



## CITY OF MERCER ISLAND

9611 SE 36<sup>th</sup> Street, Mercer Island, Washington 98040-3732  
❖ PHONE (206) 236-5300 ❖ FAX (206) 236-3645 ❖ TDD (206) 232-9598  
www.ci.mercer-island.wa.us

# INTERNATIONAL FIRE CODE – ADOPTION AND AMENDMENTS

Effective July 1, 2004

The 2003 edition of the International Fire Code (IFC), as adopted and amended by the State Building Code Council in Chapter 51-54 WAC, as published by the International Code Council, excluding WAC 51-54-0500: Chapter 5, Fire Service Features, is adopted by reference, together with the amendments and additions set forth below.

The following Appendices of the 2003 edition of the International Fire Code are also adopted by reference: Appendix B – Fire-Flow Requirements for Buildings; Appendix C – Fire Hydrant Locations and Distribution; and Appendix D – Fire Apparatus Access Roads.

### **Amendments and Additions.**

**A. IFC Section 102.6 Amended – Applicability, Referenced codes and standards.**  
Section 102.6 of the International Fire Code is hereby amended to read as follows:

**Section 102.6 Referenced codes and standards.** The codes and standards referenced in this code shall be those that are listed in Chapter 45. Such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference as determined or modified by the fire code official. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.

**B. IFC Section 104.10.1 Amended – General Authority and Responsibilities, Assistance from other agencies.** Section 104.10.1 of the International Fire Code is hereby amended to read as follows:

**Section 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 when requested to do so by the fire code official.

**C. IFC Section 104.11.2 Amended – General Authority and Responsibilities, Obstructing operations.** Section 104.11.2 of the International Fire Code is hereby amended to read as follows:

**Section 104.11.2 Obstructing operations.** No person shall obstruct the operations of the fire department in connection with extinguishment, control, or investigation 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.

**D. IFC Section 105.1.4 Added – Permits, Construction permit fees.** Section 105.1.4 of the International Fire Code is hereby added to read as follows:

**Section 105.1.4 Construction permit fees.** Fees will be assessed for each construction permit issued under this Code. Fees shall be established by resolution of the city council.

**E. IFC Section 105.1.5 Added – Permits, Operational permit fees.** Section 105.1.5 of the International Fire Code is hereby added to read as follows:

**Section 105.1.5 Operational permit fees.** Fees may be charged annually for each type of operational permit. Fees shall be established by resolution of the city council.

**F. IFC Section 108.1 Amended – Board of Appeals, Board of appeals established.** Section 108.1 of the International Fire Code is hereby amended to read as follows:

**Section 108.1 General.** In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of the International Fire Code, there shall be a building board of appeals as established in MICC Chapter 3.28.

**G. IFC Section 108.2 Amended – Board of Appeals, Limitations on authority.** Section 108.2 of the International Fire Code is hereby amended to read as follows:

**Section 108.2 Limitations on authority.** An application for appeal shall be based on a claim that the true intent of the International Fire Code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the International Fire Code do not fully apply or an equally good or better form of construction is proposed. The building board of appeals shall have no authority relative to interpretation of the administrative provisions of the International Fire Code nor shall the board be empowered to waive requirements of the International Fire Code which are the codes, appendices and referenced code standards adopted by the jurisdiction.

**H. IFC Section 108.3 Deleted – Board of Appeals, Qualifications.**

**I. IFC Section 308.3.1.2 Added – Open Flames, Flaming food and beverage preparation.** Section 308.3.1.2 of the International Fire Code is hereby added to read as follows:

**Section 308.3.1.2 Flaming food and beverage preparation.**

**308.3.1.2.1 General.** The preparation of flaming foods or beverages in places of assembly and drinking or dining establishments shall be in accordance with Section 308.3.1.2.

**308.3.1.2.2 Dispensing.** Flammable or combustible liquids used in the preparation of flaming foods or beverages shall be dispensed from one of the following:

1. A 1-ounce (29.6 ml) container or
2. A container not exceeding 1 quart (946.5 ml) capacity with controlled-pouring device that will limit the flow to a 1 ounce (29.6 ml) serving.

**308.3.1.2.3 Containers not in use.** Containers shall be secured to prevent spillage when not in use.

**308.3.1.2.4 Serving of flaming food.** The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames. The pouring, ladling or spooning of liquids is restricted to a maximum height of 8 inches (203 mm) above the receiving receptacle.

**308.3.1.2.5 Location.** Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be transported or carried while burning.

**308.3.1.2.6 Fire protection.** The person preparing the flaming foods or beverages shall have a wet cloth immediately available for use in smothering the flames in the event of an emergency.

**J. IFC Section 308.3.7 Amended – Open Flames, Group A occupancies.** Section 308.3.7 of the International Fire Code is hereby amended to read as follows:

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

**Exceptions:**

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

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

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

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

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

3. Gas lights are allowed to be used provided adequate precautions satisfactory to the fire code official are taken to prevent ignition of combustible materials.

4. Where approved by the fire code official (see also 308.3.1.2).

**K. IFC Section 314.4 Amended – Indoor Displays, Vehicles.** Section 314.4 of the International Fire Code is hereby amended to read as follows:

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

1. Batteries are disconnected.
2. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (19 L) (whichever is least).
3. Fuel tanks and fill openings are closed and sealed to prevent tampering.
4. Vehicles, fueled equipment, boats or other motorcraft equipment are not fueled or defueled within the building.

**L. IFC Section 501.1 Amended – General, Scope.** Section 501.1 of the International Fire Code is hereby amended to read as follows:

**Section 501.1 Scope.** Fire service features for buildings, structures and premises shall comply with this chapter. The requirements in this chapter may be modified by the fire code official if other approved fire-protection features are provided.

**M. IFC Section 503.1 Amended – Fire Apparatus Access Roads, Where required.** Section 503.1 of the International Fire Code is hereby amended to read as follows:

**Section 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/or local street, road and access standards.

**N. IFC Section 508.3 Amended – Fire Protection Water Supplies, Fire flow.** Section 508.3 of the International Fire Code is hereby amended to read as follows:

**Section 508.3 Fire flow.** Fire flow requirements for buildings or portions of buildings and facilities shall be determined by Appendix B.

**O. IFC Section 508.5.1 Amended – Fire hydrant systems, Where required.** Section 508.5.1 of the International Fire Code is hereby amended to read as follows:

**Section 508.5.1 Where required.** Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 150 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

**Exceptions:**

1. For one- and two-family dwellings and Group R-3 and Group U occupancies, the distance requirement shall be 300 feet.

2. For buildings one- and two-family dwellings and Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

**P. IFC Section 511 Added – Emergency Radio Coverage in Buildings.** Section 511 of the International Fire Code is hereby added to read as follows:

**Section 511 Emergency Radio Coverage in Buildings.**

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

**Exceptions:**

1. This section shall not apply to single family residential buildings; any building constructed of wood frame; or any building thirty-five (35) feet high or less, as long as none of the aforementioned buildings make primary use of metal or concrete construction or contain below grade storage or parking areas. For purposes of this section, parking structures are included in the definition of building, and stair shafts are included in the definition of all parts of a building, but elevators may be excluded.

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

**511.1.1 Adequate radio coverage.** A minimum signal strength of three (3) micro volts shall be available in all areas of the building when transmitted from the Regional 800 MHz. Radio System. For purposes of this section, 90 percent building coverage is considered to be all areas of the building.

**511.1.2 Minimum signal strength.** A minimum signal strength of one-half (0.5) micro volts shall be received by the Regional 800 MHz. Radio System when transmitted from any area of the building.

**511.1.3 Frequency range.** The frequency range which must be supported shall be 806 MHz. to 824 MHz. and 851 MHz. to 869 MHz. in all areas of the building. Measurements in buildings for the purpose of this ordinance shall be to a portable radio with a half-wave antenna, worn on the belt. The City's Radio System Manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety grade coverage.

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

**511.2 Annual test.** Each owner shall submit on an annual basis to the Fire Code Official required test data demonstrating that an adequate radio coverage level is available and maintained in all required areas of the building, or that the installed amplification system functions properly. The annual submittal shall ensure that no structural changes have occurred to the building that would materially change the original field tests.

**511.3 Amplification systems allowed.** Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system and/or an internal multiple antenna system with FCC-type accepted bi-directional 800 MHz. amplifiers, or systems otherwise approved by the City Radio System Manager in order to achieve the required adequate radio coverage. The installed system or systems shall be capable of operating on an independent battery system for a period of at least twelve (12) hours without external power input. The battery system shall automatically charge in the presence of external power input.

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

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

**Q. IFC Section 602.1 Addition – Building Services and Systems, Definitions.** The following definition is added to Section 602.1 of the International Fire Code to read as follows:

**POWER TAP.** A listed device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end, and that has overcurrent protection.

**R. IFC Section 803.1 Amended – Furnishings, General requirements.** Section 803.1 of the International Fire Code is hereby amended to read as follows:

**Section 803.1 General requirements.** The provisions of Sections 803.1.1 through 803.1.4 shall be applicable to all occupancies covered by sections 803.2 through 803.7.

**S. IFC Section 803.1.4 Added –General requirements, Atrium furnishings.** Section 803.1.4 of the International Fire Code is hereby added to read as follows:

**Section 803.1.4 Atrium furnishings.**

**803.1.4.1 Potential heat.** Potential heat of combustible furnishings and decorative materials within atria shall not exceed 9,000 Btu per pound (20 934 J/g) when located within an area that is more than 20 feet (6096 mm) below ceiling-level sprinklers.

**803.1.4.2 Decorative materials.** Decorative materials in atria shall be noncombustible, flame resistant or treated with a flame retardant.

**T. IFC Section 901.4.5 Added – Installation, Additions, change of use, alterations and repairs to buildings.** Section 901.4.5 of the International Fire Code is hereby added to read as follows:

**901.4.5 Additions, change of use, alterations and repairs to buildings.**

**901.4.5.1 Additions or changes of use.** Additions or changes of use to existing buildings which would result in a non conforming building shall be brought up to current code requirements for fire protection systems. Subject to the approval of the fire code official, a phasing plan of up to five years is permitted on sprinkler systems only.

**Exception:** A one-time exemption for additions to one- and two-family dwellings and Group R-3 and U occupancies of up to 500 square feet is permitted without compliance with this section. This exemption shall be recorded with King County Records and Elections.

**901.4.5.2 Alterations and repairs.** When the value of all alterations or repairs performed within a sixty-month period exceeds 50 percent of the assessed value of the building, the fire extinguishing systems and fire detection systems shall be installed throughout as for new construction.

**U. IFC Section 901.6.1 Amended – Inspection, testing and maintenance, Standards.** Section 901.6.1 of the International Fire Code is hereby amended to read as follows:

**Section 901.6.1 Standards.** Fire protection systems shall be inspected, tested and maintained in accordance with the referenced standards listed in Table 901.6.1. For the sole purpose of inspecting, testing and maintenance of water-based fire protection systems in accordance with NFPA 25, all existing water-based fire protection systems shall be considered new as of July 1, 2004.

**V. IFC Section 901.7 Amended – General, Systems out of service.** Section 901.7 of the International Fire Code is hereby amended to read as follows:

**Section 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.

**W. IFC Section 903.2 Amended – Automatic Sprinkler Systems, Where required.** Section 903.2 of the International Fire Code is hereby amended to remove the exception for telecommunication buildings to read as follows:

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

**X. IFC Section 903.4.2 Amended –Sprinkler system monitoring and alarms, Alarms.** Section 903.4.2 of the International Fire Code is hereby amended to read as follows:

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

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

**Y. IFC Section 903.4.3 Amended –Sprinkler system monitoring and alarms, Floor control valves.** Section 903.4.3 of the International Fire Code is hereby amended to read as follows:

**Section 903.4.3 Floor control valves.** Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor.

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

**Z. IFC Section 905.3.7 Added –Required installations, High-rise building standpipes.** Section 905.3.7 of the International Fire Code is hereby added to read as follows:

**Section 905.3.7 High-rise building standpipes.** Standpipe risers shall be combination standpipe/sprinkler risers using a minimum pipe size of 6" i.d. approved material pipe. Two 2-1/2 inch hose connections shall be provided on every intermediate floor level landing in every required stairway. Where pressure reduction valves (PRV's) are required, each hose connection shall be provided with its own PRV. The system shall be designed to provide a minimum flow of 300 gpm at a minimum pressure of 150 psi (maximum 200 psi) at each standpipe connection, in addition to the flow and pressure requirements contained in NFPA 14.

**AA. IFC Section 905.8 Amended – Standpipe Systems, Dry standpipes.** Section 905.8 of the International Fire Code is hereby amended to read as follows:

**Section 905.8 Dry standpipes.** Dry standpipes, when approved by the fire code official, are acceptable in other than high rise buildings.

**BB. IFC Section 906.1 Amended – Portable Fire Extinguishers, Where required.** Section 906.1 of the International Fire Code is hereby amended to remove the exception to Item 1 to read as follows:

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

1. In all Group A, B, E, F, H,I ,M,R-1, R-2, R-4 and S occupancies.
2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or combustible liquids are stored, used or dispensed.
4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 1415.1.
5. Where required by the sections indicated in Table 906.1.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

**CC. IFC Section 907.2.24 Added – Where required – New buildings and structures, All buildings.** Section 907.2.24 of the International Fire Code is hereby added to read as follows:

**Section 907.2.24 All buildings.** All newly constructed buildings with a gross floor area of 3,000 or greater square feet shall be provided with an approved automatic and manual fire alarm system.

**Exceptions:**

1. One- and two-family dwellings, Group R-3, Group R-4, and Group U Occupancies having adequate fire flow and approved access. Dwelling units shall have interconnected single station smoke detectors in accordance with RCW 48.48.140 and WAC 212-10.

Buildings under 10,000 square feet that are protected throughout by an approved and monitored automatic sprinkler system.

**DD. IFC Section 907.2.25 Added – Where required – New buildings and structures, Remodels and tenant improvements.** Section 907.2.24 of the International Fire Code is hereby added to read as follows:

**Section 907.2.25 Remodels and tenant improvements.** When undergoing remodel and tenant improvements, existing occupancies equipped with smoke detectors that are 10 or more years old shall have all such detectors replaced with modern units. Those occupancies without the protection of smoke detection shall add smoke detection in accordance with the applicable requirements in the International Residential Code or International Building Code.

**EE. IFC Section 1404.5 Amended – Precautions against fire, Fire watch.** Section 1404.5 of the International Fire Code is hereby amended to read as follows:

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

**FF. IFC Section 2703.9 Amended – General Requirements, General safety precautions.** Section 2703.9 of the International Fire Code is hereby amended to read as follows:

**Section 2703.9 General safety precautions.** General precautions for the safe storage, handling or care of hazardous materials shall be in accordance with Sections 2703.9.1 through 2703.9.10.

**GG. IFC Section 2703.9.10 Added – General safety precautions.** Section 2703.9.10 of the International Fire Code is hereby added to read as follows:

**Section 2703.9.10 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.

**HH. IFC Appendix B, Section B102.1 Amended – Fire-Flow Requirements for Buildings, Definitions.** Appendix B, Section B102.1 of the International Fire Code is hereby amended to read as follows:

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

**FIRE FLOW.** The flow rate of water supply measured at 20 pounds per square inch (psi) residual pressure, that is available for fighting the fire.

**FIRE-FLOW CALCULATION AREA.** The gross floor area in square feet under the roof line of the structure including all usable area whether heated or not above and below grade.

**II. IFC Appendix B, Section B104.2 Deleted – Fire Area, Area separation.**  
Appendix B, Section B104.2 of the International Fire Code is hereby deleted.

**JJ. IFC Appendix B, Section B105.1 Amended – Fire-Flow Requirements For Buildings, One- and two-family dwellings.** Appendix B, Section B105.1 of the International Fire Code is hereby amended to read as follows:

**Section B105.1 One- and two-family dwellings.** The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3600 square feet shall be 1,500 gallons per minute. Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet shall not be less than that specified in Table B105.1.

**Exception.** A reduction in required fire flow may be approved when the building is provided with an approved automatic fire sprinkler system and/or other fire-protection features as determined by the fire code official. No fire flow shall be less than 1,750 gpm.

**KK. IFC Appendix B, Section B105.2 Amended – Fire-Flow Requirements For Buildings, Buildings other than one- and two-family dwellings.** Appendix B, Section B105.2 of the International Fire Code is hereby amended to read as follows:

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

**Exception.** A reduction in required fire flow of up to 50 percent, as approved, may be allowed when the building is provided with an approved fire sprinkler system and/or other fire-protection features as required by the fire code official. No fire flow shall be less than 1,750 gpm with the prescribed duration as determined in Table B105.1

**LL. IFC Appendix C, Section C103.2 Added – Number of Fire Hydrants, Sprinkler support hydrants.** Appendix C, Section C103.2 of the International Fire Code is hereby added to read as follows:

**Section C103.2 Sprinkler support hydrants.** One or more fire hydrants shall be designated as “sprinkler support hydrants” and are not included in the required fire hydrant calculations as determined by fire flow.

**MM. IFC Appendix D, Section D101.1 Amended – General, Scope.** Appendix D, Section D101.1 of the International Fire Code is hereby amended to read as follows:

**Section D101.1 Scope.** Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the International Fire Code. The requirements in this appendix may be modified by the fire code official if other approved fire-protection features are provided.