutes or less and shall provide for the refilling of breathing air cylinders within a certified rupture fill containment enclosure. The design of the air fill station shall provide for the direct refilling of firefighter breathing air cylinders by means of a discharge outlet with a minimum of one cylinder filling hose that shall have a female quick connect (UAC). The female UAC shall be designed to connect to a male UAC. The assembled UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, *Standard on Open Circuit Self-Contained Apparatus for Fire and Emergency Services.*

919.9.7 Enclosure requirements. Each air fill station shall be installed within a lockable enclosure (closet or room) by a means *approved* by the *fire code official*. Each enclosure shall be located between the fire service access elevator and an *approved* enclosed *interior exit stairway*. Features of the *approved* stairway shall include access to all above-grade floor levels of the building and proximity to the fire service access elevator.

The door to each enclosure shall be readily visible from the entrance to the *interior exit stairway* and readily accessible at all times by firefighters and other emergency responders and shall be maintained with a minimum of 6 feet clear distance that provides a 180-degree clear unobstructed access to the front of the panels. The enclosure shall have emergency illumination and at least one 120-volt AC duplex grounded receptacle supplied from the building *emergency power system*.

919.9.8 Security. To prevent unauthorized access to or tampering with the system, each air fill station enclosure shall be maintained locked by a means *approved* by the *fire code official*.

919.10 Markings.

919.10.1 Enclosure. Each air fill station enclosure shall be marked FIREFIGHTER AIR REPLENSHMENT SYSTEM on a securely fastened stainless steel engraved, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2-inches high with 3/8-inch brush stroke. The marking of the cabinet shall be immediately visible and accessible to emergency response personnel.

919.10.2 Stairway. Immediately above stairway signage required by *International Fire Code* Section 1023.9 a sign as described in 919.10.1 shall be posted at every door on floors equipped with air fill stations.

919.10.3 Air fill station marking. The front of each air fill station shall be marked FIREFIGHTER AIR REPLENSHMENT SYSTEM on a securely fastened stainless steel engraved, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2-inches high with

3/8-inch brush stroke. The marking of the cabinet shall be immediately visible and accessible to emergency response personnel.

919.11 Air fill station components. The air fill station shall contain all of the necessary gauges, isolation valves, pressure relief valves, pressure regulating valves, check valves, tubing, fittings, supports, connectors, adapters and other necessary components as may be required to allow firefighters and other first responders to safely and reliably replenish a minimum of two breathing air cylinders within a certified rupture-proof fill containment enclosure and an emergency connect directly to firefighter self-contained breathing apparatus equipment by means of quick fill adapters, hose and UAC fittings.

919.11.1 Purpose. Air fill panels shall provide firefighters and other first responders the ability to safely and reliably replenish empty breathing air cylinders during an emergency incident.

919.11.2 Performance. Air fill panels shall be capable of replenishing a minimum of two 66 cubic foot, 5,500 PSIG breathing air cylinders at 25 percent capacity within two minutes or less and shall provide for the direct refilling of firefighter breathing air cylinders by means of a discharge outlet with a minimum of two cylinder filling hoses that shall have a female quick connect (UAC). The female UAC shall be designed to connect to a male UAC. The assembled UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, *Standard on Open Circuit Self-Contained Apparatus for Fire and Emergency Services.*

919.11.3 Enclosure requirements. Each air fill panel shall be in a cabinet constructed of minimum 18-gauge carbon steel. The depth of the cabinet shall not create an exit obstruction when installed in building stairways. All components, except the control valve, pressure gauges, fill hoses and ancillary components, shall be contained behind a minimum 18-gauge carbon steel interior panel.

919.11.4 Cylinder filling hose. The design of the cabinet shall provide a means for storing the hose to prevent kinking. The brackets shall be installed so that the hose bend radius is maintained at 4 inches (102 mm) or greater when the hose is coiled.

The discharge outlet of each cylinder filling hose shall have a female Rapid Intervention Crew Universal Air Coupling (RIC/UAC). The female fitting shall be designed to connect to a male RIC/UAC. The assembled RIC/UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, *Standard on Open Breathing Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services*.

919.11.5 Door. Hinges for the cabinet door shall be located inside of the cabinet. The door shall be arranged such that when the door is open, it does not reduce the required exit width or create an obstruction in the path of egress. A minimum of 20 percent of the door surface area shall be a relite constructed of tempered glass. The thickness of the glass shall not be greater than 1/8 inch.

919.11.6 Security. To prevent unauthorized access to or tampering with the system, each air fill panel enclosure shall be maintained locked by a means *approved* by the *fire code official.*

919.11.7 Cabinet marking. The front of each panel shall be marked FIREFIGHTER AIR REPLENISHMENT SYSTEM on a securely fastened stainless steel engraved, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2-inches high with 3/8-inch brush stroke. The marking of the cabinet shall be immediately visible and accessible to emergency response personnel.

919.11.8 Air fill panel components. The air fill panel shall contain all of the necessary gauges, isolation valves, pressure relief valves, pressure regulating valves, check valves, tubing, fittings, supports, connectors, adapters and other necessary components as may be required to allow firefighters and other first responders to safely and reliably replenish a minimum of 2 breathing air cylinders connecting directly to firefighter self-contained breathing apparatus equipment by means of quick fill adapters, hose and RIC/UAC fittings.

919.12 Air storage system.

919.12.1 Location. An air storage system shall be installed in buildings and structures at locations *approved* by the *fire code official*.

919.12.2 Purpose. The air storage system along with interior air fill stations and air fill panels shall provide firefighters and other first responders the ability to safely and reliably replenish empty breathing air cylinders prior to the fire department mobile air unit arriving on scene.

919.12.3 Performance. The air storage system shall be capable of replenishing not less than 50 breathing air cylinders at a rate of 2 simultaneously, each pair within 2 minutes or less (25 repetitions) without fire department supplementation. The breathing air cylinders are fire department standard 66 cubic feet at 5,500 PSIG.

919.12.4 Enclosure requirements. The air storage system shall be contained within an enclosure (closet or room) which shall be separated from the remainder of the building by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both. The enclosure shall be sufficiently sized to accommodate all air storage system components. The access door to the enclosure shall be of sufficient size to allow for the maintenance and removal of the air storage system. The enclosure shall be conditioned so that the temperature is no less than 40^0F or more than 80^0F and shall have an engineered pressure relief vent for over-pressurization in the event of component failure. The enclosure shall have emergency illumination and at least one 120-volt AC duplex grounded receptacle supplied from the building *emergency power system*.

919.12.5 Security. To prevent unauthorized access to or tampering with the air storage system, the enclosure shall be maintained locked by a means *approved* by the *fire code official*.

919.12.6 Enclosure marking. The air storage enclosure shall be marked FIREFIGHTER AIR REPLENSHMENT SYSTEM on a securely fastened stainless steel engraved, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2-inches high with 3/8-inch brush stroke. The marking of the enclosure shall be immediately visible and accessible to emergency response personnel.

919.12.7 Air storage system marking. The air storage system shall be marked FIREFIGHTER AIR REPLENSHMENT SYSTEM on securely fastened stainless steel engraved, plastic engraved or painted plates. The lettering shall be in a color that contrasts with the system components and in letters that are a minimum of 2-inches high with 3/8-inch brush stroke.

919.13 Piping, distribution materials and methods.

919.13.1 Prohibition. The use of carbon steel, iron pipe, malleable iron, high-strength gray iron, alloy steel, copper or plastic for pressurized breathing air components is prohibited.

919.13.2 Materials of construction. All components of the piping distribution system shall be protected from physical damage and shall be separated from the remainder of the building by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.

All pressurized materials used in the construction of the piping distribution system shall be compatible for use with high pressure breathing air equipment and self-contained breathing apparatus. All pressurized breathing air components shall be rated for a minimum working pressure of 5,500 PSIG with a minimum 4:1 safety factor. The internal surfaces of all pressurized material shall be free of contamination.

919.13.3 Tubing. Tubing shall be constructed of stainless-steel materials that are compatible with high pressure breathing air. When stainless steel tubing is used, it shall meet ASTM A-269, Grade 316 or an equal standard. Stainless steel tubing shall be a minimum .375 outside diameter x .065 wall Grade 316 fully annealed seamless. Stainless steel tubing shall be at least Grade 316 and shall meet the requirements of ASTM A-479 or equal. Routing of tubing and bends shall be such as to protect the tubing from mechanical damage.

919.13.4 Securement. Tubing shall be supported at a maximum of five-foot intervals. Individual tubing clamps and mounting components shall be mechanically secured to

the building structural support members in accordance with the manufacturer's specifications and the applicable Bellevue Plumbing and Mechanical codes.

919.13.5 Marking. All tubing shall be clearly marked FIREFIGHTER AIR REPLENSHMENT SYSTEM and HIGH-PRESSURE BREATHING AIR using double-sided engraved 3-inch x 1-inch stainless steel or plastic markers placed at a minimum of 10-foot intervals and at each floor level whether concealed or not.

919.13.6 Fittings. Fittings shall be constructed of stainless-steel materials that are compatible with high-pressure breathing air. Stainless steel fittings shall be at least Grade 316 and meet the requirements of ASTM A-479 or an equal standard and rated to the maximum working pressure of the tubing used.

919.13.7 System assembly requirements. The piping distribution system shall be a welded system, except where the tubing joints are readily accessible and at the point of connection to the individual air fill stations. Welding procedures shall follow nationally recognized standards. Prior to and during the welding of sections of tubing, a continuous, regulated dry nitrogen purge at 3 PSIG shall be maintained to eliminate contamination with products of the oxidation or welding flux. The purge shall commence a minimum of 2 minutes prior to welding operations and continue until the welded joint is at ambient temperature of 72^{o}F. When mechanical high-pressure tube fittings are used, they shall be listed for the type of materials to be joined and rated for the maximum pressure of the system. When mechanical tube fittings are used, prior approval by the *fire code official* must be obtained. All concealed mechanical fittings for tubing and valves shall be readily accessible by means of a 90-minute *fire-resistance-rated*, *self-closing*, *self-latching fire door*. Each *fire door* shall be provided with a fire department *approved* locking system. Where tubing passes through *fire-resistance rated* construction, it shall be protected by a sleeve at least three times the tube diameter. Penetrations of *fire-resistance-rated* assemblies shall comply with *International Building Code* Section 714.

919.13.8 Prevention of contamination. The installing contractor shall ensure that, at all times, the system components are not exposed to contaminants, including but not limited to, oils, solvents, dirt and construction materials. When known or suspected contamination of system components has occurred, the affected component shall not be installed in the system. The installation shall also conform to engineering standard of care.

919.14 Air monitoring system. An *approved* air monitoring system shall be provided. The system shall automatically monitor air quality, moisture and pressure on a continual basis.

The air monitoring system shall be equipped with not less than two content analyzers capable of detecting carbon monoxide, carbon dioxide, nitrogen, oxygen, moisture and hydrocarbons. The air monitoring system shall be connected to the building fire alarm system as a supervisory alarm.

The air monitoring system shall transmit a supervisory signal when any of the following levels are detected:

1. Carbon monoxide exceeds 5 ppm;
2. Carbon dioxide exceeds 1,000 ppm;
3. An oxygen level below 19.5 percent or above 23.5 percent;
4. A nitrogen level below 75 percent or above 81 percent;
5. Hydrocarbon (condensed) content exceeds 5 milligrams per cubic meter of air;
6. The moisture concentration exceeds 24 ppm by volume; or
7. The pressure falls below 4,950 PSIG at 70°F

The air quality and pressure status shall be displayed at the fire command center, within the exterior mobile air connection panel and at the air storage system. The building owner or authorized agent shall notify the fire department and testing contractor of any alarm signaling a rise in moisture or carbon monoxide levels within the system.

919.15 Final testing, inspection and commissioning.

919.15.1 All components of the firefighter air replenishment system shall be pre-inspected and tested for proper assembly and operation prior to a functional fire department test and inspection.

919.15.2 Testing procedures.

919.15.2.1 Following fabrication, assembly, and installation of the piping distribution system, exterior connection panel and interior cylinder fill panels, the *fire code official* shall witness the pneumatic testing of the complete system at a minimum test pressure of 6,050 PSIG using oil-free dry air, nitrogen or argon. A minimum 24-hour pneumatic test shall be performed. During this test all fittings, joints and system components shall be inspected for leaks. A solution compatible with the system component materials shall be used on each joint and fitting to detect any leaks. Any system defects or detected leaks shall be documented on an inspection report and either repaired or replaced.

As an alternate, a pressure decay test in accordance with ASME B31.3 is allowed. A test of the low-pressure monitoring switch shall be performed. Each air fill panel shall be tested for compatibility with the fire department self-contained breathing apparatus (SCBA) RIC/UAC. The pipe or tubing manufacturer mill report shall be provided to the *fire code official*.

919.15.2.2 Upon the successful completion of the twenty-four-hour pressure test, the system low pressure monitor shall be calibrated to not less than 4,950 PSIG descending and tested to verify that the signal is annunciated at the building main fire alarm panel.

919.15.2.3 A minimum of two air samples shall be taken from separate air fill stations and submitted to an independent certified gas analyst laboratory to verify the system cleanliness and that the air meets all applicable standards for breathing air systems to include, but not limited to 1) NFPA 1500; 2) NFPA 1989 Standard on Breathing Air Quality for Emergency Services Respiratory Protection; and 3) OSHA Standard 29 CFR 1910.134(i)(1) – Grade D Breathing Air.

The laboratory shall submit a written report to the testing contractor and the *fire code official* documenting the air analysis complies with the above requirements.

919.15.2.4 During the period of air quality analysis, the air fill stations inlets shall be secured so that no air can be introduced into the system and each air fill station shall be provided with a sign stating, "AIR QUALITY ANALYSIS IN PROGRESS, DO NOT FILL OR USE ANY AIR FROM THIS SYSTEM." This sign shall be a minimum of 8-1/2 X 11 inch with a minimum of 1-inch lettering.

919.15.2.5 Each external mobile air connection panel shall be tested for compatibility with the fire department mobile air unit.

919.15.2.6 Each air fill station and air fill panel shall be tested for compatibility with the fire department self-contained breathing cylinders and apparatus.

919.15.2.7 The air storage system shall be tested for its ability to meet the performance criteria outlined in section 919.12.3.

919.15.2.8 The air monitoring system shall be tested for the capability to meet the requirements of this section.

919.15.2.9 Upon successful completion of all testing procedures, the system shall be filled to normal operating pressure of 5,500 PSIG, all control valves shall be placed in their normal operating position, and all doors shall be secured and locked. Five sets of keys properly identified shall be provided to the fire department.

919.15.3 System acceptance and final commissioning.

919.15.3.1 Training. The installing contractor shall provide training for the fire department upon the successful completion of all inspections, testing and commissioning procedures. The training shall be accomplished in three separate shifts of not more than three hours per session. The fire department may request additional training when the regular testing and certification contractor performs testing and certification procedures. Training sessions shall be by mutual consent with the building owner or authorized agent.

Exception: This requirement shall be waived when five projects with firefighter air replenishment systems have received a certificate of occupancy provided that

subsequent installations have not been granted approval under an *Alternative Materials, Design and Methods of Construction and Equipment*.

919.15.3.2 Certification. A certificate documenting that the entire firefighter air replenishment system has been installed, tested and commissioned in accordance with this Section 919 and the *approved* plans shall be stamped by a Washington State licensed engineer and submitted to the *fire code official*.

919.15.3.3 Final acceptance. Prior to the final acceptance of the firefighter air replenishment system and issuance of the certificate of occupancy, the building owner or authorized agent shall provide for the regular testing and certification of the firefighter air replenishment system. Written verification of regular testing and certification shall be provided to the fire department.

919.15.3.4 Regular testing and certification. The firefighter air replenishment system shall be continuously maintained in an operative condition and shall be inspected not less than annually.

This shall include verifying the system compatibility with the fire department mobile air unit and self-contained breathing apparatus, and shall include verifying the system ability to maintain 5,500 PSIG working pressure at 70^0F with a 4:1 safety factor, the operability of the low-pressure monitor, air monitoring system and the system ability to comply with the air quality requirements of this section. The building owner, authorized agent or testing contractor shall notify the fire department of any scheduled test of the system. On a quarterly basis two air samples shall be taken from two separate air fill stations and tested to verify compliance with NFPA 1989. The laboratory test results shall be maintained on site and readily available for review by the fire department.

Point of Information
Annual test reports shall be submitted online via www.TheComplianceEngine.com within 5 business days after completing the test

919.15.3.5 Final commissioning. Upon satisfactory completion of all testing procedures, receipt of the Washington State licensed engineer's stamped certification, verification of a regular testing and maintenance contract, and fire department training (unless waived by the fire department), the system shall be considered complete. The firefighter air replenishment system shall then be considered ready for use by firefighters and other first responders in an emergency incident.

919.16 Special requirements. Any modification or changes to components contained within or to the "systems" described in this section shall be requested through the *fire code official* and *approved* in writing. This condition does not prohibit emergency

repairs; however, a written report of the emergency repairs and testing is required to be submitted by the testing and certification contractor.

23.11.1008.3.4 International Fire Code Section 1008.3.4 amended – Duration.

International Fire Code Section 1008.3.4 is hereby amended to read as follows:

1008.3.4 Duration. The emergency power system shall provide power for a duration of not less than 90 minutes, or such time as stipulated by Section 2702 and Table 2702 when applicable for high-rise or underground buildings, and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with International Building Code Section 2702.

23.11.1009.8.1 International Building Code Section 1009.8.1 amended – System requirements.

International Fire Code Section 1009.8.1 is hereby amended to read as follows:

1009.8.1 System requirements. Two-way communication systems shall provide communication between each required location and the fire command center or a central control point location *approved* by the fire department. Where the central control point is not a constantly attended location, a two-way communication system shall have a timed automatic telephone dial-out capability to a monitoring location. The two-way communication system shall include both audible and visible signals. The two-way communication system shall have a battery backup or an *approved* alternate source of power that is capable of a duration of operation in accordance with Section 2702 and Table 2702 ~~90 minutes use~~ upon failure of the normal power source.

23.11.1010.1.7 International Fire Code Section 1010.1.7 amended – Thresholds.

International Fire Code Section 1010.1.7 is hereby amended to read as follows:

1010.1.7 Thresholds. Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving *dwelling units* or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one-unit vertical in two units horizontal (50-percent slope).

Exceptions:

1. In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7 3/4 inches (197 mm) in height if all of the following apply:

    1.1. The door is not part of the required *means of egress*.

    1.2. The door is not part of an *accessible route* as required by Chapter 11.

1.3. The door is not part of an *Accessible unit*, *Type A unit* or *Type B unit*.

2. In Type B units, where Exception 5 to Section 1010.1.5 permits a 4-inch (102 mm) elevation change at the door, the threshold height on the exterior side of the door shall not exceed 4 3/4 inches (120 mm) in height above the exterior deck, patio or balcony for sliding doors or 4 1/2 inches (114 mm) above the exterior deck, patio or balcony for other doors.

3. Thresholds at doors serving non-occupiable transformer rooms where emergency containment of oil and sprinkler water is required.

23.11.1011.7 International Fire Code Section 1011.7 amended – Stairway construction.

Section 1011.7 of the International Fire Code is hereby amended to read as follows:

1011.7 Stairway construction. Stairways shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood handrails shall be permitted for all types of construction.

Exception: In buildings with a 3-hour horizontal assembly used to establish two separate buildings in accordance with Section 510, a stairway constructed of combustible materials may extend below the 3-hour horizontal assembly if it is enclosed within a 3-hour fire-resistance rated shaft enclosure in accordance with Section 713, extending from the 3-hour horizontal assembly through the lowest basement level.

23.11.1011.12.2 International Fire Code Section 1011.12.2 amended – Roof access.

Section 1011.12.2 of the International Fire Code is hereby amended to read as follows:

1011.12.2 Roof access. Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with Section 1510.2 of the International Building Code.

Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet in area and having a minimum dimension of 3 feet.

23.11.1026 International Fire Code added – Fire Alarm and Sprinkler zones

Section 1026 International Fire Code is hereby amended by the addition of a new section 1026.6 – Fire Alarm and Sprinkler Zones

1026.6 Fire Alarm and Sprinkler Zones. When fire walls and/or horizontal exits are provided the fire alarm and sprinkler systems shall be zoned to coincide with the horizontal exits.

Exception: Sprinkler zoning is not required in existing construction if fire alarm initiating devices provide the same level of occupant notification that a zoned sprinkler system would provide.

23.11.1103.2 International Fire Code Section 1103.2 amended – Emergency responder radio coverage in existing buildings.

Section 1103.2 of the International Fire Code is hereby amended to read as follows:

1103.2 Emergency responder radio coverage in existing buildings.

Buildings constructed prior to the implementation of this code shall not be required to comply with the emergency responder radio coverage provisions except as follows:

1. Whenever an existing wired communication system cannot be repaired or is being replaced.
2. Buildings identified in Section 510.1 undergoing substantial alteration as determined by the *Fire code official*.
3. When buildings, classes of buildings or specific occupancies do not have minimum radio coverage signal strength as identified in Section 510.4.1 and the Fire or Police Chief determines that lack of minimum signal strength poses an undue risk to emergency responders that cannot be reasonably mitigated by other means.

23.11.1103.8 International Fire Code Section 1103.8 amended – Single- and multiple-station smoke alarms.

Section 1103.8 of the International Fire Code is hereby amended to read as follows:

1103.8 Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with Sections 1103.8.1 through 1103.8.3.

1103.8.1 Where required. Existing Group I-1 and R occupancies shall be provided with single-station smoke alarms in accordance with Section 907.2.~~11~~ 10. Interconnection and power sources shall be in accordance with ~~except as provided in~~ Sections 1103.8.2 and 1103.8.3.

Exception: Where smoke detectors connected to a fire alarm system have been installed as a substitute for smoke alarms.

23.11.1103.11 International Fire Code Section 1103.11 added – Building information card.

Chapter 11 of the International Fire Code is hereby amended by the addition of a new Section 1103.11 to read as follows:

Building Information Cards complying with Public Information Sheet F-72 or as hereafter amended shall be provided in every high-rise building, hospital and R occupancies where multiple buildings are located on a common podium.

Building Information Cards shall be located in each fire command center when provided. If no fire command center exits, the Building Information Cards shall be located in an *approved* location near the Fire Alarm Control Panel. The Building Information shall include~~s~~, but is not limited to, all of the following information:

1103.11.1 General Building Information. General building information that includes: property name, address, the number of floors in the building above and below grade, use and occupancy classification (for mix uses, identify the different types of occupancies on each floor) and the estimated building population during the day, night and weekend;

1103.11.2 Building Emergency Contact Information. Building emergency contact information that includes: a list of the building's emergency contacts including but not limited to building manager, building engineer and their respective work phone number, cell phone number and e-mail address;

1103.11.3 Building Construction Information. Building construction information that includes: the type of building construction including but not limited to floors, walls, columns and roof assembly;

1103.11.4 Exit Stairway Information. Exit access stairway and exit stairway information that includes; number of exit access stairways and exit stairways in building; each exit access stairway and exit stairway designation and floors served; location where each exit access stairway and exit stairway discharges, interior exit stairways that are pressurized; exit stairways provided with emergency lighting; each exit stairway that allow reentry; exit stairways providing roof access; elevator information that includes: number of elevator banks, elevator bank designation, elevator car numbers and respective floors that they serve; location of elevator machine rooms, control rooms and control spaces; location of sky lobby; and location of freight elevator banks;

1103.11.5 Building Services and System Information. Building services and system information that includes: location of mechanical rooms, location of building management system, location and capacity of all fuel oil tanks, location of emergency generator and location of natural gas service;

1103.11.6 Fire Protection System Information. Fire protection system information that includes: location of standpipes, location of fire pump room, location of fire department connections, floors protected by automatic sprinklers and location of different types of automatic sprinkler systems installed including but not limited to dry, wet and pre-action;

1103.11.7 Hazardous Material Information. Hazardous material information that includes: location and quantity of hazardous material.

23.11.1107 International Fire Code Section 1107 added – Address identification.

Chapter 11 of the International Fire Code is hereby amended by the addition of a new Section 1107 to read as follows:

SECTION 1107

PREMISES IDENTIFICATION

1107.1 Address Identification. Address Identification for existing buildings shall be in accordance with section 505~~.1~~ of this code.

23.11.1203.1 International Fire Code Section 1203.1 amended – Emergency and standby power systems.

Section 1203.1 of the International Fire Code is hereby amended as follows:

1203.1 General. Emergency power systems and standby power systems required by this code shall comply with International Building Code chapter 27 as amended by the City of Bellevue.

23.11.2306.2.3 International Fire Code Section 2306.2.3 amended – Above-ground tanks located outside, above grade.

Section 2306.2.3 of the International Fire Code is hereby amended to read as follows:

2306.2.3 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 in accordance with UL 2085 and shall be in accordance with Chapter 57. Such tanks shall be located in accordance with Table 2306.2.3.
3. Above-ground tanks used for outside, above-grade storage of Class II or IIIA liquids shall be listed and labeled as protected above-ground tanks in accordance with UL 2085 and shall be installed in accordance with Chapter 57. Tank locations shall be in accordance with Table 2306.2.3.

   Exception: Other above-ground tanks that comply with Chapter 57 where *approved* by the *fire code official*.

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 5706.2.
6. Above-ground tanks used for outside above-grade storage of Class IIIB liquid motor fuel shall be listed and labeled in accordance with UL 142 or listed and labeled as protected above-ground tanks in accordance with UL 2085 and shall be installed in accordance with Chapter 57. Tank locations shall be in accordance with Table 2306.2.

23.11.3308 International Fire Code Section 3308 amended – Owner's responsibility for fire protection.

SECTION 3308 OWNER'S RESPONSIBILITY FOR FIRE PROTECTION

3308.1 Program superintendent. The owner shall designate a person to be the fire prevention program superintendent who shall be responsible for the development, implementation and maintenance of a written plan establishing a fire prevention program at the project site applicable throughout all phases of the construction, repair, alteration or demolition work and ensure that it is carried out through completion of the project. The fire prevention program superintendent shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. Where guard service is provided, the superintendent shall be responsible for the guard service.

3308.2 Prefire plans. The fire prevention program superintendent shall develop and maintain an *approved* prefire plan in cooperation with the fire chief. Prefire plans for buildings exceeding 50,000 s.f. shall be *approved* prior to the issuance of the building permit. The fire chief and the *fire code official* shall be notified of changes affecting the utilization of information contained in such prefire plans.

3308.3 Training. Training of responsible personnel in the use of fire protection equipment shall be the responsibility of the fire prevention program superintendent.

3308.4 Fire protection devices. The fire prevention program superintendent shall determine that all fire protection equipment is maintained and serviced in accordance with this code. The quantity and type of fire protection equipment shall be *approved*.

3308.5 Hot work operations. The fire prevention program superintendent shall be responsible for supervising the permit system for hot work operations in accordance with Chapter 35.

3308.6 Impairment of fire protection systems. Impairments to any fire protection system shall be in accordance with Section 901.

3308.7 Temporary covering of fire protection devices. Coverings placed on or over fire protection devices to protect them from damage during construction processes shall be immediately removed upon the completion of the construction processes in the room or area in which the devices are installed.

3308.8 Job shacks and other temporary structures. Job shacks and other temporary structures located within or less than 20' from the permanent building shall be:

- Constructed of non-combustible materials or 1-hour fire-resistive construction.
- Shall not be equipped with fuel fired heaters.
- Shall be equipped with monitored fire alarm system when located below grade.
- Shall not function as offices unless protected with automatic sprinkler systems.

~~3308.8~~ 3308.10 Additional Requirements for ~~High-rise buildings and~~ wood-frame buildings more than 50,000 s.f. in area.

~~3308.8.1~~ 3308.10.1 Job Site Security. The job site shall be secured with controlled access once above grade combustible construction has begun together with off hours guard service, motion-controlled surveillance or both.

~~3308.8.2 Job shacks and other temporary structures. Job shacks and other temporary structures located within or less than 20' from the permanent building shall be:~~

~~• Constructed of non-combustible materials or 1 hour fire-resistive construction.~~

~~• Shall not be equipped with fuel fired heaters.~~

~~• Shall be equipped with monitored fire alarm system when located below grade.~~

~~• Shall not function as offices unless protected with automatic sprinkler systems.~~

~~3308.8.3~~ 3308.10.2 Construction mitigations for wood frame buildings exceeding 80,000 s.f. when exposures exists within 60' of a building under construction. The exterior wall of the building under construction shall be covered with 5/8-inch gypsum sheathing to include windows, doors or other openings until interior framing members have been covered with gypsum board or their finish materials.

For the purpose of measuring total square footage of wood framing, any adjacent on-going wood frame construction is considered to be within the project when adjacent structures are separated by less than sixty (60) feet of open air.

Exception: A mitigation plan developed by a Washington State Licensed Fire Protection Engineer. The mitigation plan may rely on temporary, permanent and/or active measures.

~~3308.8.4~~ 3308.10.3 Construction mitigations for wood frame buildings exceeding three hundred fifty thousand square feet; or two hundred thousand square feet when the building exceeds fifty feet in height:

Mitigating fire protection barriers consisting of at least one layer of 5/8-inch gypsum board or other equivalent fire resistive materials shall be installed such that the mitigating fire protection barrier(s) enclose area(s) of not more than fifty thousand square feet.

For the purpose of measuring total square footage of wood framing, any adjacent on-going wood frame construction is considered to be within the project when adjacent structures are separated by less than sixty (60) feet of open air.

Exception: A mitigation plan developed by a Washington State Licensed Fire Protection Engineer. The mitigation plan may rely on temporary, permanent and/or active measures.

23.11.5003.9 International Fire Code Section 5003.9 amended – General safety.

Section 5003.9 of the International Fire Code is hereby amended to read as follows:

5003.9 International Fire Code Section 5003.9 – General safety precautions. General precautions for the safe storage, handling or care of hazardous materials shall be in accordance with Sections 5003.9.1 through 5003.9.11.

23.11.5003.9.11 International Fire Code Section 5003.9.11 added – Manufacturer's limitations.

Section 5003.9 of the International Fire Code is hereby amended by the addition of a new section 5003.9.11 to read as follows:

5003.9.11 International Fire Code Section 5003.9.11 – Manufacturer's Limitations. The storage and use of hazardous materials shall not exceed the manufacturer's limitations on shelf life and any other restrictions on use.

23.11.5307.3 International Fire Code Section 5307.3 amended – Insulated liquid carbon dioxide or nitrogen system used in beverage dispensing applications.

Section 5307.3 of the International Fire Code is hereby amended to read as follows:

5307.3 Insulated liquid carbon dioxide or nitrogen systems used in beverage dispensing applications. Insulated liquid carbon dioxide or nitrogen systems with more than 100 pounds (45.4 kg) of carbon dioxide or nitrogen used in beverage dispensing applications shall comply with Section 5307.3.1.

5307.3.1 Ventilation. Where insulated liquid carbon dioxide or nitrogen storage tanks, cylinders, piping and equipment are located indoors, rooms or areas containing storage tanks, cylinders, piping and equipment, and other areas where a leak of carbon dioxide or nitrogen is expected to accumulate, shall be provided with mechanical ventilation in

accordance with Section 5004.3 and designed to maintain the room containing carbon dioxide or nitrogen at a negative pressure in relation to the surrounding area.

Exception: A gas detection system complying with Section 5307.3.2 shall be permitted in lieu of mechanical ventilation.

5307.3.2 Gas detection system. Where ventilation is not provided in accordance with Section 5307.3.1, a gas detection system shall be provided in rooms or indoor areas and in below-grade outdoor locations with insulated carbon dioxide or nitrogen systems. Carbon dioxide or nitrogen sensors shall be provided within 12 inches (305 mm) of the floor in the area where the gas is expected to accumulate or other *approved* locations.

The system shall be designed as follows:

1. Activates an audible and visible supervisory alarm at a normally attended location upon detection of a carbon dioxide or nitrogen concentration of 5,000 ppm (9000 mg/m3).
2. Activates an audible and visible alarm within the room or immediate area where the system is installed upon detection of a carbon dioxide or nitrogen concentration of 30,000 ppm (54 000 mg/m3).

23.11.5601.2.2 International Fire Code Section 5601.2.2 amended – Sale and retail display.

Section 5601.2.2 of the International Fire Code is hereby amended to read as follows:

5601.2.2 Explosives, Explosive Materials or Fireworks Sale. It is illegal to offer for sale explosives, explosive materials or fireworks.

Exceptions:

1. The Fire Marshal is authorized to allow sales of explosives or explosive materials for activities such as demolition activities and fireworks for permitted public displays.
2. The use by law enforcement or emergency response agencies of devices that may fall within the definition of explosives, explosive materials or the definition of fireworks, when such devices are to be used in the furtherance of law enforcement or emergency response operations or training.
3. For the purposes of this chapter, small arms ammunition, small arms ammunition primers, smokeless powder not exceeding fifty pounds, and black powder not exceeding five pounds shall not be defined as explosives, unless possessed or used for a purpose inconsistent with small arms use or other lawful purpose.

23.11.5601.2.3 International Fire Code Section 5601.2.3 amended – Permit restrictions.

Section 5601.2.3 of the International Fire Code is hereby amended to read as follows:

5601.2.3 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.

23.11.5601.9 International Fire Code Section 5601.9 added – Violations and penalties.

Chapter 56 of the International Fire Code is hereby amended by the addition of a new Section 5601.9 to read as follows:

5601.9 Violations and penalties.

Violations of BCC 23.11.5601.2.2 or BCC 23.11.5608.2 may be prosecuted as a civil violation under Chapter 1.18 BCC.

23.11.5608.2 International Fire Code Section 5608.2 amended – Fireworks discharge prohibited.

Section 5608.2 of the International Fire Code is hereby amended to read as follows:

5608.2 Fireworks Discharge Prohibited. No person shall ignite or discharge any fireworks at any time.

Exceptions:

1. 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.

23.11.5608.2.3 International Fire Code Section 5608.2.3 added – Standards for fireworks displays.

Section 5608.2 of the International Fire Code is hereby amended by the addition of a new subsection 5608.2.3 to read as follows:

5608.2.3 Standards for fireworks displays. All fireworks displays shall conform to the following minimum standards and conditions:

A. All fireworks displays must be planned, organized, and discharged by a state-licensed pyrotechnician.

B. A permit must be obtained from the city and *approved* by the fire chief or designee prior to any display of fireworks. The permit shall include the name of the applicant and his address, the name of the pyrotechnician and his address, the exact location, date and time of the proposed display, the number, type and class of fireworks to be displayed, and the manner in which the fireworks are being stored prior to the public fireworks display.

C. The applicant for a display of fireworks permit shall include with the application evidence of a bond issued by an authorized surety or a certificate of public liability insurance. Such bond or certificate shall conform to the requirements set forth in RCW 70.77.285 and 70.77.355.

D. A drawing shall be submitted with the application to the fire chief showing a plan view of the fireworks discharge site and the surrounding area within a 500-foot radius. The drawing shall include all structures, fences, barricades, streets, fields, streams, and any other significant factors that may be subjected to ignition or that may inhibit firefighting capabilities.

E. When, in the discretion of the fire chief, such requirement is necessary to preserve the public health, safety and welfare, the permit may, at the direction of the fire chief or designee, require that a Bellevue fire pumper and a minimum of three firefighters shall be on site 30 minutes prior to and after the conclusion of the display. All compensation for fire personnel and apparatus will be paid by the applicant in an amount calculated according to the Washington State Fire Chiefs Association's fee schedule and shall be designated to the Bellevue fire department.

F. All combustible debris and trash shall be removed by the applicant from the area of discharge for a distance of 300 feet in all directions.

G. Applicant shall dispose of all unfired or "dud" fireworks in a safe manner.

H. Applicant shall provide the fireworks discharge site a minimum of two 2A-rated pressurized water fire extinguishers and one fire blanket.

I. The permit may be immediately revoked at any time deemed necessary by the fire chief or designee due to any noncompliance or weather conditions such as extremely low humidity or wind factor. The display may also be canceled by accidental ignition of combustible or flammable material in the vicinity due to fall debris from the display.

J. Areas of public access shall be determined by the fire chief or designee and maintained by the applicant in an *approved* manner.

K. For displays other than the 4th of July, the permit application must also include a public notification plan for affected residents or businesses. This may include newspaper, radio, and/or television announcements; door to door distribution of

written announcements; reader boards and/or other methods or media. The public notification plan is subject to approval by the fire chief or designee. Costs associated with public notification to affected residents are to be borne by the permit applicant.

23.11.5704.2.7.2 International Fire Code Section 5704.2.7.2 amended – Pressure limitations for tanks.

Section 5704.2.7.2 of the International Fire Code is hereby amended to read as follows:

5704.2.7.2 Pressure limitations for tanks. Tanks shall be designed for the pressures to which they will be subjected in accordance with NFPA 30. If the static head with a vent pipe filled with oil exceeds 10 pounds per square inch (psi) (69 kPa), the tank shall be designed for the maximum static head that will be imposed.

23.11.5704.2.9.6.1 International Fire Code Section 5704.2.9.6.1 amended – Locations where above-ground tanks are prohibited or restricted.

Section 5704.2.9.6.1 of the International Fire Code is hereby amended to read as follows:

5704.2.9.6.1 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.

23.11.5704.2.13 International Fire Code Section 5704.2.13 amended – Abandonment and status of tanks.

Section 5704.2.13 of the International Fire Code is hereby amended to read as follows:

5704.2.13 Tanks taken out of service shall be removed in accordance with Section 5704.2.14, or safeguarded in accordance with Sections 5704.2.13.1 through 5704.2.13.2.3 and American Petroleum Institutes (API) 1604.

Residential heating oil tanks required by this code to be removed or decommissioned shall also comply with Public Information Sheet F-07 Decommissioning Residential Heating Oil Tanks and any future revision to this document.

<u>23.11.5707 International Fire Code Section 5707 amended – On-Demand Mobile Fueling Operations</u>

<u>Section 5707 of the International Fire Code is hereby amended to read as follows:</u>

SECTION 5707 ON-DEMAND MOBILE FUELING OPERATIONS

5707.1 General. On-demand mobile fueling operations that dispense Class I, II and III liquids into the fuel tanks of motor vehicles shall comply with Sections 5707.1 through 5707.6.~~3~~6.

Exception: Fueling from an *approved* portable container in cases of an emergency or for personal use.

5707.1.1 Approval required. Mobile fueling operations shall not be conducted without first obtaining a *permit* and approval from the *fire code official*. Mobile fueling operations shall occur only at *approved* locations. The *fire code official* is authorized to approve individual locations or geographic areas where mobile fueling is allowed.

5707.2 Mobile fueling vehicle. An on-demand mobile fueling vehicle shall be ~~one of the following:~~ that which is utilized in on-demand fueling operations for the dispensing of Class I, II or III liquids into the fuel tanks of motor vehicles.

5707.2.1 Mobile fueling vehicle classifications. An on-demand mobile fueling vehicle shall be characterized one of the following:

1. Tier 1 Mobile Fueling Vehicle- A tank vehicle that complies with NFPA 385 and that has chassis-mounted tanks ~~or containers~~ where the aggregate ~~cargo~~ capacity does not exceed ~~1200~~ 1600 gallons (~~4592~~ 6057 L).

2. Tier 2 Mobile Fueling Vehicle- A ~~mobile fueling~~ vehicle with ~~a mounted *tank* in excess of~~ one or more chassis-mounted tanks or chassis-mounted containers, not to exceed 110 gallons (415 L) capacity and having an aggregate capacity that does not exceed 800 gallons (3028 L) ~~shall comply with the requirements of Section 5706.6, Section 5707 and NFPA 385~~ or the weight capacity of the vehicle in accordance with DOTn.

~~2.~~ 3.Tier 3 Mobile Fueling Vehicle- A vehicle that carries a maximum aggregate capacity of 60 gallons (227 L) of motor fuel in metal safety cans *listed* in accordance with UL 30 or other *approved* metal containers*,* each not to exceed 5 gallons (19 L) in capacity. ~~Containers shall be secured to the mobile fueling vehicle except when in use.~~

5707.2.2 Mobile fueling vehicle requirements. Each ~~The~~ mobile fueling vehicle shall comply with all local, state and federal requirements~~.~~, as well as the following:

1. Mobile fueling vehicles with a chassis-mounted tank in excess of 110 gallons (415 L) shall also comply with the requirements of Section 5706.6 and NFPA 385.
2. The mobile fueling vehicle and its equipment shall be maintained in good repair.
3. Safety cans and *approved* metal containers shall be secured to the mobile fueling vehicle except when in use.

4. Fueling a motor vehicle from tanks or containers mounted in a trailer connected to a mobile fueling vehicle shall be prohibited.

5707.3 Required documents. Documents developed to comply with Sections 5707.3.1 through 5707.3.3 shall be updated as necessary by the *owner* of the mobile fueling operation and shall be maintained in compliance with Section 108.3.

5707.3.1 Safety and emergency response plan. Mobile fueling operators shall have an *approved* written safety and emergency response plan that establishes policies and procedures for fire safety, spill prevention and control, personnel training and compliance with other applicable requirements of this code.

5707.3.2 Training records. Mobile fueling vehicles shall be operated only by designated personnel who are trained on proper fueling procedures and the safety and emergency response plan. Training records of operators shall be maintained.

5707.3.3 Site plan. Where required by the *fire code official*, a site plan shall be developed for each location or area at which mobile fueling occurs. The site plan shall be in sufficient detail to clearly indicate the following:

1. ~~a~~ All buildings, structures;

2. ~~l~~ *Lot lines* or, property lines ~~and;~~

3. Electric car chargers;

4. Solar photovoltaic parking lot canopies;

5. ~~a~~ Appurtenances on site and their use or function~~;~~

6. ~~a~~ All uses adjacent to the *lot lines* of the site~~; all~~

7. ~~f~~ Fueling locations ~~, the;~~

8. ~~l~~ Locations of all storm drain openings and adjacent waterways or wetlands;

9. ~~l~~ Information regarding slope, natural drainage, curbing, impounding ~~and~~;

10. ~~h~~ How a spill will be kept on the site property; and ~~the~~

11. ~~s~~ Scale of the site plan.

5707.4 Mobile fueling areas. ~~Mobile fueling~~ The mobile fueling vehicle and point of connection of the vehicle being fueled shall not occur on public streets, *public ways* or inside *buildings*. Fueling on the roof level of parking structures or other *buildings* is prohibited.

5707.4.1 Separation. ~~Mobile fueling~~ The point of connection of the vehicle being fueled shall not take place within 25 feet (7620 mm) of buildings, lot lines, property lines or combustible storage. Mobile fueling vehicles shall not park within 10 feet (3048 mm) of buildings, lot lines, property lines, or combustible storage.

Exceptions:

1. The *fire code official* shall be authorized to decrease the separation distance for dispensing from metal safety cans or other *approved* metal containers in accordance with Section 5707.2.
2. The point of fueling shall not take place within 10 feet (3048 mm) of buildings, lot lines, property lines, or combustible storage when the mobile fueling vehicle has an *approved* vapor recovery system or is servicing vehicles with on board refueling vapor recovery.

Where dispensing operations occur within 15 feet (4572 mm) of a storm drain, an *approved* storm drain cover or an *approved* equivalent method that will prevent any fuel from reaching the drain shall be used.

5707.4.3 Electrical equipment. Mobile fueling shall not occur within 20 feet of electrical equipment located within 18 inches of the ground unless such electrical equipment is rated for Class 1, Division 2 hazardous locations in accordance with the National Electrical Code.

5707.4.2 Sources of ignition. Smoking, open flames and other sources of ignition shall be prohibited within 25 feet (7620 mm) of fuel dispensing activities. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the vehicle or the point of fueling shall be prominently posted on the mobile fueling vehicle. The engines of vehicles being fueled shall be shut off during fueling.

5707.5 Equipment. Mobile fueling equipment shall comply with Sections 5707.5.1 through 5707.5.((4))5.

5707.5.1 Dispensing hoses and nozzles. Where equipped, the dispensing hose shall not exceed 50 feet (15 240 mm) in length. The dispensing nozzles and hoses shall be of an *approved* and *listed* type. Where metal-to-metal contact cannot be made between the nozzle and the fuel fill opening, then a means for bonding the mobile fueling vehicle to the motor vehicle shall be provided and employed during fueling operations.

5707.5.2 Break-away device. A listed break-away device shall be provided at the nozzle.

Exception: Mobile fueling vehicles equipped with an *approved* brake interlock tied to the nozzle holder that prohibits movement of the mobile fueling vehicle when the nozzle is removed from its holder or tied to the delivery of fuel that prevents activation of the pumping system.

5707.5.2~~2~~3 ~~Fuel~~ Shut off valve and fuel limit. Mobile fueling vehicles shall be equipped with a listed shutoff valve assembly and a fuel limit switch set to a maximum of 30 gallons (116 L) ~~and a nozzle or other *approved* device that, when activated, immediately causes flow of fuel from the mobile fueling vehicle to cease~~.

5707.5.~~3~~4 Fire extinguisher. An *approved* portable fire extinguisher complying with Section 906 with a minimum rating of ~~40~~ 4A:80-B:C shall be provided on the mobile fueling vehicle with signage clearly indicating its location.

5707.5.~~4~~5 Spill kit. Mobile fueling vehicles shall contain a minimum 5-gallon (19 L) spill kit of an *approved* type.

5707.6 Operations. Mobile fueling vehicles shall be constantly attended during fueling operations with brakes set and warning lights in operation. Mobile fueling vehicles shall not obstruct emergency vehicle access roads.

5707.6.1 Dispensing hose. Where equipped, mobile fueling vehicles shall be positioned in a manner to preclude traffic from driving over the dispensing hose. The dispensing hose shall be properly placed on an *approved* reel or in an *approved* compartment prior to moving the mobile fueling vehicle.

5707.6.2 Drip control. Operators shall place a drip pan or an absorbent pillow under the nozzle and each fuel fill opening prior to and during dispensing operations to catch drips.

5707.6.3 Safety cones. Safety cones or other visual barriers shall be employed as warning devices to highlight the vehicle fueling area.

5707.6.4 Vehicle lights. The mobile fueling vehicle flasher lights shall be in operation while dispensing operations are in progress.

5707.6.5 Nighttime deliveries. Nighttime deliveries shall only be made in areas deemed adequately lighted by the *fire code official*.

5707.6.~~3~~6 Spill reporting. Spills shall be reported in accordance with Section 5003.3.1.

23.11.6104.2 International Fire Code Section 6104.2 amended – Maximum capacity.

Section 6104.2 of the International Fire Code is hereby amended to read as follows:

6104.2 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.

23.11.80 International Fire Code Chapter 80 amended – Reference Standards

Chapter 80 of the International Fire Code amended – NFPA 1221

Reference to NFPA 1221 – 16: Standard for the Installation, Maintenance and Use of Emergency Services Communication Systems is amended to read as follows:

NFPA

1221—~~16~~ 19: Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems

510.4.2, 510.5