Ordinance No. 121524

Council Bill No. 114940

AN ORDINANCE relating to the Seattle Fire Code; adopting the 2003 International Fire Code with some exceptions; amending and adding various provisions to that Fire Code; repealing Section 22.600.040 and amending Section 22.600.020 of the Seattle Municipal Code in connection therewith; all as regulated and allowed by the State Building Code Act, Chapter 19.27 of the Revised Code of Washington.

CF No. 304113

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The City of Seattl
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This file is complete and ready

Law Dept. Review

The City of Seattle - Legislative Department

Council Bill/Ordinance sponsored by: Nic Steinbrueck

Councilmember

Committee Action:

Passed 2-0 (RS, TR)

7-6-06 Passed As Amended 8-0

(Excused: Drago)

This file is complete and ready for presentation to Full Council. Committee: _____ (Initial/Date)

Law Dept. Review | OMP Review | City Clerk Review | Electronic Copy Loaded | Indexed

Diane Hansen/dh
2003 Seattle Fire Code
July 1, 2004
Version 8

ORDINANCE 121524

AN ORDINANCE relating to the Seattle Fire Code; adopting the 2003 International Fire Code with some exceptions; amending and adding various provisions to that Fire Code; repealing Section 22.600.040 and amending Section 22.600.020 of the Seattle Municipal Code in connection therewith; all as regulated and allowed by the State Building Code Act, Chapter 19.27 of the Revised Code of Washington.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.600.020 of the Seattle Municipal Code adopting the 1997 the Uniform Fire Code, 1997 Edition with Appendices I-C, II-A, II-B, II-C, II-D, II-E, II-F, II-I, II-J, III-A, III-B, III-C, IV-A, IV-B, V-A, VI-A, VI-B, VI-C, VI-E, VI-F, VI-G, VI-H and VI-I thereto, and the Uniform Fire Code Standards, 1997 Edition, (Ordinance 119124 as amended by Ordinances 119125 and 120066) is hereby repealed, and a new Section 22.600.020 is adopted as follows:

22.600.020 Adoption of the International Fire Code

The following is hereby adopted and by this reference made a part of this subtitle: 2003 International Fire Code with some exceptions, with Appendixes B, D, E, F and G, as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in C.F. 306763.

The Seattle Fire Code shall consist of the 2003 International Fire Code with some exceptions, together with the amendments and additions thereto adopted.

Wherever in this ordinance there is a conflict between metric units of measurement and English units, the English units shall govern.

Section 2. SMC 22.600.040 is hereby repealed.

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Section 3. Subsection 101.1 of the 2003 International Fire Code is amended as follows:

101.1 Title. These regulations shall be known as the *Seattle Fire Code*((~~of [NAME OF JURISDICTION]~~)), hereinafter referred to as "this code."

Section 4. Subsection 101.2 of the 2003 International Fire Code is amended as follows:

101.2 Scope. This code establishes regulations affecting or relating to structures, processes, premises, motor vehicles, marine vessels and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.

Text marked "Point of Information" or "Code Interpretation" in the Seattle Fire Code is for guidance only and shall not have the force of law.

* * *

Section 5. Subsection 101.3 of the 2003 International Fire Code is hereby repealed, and a new subsection 101.3 is adopted to read as follows:

101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, premises, motor vehicles and marine vessels.

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This Code is enacted as an exercise of the police power of the City of Seattle to protect the public peace, health, safety and welfare, and its provisions shall be liberally construed to accomplish these purposes. The express purpose of this Code is to promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this Code or ordinance.

The specific intent of this Code is to place the obligation of complying with its requirements upon the owners or occupiers of premises, buildings, motor vehicles or marine vessels, or structures within its scope. No provision or term used in this Code is intended to impose any duty whatsoever upon the City or any of its officers or employees, for whom the implementation or enforcement of this Code shall be discretionary, not mandatory.

Section 6. Subsection 102.1 of the 2003 International Fire Code is amended as follows:

102.1 Construction and design provisions. The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.
2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code. A condition is not "legally in existence at the time of adoption of this code" unless the condition is in compliance with the building code and fire code of the City of Seattle in effect when the condition first arose, and the practice, process, materials used, and storage configurations have not changed since the condition first arose.
3. Existing structures, facilities and conditions when identified in specific sections of this code.

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4. Existing structures, facilities and conditions which, in the opinion of the code official, constitute a distinct hazard to life or property.

Section 7. Subsection 102.3 of the 2003 International Fire Code is amended as follows:

((~~[EB]~~)) **102.3 Change of use or occupancy.** The provisions of the ((~~*International Existing*~~)) *Seattle Building Code* shall apply to all buildings undergoing a change of occupancy.

Section 8. Subsection 102.4 of the 2003 International Fire Code is amended as follows:

102.4 Application of building code. The design and construction of new structures shall comply with the *International Building Code*. Repairs, alterations and additions to existing structures shall comply with the ((~~*International Existing*~~)) *Seattle Building Code*.

Section 9. Subsection 102.5 of the 2003 International Fire Code is amended as follows:

((~~[EB]~~)) **102.5 Historic buildings.** The construction, alteration, repair, enlargement, restoration, relocation or movement of existing buildings or structures that are designated as historic buildings when such buildings or structures do not constitute a distinct hazard to life or property shall be in accordance with the provisions of the ((~~*International Existing*~~))*Seattle Building Code*.

Section 10. Subsection 103.2 of the 2003 International Fire Code is hereby repealed.

Section 11. Subsection 103.3 of the 2003 International Fire Code is amended as follows:

103.2((~~3~~)) Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the fire code official shall have the authority to appoint a deputy fire code official, other related technical officers, inspectors and other employees.

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Section 12. Section 103 of the 2003 International Fire Code is amended by adding thereto a new subsection 103.3 to read as follows:

103.3 Liability for damages. Nothing contained in this ordinance is intended to, nor shall be construed to, create or form the basis for any liability on the part of the City, or its officers, employees or agents, for any injury or damage resulting from the failure of the owner or occupier of premises, buildings or structures, or motor vehicles or marine vessels, to comply with this code, or for any injury or damage caused by any act or omission on the part of the City by its officers, employees or agents in the course of implementing or enforcing this code.

Any lawsuit brought against the City, or its officers or employees because of acts or omissions in the implementation or enforcement of this code, or other pertinent laws, ordinances or regulations implemented through the enforcement of this code or enforced by the code enforcement agency, shall be defended by the City until final termination of such lawsuit, and any judgment or settlement resulting therefrom shall be assumed by the City, provided that defense and assumption of judgment or settlement costs by the City shall be only to the extent provided by Chapter 4.64 and other relevant sections of the Seattle Municipal Code.

Limited public funds are available for the implementation and enforcement of this code. The issuance of permits, reviews of permit applications, and inspections conducted pursuant to this code are spot checks designed to encourage compliance, and are not in any way representations, guarantees or assurances that permits, or work undertaken pursuant to issuance of permits, comply with any applicable codes.

Section 13. Subsection 103.4 of the 2003 International Fire Code is hereby repealed.

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Section 14. Subsection 104.3 of the 2003 International Fire Code is hereby repealed, and a new subsection 104.3 is adopted to read as follows:

104.3 Right of entry. With the consent of the owner or occupier of a building, premises, motor vehicle, or marine vessel or pursuant to a lawfully issued warrant, the fire code official may enter any building, premises, motor vehicle, or marine vessel at any reasonable time to inspect or to perform the duties authorized by this code. If entry is refused, the fire code official has recourse to every remedy provided by law to secure entry.

Section 15. Subsection 104.6.2 of the 2003 International Fire Code is amended as follows:

104.6.2 Inspections. The fire code official shall keep a record of ((~~each inspection made, including notices~~)) violations, correction letters and orders issued, showing the findings and disposition of each. The responsible party shall receive a copy of violations, correction letters and orders issued.

Section 16. Subsection 104.11.2 of the 2003 International Fire Code is amended as follows:

104.11.2 Obstructing operations. No person shall knowingly obstruct the operations of the fire department in connection with extinguishment, ((~~or~~)) control, or investigation, of any fire, or actions relative to other emergencies, or knowingly 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.

Any person who knowingly obstructs the operation of the fire department in connection with extinguishing any fire or responding to any emergency, or in the performance of other duties authorized by this code, shall be subject to the penalties set forth in Section 109 of the Seattle Fire Code.

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Section 17. A new subsection 104.12 is adopted to read as follows:

104.12 Motor vehicle impoundment and removal. The fire code official may order the impoundment or removal of a motor vehicle under the following conditions:

1. The motor vehicle poses an immediate hazard to public safety; or
2. The motor vehicle is transporting hazardous materials, and is left unattended on a residential street or within 500 feet of any building containing a Group A, R, E or I occupancy, including, but not limited to, any dwelling apartment, hotel, day care, school, hospital or health care facility;
3. The motor vehicle contains or is carrying hazardous materials, or flammable or combustible liquids or gases, and is left unattended while transferring such materials, liquids or gases by means of hose line.

The Seattle Police Department shall carry out motor vehicle impoundment orders of the fire code official in accordance with the authority of this Section, Chapter 11.30 of the Seattle Municipal Code, and impoundment procedures of the Seattle Police Department.

Section 18. A new subsection 104.13 is adopted to read as follows:

104.13 Prohibition. The fire code official may prohibit the use, display, or sale of any device, material, or object which is designed to be used in such a manner as to violate any provisions of this code, or where the use or sale of such constitutes a distinct hazard to life or property.

Any materials shown by test to have a life hazard greater than that indicated and controlled by building code interior finish regulations or fire code decorative material regulations shall be prohibited or shall be installed or used with such additional fire safety features as are necessary to substantially reduce the life hazard.

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Section 19. Subsection 105.1.1 of the 2003 International Fire Code is amended as follows:

105.1.1 Permits required. Permits required by this code shall be obtained from the fire code official prior to engaging in the activities or operations for which they are required. Permit fees, if any, ((~~shall~~)) may be required to be paid prior to issuance of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

Section 20. Subsection 105.1.2 of the 2003 International Fire Code is amended as follows:

105.1.2 Types of permits. There shall be ((~~two~~)) three types of permits as follows:

1. Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:
   1.1. A prescribed period.
   1.2. Until renewed or revoked.
2. ((~~Construction~~)) Installation permit. An installation ((~~construction~~)) permit allows the applicant to install, ((~~or~~)) modify or remove systems and equipment for which a permit is required by Section 105.7.
3. Temporary permit. The chief may issue temporary permits establishing fire safety controls for:
   3.1. An activity not specifically regulated, but where regulatory safeguards are necessary because of unusual circumstances.
   3.2. Interim operation of a regulated activity at reduced scope and/or with temporary fire safeguards until permanent fire prevention features are provided.

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Section 21. Subsection 105.2.3 of the 2003 International Fire Code is hereby repealed.

Section 22. Subsection 105.2.4 of the 2003 International Fire Code is amended as follows:

105.2.3((4)) Action on application. The fire code official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the fire code official shall reject such application in writing, stating the reasons therefor. If the fire code official is satisfied that the proposed work or operation conforms to the requirements of this code and laws and ordinances applicable thereto, the fire code official shall issue a permit therefore as soon as practicable.

Section 23. Subsection 105.3 of the 2003 International Fire Code is amended as follows:

105.3 Conditions of a permit. The fire code official may condition any permit, increasing or decreasing the scope of activity, and/or specifying fire safety provisions in addition to those established by this code, where he or she deems such conditions are necessary to provide reasonable public safety. A permit shall constitute permission to maintain, store or handle materials; or to conduct processes which produce conditions hazardous to life or property; or to install equipment utilized in connection with such activities; or to install or modify any fire protection system or equipment or any other construction, equipment installation or modification in accordance with the provisions of this code where a permit is required by Section 105.6 or 105.7. Such permission shall not be construed as authority to violate, cancel or set aside any of the provisions of this code or other applicable regulations or laws of the jurisdiction.

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Section 24. Subsection 105.3.1 of the 2003 International Fire Code is amended 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 shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work, if any, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.~~)) Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

Point of Information

Approval to occupy a building or structure is granted by the Department of Planning and Development through issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy. A Fire Department recommendation to issue an occupancy certificate is conditional upon applicable provisions of this code being met.

Section 25. Subsections 105.3.2, 105.3.3 and 105.3.4 of the 2003 International Fire Code are hereby repealed.

Section 26. Subsection 105.3.5 of the 2003 International Fire Code is amended as follows:

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105.3.2((5)) Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

Section 27. Subsection 105.3.6 of the 2003 International Fire Code is amended as follows:

105.3.3((6)) Compliance with code. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the fire code official from requiring the correction of errors in the construction documents and other data. Any addition to or alteration of approved construction documents shall be approved in advance by the fire code official, as evidenced by the issuance of a new or amended permit.

Section 28. Subsection 105.3.7 of the 2003 International Fire Code is amended as follows:

105.3.4((7)) Information on the permit. The fire code official shall issue all permits required by this code on an approved form furnished for that purpose. The permit shall contain a general description of the operation or occupancy and its location and any other information required by the fire code official. Issued permits shall bear the signature of the fire code official or other approved legal authorization.

Section 29. A new subsection 105.3.5 is adopted to read as follows:

105.3.5 Liability insurance. Where liability insurance is required by any section of this code or as a permit condition for any controlled hazardous activity, the applicant shall file with the fire code official a "Certificate of Insurance". The applicant's policy shall evidence a

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"Comprehensive General Liability" (including automobile coverage) insurance limit of $2 million ($2,000,000), combined single limit per occurrence and annual aggregate, no deductible and naming the City of Seattle as an additional insured. The fire code official may increase or decrease these amounts.

In those instances where this code requires, as a condition of issuing a permit, that the applicant for the license shall provide insurance, the purpose of the requirement is to insure that members of the public and the City will be compensated for losses caused by personal injury or property damage resulting from the negligent acts of the licensees or their agents or employees.

Whenever the issuance of a permit is conditioned upon obtaining a policy or policies of public liability insurance by the applicant for such license, the policy:

1. Shall be issued by a company or companies authorized to do business as an insurer in Washington State pursuant to the provisions of RCW Title 48 as now or hereafter amended;
2. Shall contain, by endorsement or otherwise, the following recital:
   "This policy is issued pursuant to Section 108 of the Seattle Fire Code (Ordinance No. , as amended), of the City of Seattle for the purpose of complying with the conditions and requirements of the code. Any exception, limitation, provision or omission in this policy (including all other endorsements thereto) in conflict with such condition or requirement is void. This policy shall be continuous until canceled and terminable only on at least ten (10) days written notice to the fire code official."
3. May be approved as to sufficiency and form by the City Attorney and/or the City Risk Manager at the request of the fire code official.

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Section 30. Subsection 105.4.1 of the 2003 International Fire Code is amended as follows:

105.4.1 Submittals. Construction documents shall be submitted in one or more sets and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional where required by the fire code official ((~~statutes of the jurisdiction in which the project is to be constructed~~)).

Section 31. Subsection 105.4.6 of the 2003 International Fire Code is hereby repealed.

Section 32. Subsection 105.5 of the 2003 International Fire Code is hereby repealed, and a new subsection 105.5 is adopted to read as follows:

105.5 Revocation of Permits and Certificates

105.5.1 Non-emergency Revocations. The fire code official may revoke, suspend or refuse to renew any permit or certificate upon evidence submitted to him/her that conditions or circumstances have changed so that continued use of the permit or certificate would be unsafe. Such conditions or circumstances include, but are not limited to:

1. The permit has been used by a person other than the person to whom the permit was issued,
2. The permit has been used for a location other than that for which it was issued,
3. Any of the conditions or limitations set forth in the permit have been violated,
4. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein,
5. There has been a false statement or misrepresentation as to a material fact in the application or plans on which the permit or application was based, or
6. The permit was issued in error or in violation of any code, regulation or other law.

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The permit or certificate holder shall be notified in writing no later than five (5) business days prior to the revocation, suspension or refusal to renew such permit or certificate. The permit or certificate holder may request in writing a hearing before the fire code official for reconsideration of the decision to revoke, suspend or deny renewal. The request shall be filed with the fire code official by five o'clock (5:00 p.m.) of the second business day following service of the notice. The hearing shall be held no later than one (1) business day from receipt of a written request. The fire code official shall issue a final decision, in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or refuse to renew the permit or certificate no later than the next business day following such hearing. Further appeals shall be in accordance with Section 108 of this code.

105.5.2 Emergency Revocations. The fire code official may revoke, suspend or refuse to renew a permit or certificate in emergency situations, without providing prior notice to the permit or certificate holder, when an imminent fire, life-safety or other hazard regulated by this code exists, and failure to take immediate action may cause imminent harm to humans, domestic animals, livestock, wildlife, or to the immediate or neighboring property, lands, or premises.

Where such emergency is found to exist, all certificates and permits shall be surrendered to the fire code official or his/her authorized representative upon demand. Those activities sanctioned by the suspended or revoked certificates or permits will be suspended until the fire code official finds the emergency no longer exists.

Persons surrendering said certificates and/or permits may appeal the fire code official's action by filing a written notice of appeal to the fire code official by five o'clock (5:00 p.m.) of the next business day following such revocation, suspension or refusal to renew a permit or certificate. The hearing with the fire code official shall be no later than one (1) working day from the receipt of such written appeal.

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The fire code official shall issue a final decision in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or refuse to renew the certificate or permit no later than the next business day following such hearing. Further appeals shall be in accordance with Section 108 of this code.

Section 33. Subsection 105.6.5 of the 2003 International Fire Code is amended as follows:

105.6.5.1 Battery systems. An operational permit is required to ((~~install~~)) maintain and operate a stationary lead-acid battery system((s)) having ((a)) an electrolyte liquid capacity of more than 50 gallons (189 L).

Section 34. A new subsection 105.6.2 is adopted to read as follows:

105.6.5.2 Bonfires. An operational permit is required to ignite a bonfire.

Section 35. Subsection 105.6.8 of the 2003 International Fire Code is amended as follows:

105.6.8.1 Combustible fibers. An operational permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m^3).

Exception: A permit is not required for agricultural storage.

Section 36. A new subsection 105.6.8.2 is adopted to read as follows:

105.6.8.2 Combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m 3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

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Section 37. Subsection 105.6.10 of the 2003 International Fire Code is amended as follows:

105.6.10.1 Covered mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

Section 38. A new subsection 105.6.20.2 is adopted to read as follows:

105.6.10.2 Cruise ship hazardous operations. An operational permit is required to conduct hazardous operations on a cruise ship at a passenger terminal. Example: Hot work and fuel transfers.

Section 39. Subsection 105.6.12 of the 2003 International Fire Code is amended as follows:

105.6.12 Cutting and welding. ((~~An operational permit is required to conduct cutting or welding operations within the jurisdiction.~~))

Point of Information

Cutting and welding operations, see **Hot work operations. 105.6.24**

Section 40. Subsection 105.6.15 of the 2003 International Fire Code is amended as follows:

105.6.15 Explosives. An operational permit is required for the ((~~manufacture,~~)) storage, handling, sale or use of any quantity of explosive, explosive material, fireworks, or pyrotechnic special effects within the scope of Chapter 33.

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Section 41. Subsection 106.6.17 of the 2003 International Fire Code is amended as follows:

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

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

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5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.

6. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.

7. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.

8. To manufacture, process, blend or refine flammable or combustible liquids.

9. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

11. To store, handle or use Class III-B liquids in excess of 1,000 gallons.

12.To engage in the business of removing, abandoning or otherwise disposing of residential heating oil tanks.

Section 42. Subsection 106.6.20 of the 2003 International Fire Code is amended as follows:

105.6.20 Fumigation and thermal insecticidal fogging. An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault, freight container or chamber in which a toxic or flammable fumigant is used.

Section 43. Subsection 105.6.21 of the 2003 International Fire Code is amended as follows:

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105.6.21.1 Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.21.

Section 44. A new subsection 105.6.21.2 is adopted to read as follows:

105.6.21.2 Hazardous materials stabilization. An operational permit is required to stabilize potentially unstable (reactive) hazardous materials.

Section 45. Subsection 105.6.22 of the 2003 International Fire Code is amended as follows:

105.6.22.1 HPM facilities. An operational permit is required to store, handle or use hazardous production materials.

Section 46. A new subsection 105.6.22.2 is adopted to read as follows:

105.6.22.2 Helicopter lifts. An operational permit is required to move suspended loads via helicopter over populated areas.

Section 47. Subsection 105.6.24 of the 2003 International Fire Code is amended as follows:

105.6.24 Hot work operations. An operational permit is required for hot work including, but not limited to:

1. Public exhibitions and demonstrations where hot work is conducted.

2. Use of portable hot work equipment. ((~~inside a structure.~~))

Exceptions: ((~~Work that is conducted under a construction permit.~~))

1. Within Group R, Division 3 and Group U Occupancies.

2. Torch assemblies connected for use to an acetylene gas cylinder having a maximum individual capacity of 40 cubic feet.

3. Approved self-contained torch assemblies or similar appliances using LP-gas in accordance with the following:

(a.)LP-gas cylinders shall comply with UL 147A, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies.

(b.)LP-gas cylinders shall have a maximum water capacity of 2.7 lb (1.2 kg).

(c.)The maximum aggregate water capacity of LP-gas cylinders in storage (e.g. not connected for use) and use shall not exceed 2.7 lb (1.2 kg) per control area.

3. Fixed-site hot work equipment such as welding booths.

((~~4. Hot work conducted within a hazardous fire area.~~))

((~~5~~))4. Application of roof coverings with the use of an open-flame device.

5. Hot work on storage tanks, piping and associated systems containing or previously containing flammable or combustible liquids, or other hazardous materials that could present a fire or explosion hazard.

6. Hot work on marine vessels.

((~~6.~~)) When approved, the fire code official ((~~shall~~)) is authorized to issue a permit to carry out a Hot Work Program. This program allows approved personnel to regulate their facility's hot work operations. The approved personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in Chapter 26. These permits shall be issued only to their employees or hot work operations under their supervision.

Section 48. Subsection 105.6.28 of the 2003 International Fire Code is amended as follows:

105.6.28 LP-gas. An operational permit is required for:

1. Storage and use of LP-gas.

Exceptions:

1. A permit is not required for individual containers with a ((~~500~~))125-gallon (((~~1893~~)) 473 L) water capacity or less serving occupancies in Group R-3.

2. A permit is not required for a LP-gas container having a water capacity not exceeding 48 pounds (nominal 20 pounds LP-gas) connected to a LP-gas grill unless located on or serving a public way.

2. Operation of cargo tankers that transport LP-gas.

Section 49. Subsection 105.6.30 of the 2003 International Fire Code is hereby repealed, and a new subsection 105.6.30 is adopted to read as follows:

105.6.30 Marine terminal. An annual operational permit is required to handle or temporarily locate containers, tanks, or cylinders of hazardous materials at marine terminals located within the Seattle City limits.

Section 50. Subsection 105.6.32 of the 2003 International Fire Code is amended as follows:

105.6.32 Open flames and torches. ((~~An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a hazardous fire area.~~)) See **105.6.24 Hot work operations.**

Point of Information
See section 105.6.24, which requires a permit for all hot work.

Section 51. Subsection 105.6.35 of the 2003 International Fire Code is amended as follows:

105.6.35 Places of assembly. An operational permit is required to operate a place of assembly with an occupant load of 100 or more.

Section 52. Subsection 105.6.39 of the 2003 International Fire Code is hereby repealed.

Section 53. Subsection 105.6.40 of the 2003 International Fire Code is amended as follows:

105.6.39((40)) Repair garages and motor fuel-dispensing facilities. An operational permit is required for operation of repair garages and automotive, marine and fleet motor fuel-dispensing facilities.

Section 54. Subsection 105.6.41 of the 2003 International Fire Code is amended as follows:

105.6.40((1)) Rooftop heliports. An operational permit is required for the operation of a rooftop heliport.

Section 55. Subsection 105.6.42 of the 2003 International Fire Code is amended as follows:

105.6.41((2)) Spraying or dipping. An operational permit is required to conduct a spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 15.

Section 56. Subsection 105.6.43 of the 2003 International Fire Code is amended as follows:

105.6.42((3)) Storage of tires, scrap tires and tire byproducts. An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceeds 2,500 cubic feet (71 m^3) of total volume of scrap tires and for indoor storage of tires and tire

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byproducts. An operational permit is also required for indoor storage of tires and tire byproducts as regulated by Chapter 23.

Section 57. Subsection 105.6.44 of the 2003 International Fire Code is hereby repealed.

Section 58. Subsection 105.6.45 of the 2003 International Fire Code is amended as follows:

105.6.43((~~5~~)) Tire-rebuilding plants. An operational permit is required for the operation and maintenance of a tire-rebuilding plant.

Section 59. Subsection 105.6.46 of the 2003 International Fire Code is amended as follows:

105.6.44((~~6~~)) Waste handling. An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.

Section 60. Subsection 105.6.47 of the 2003 International Fire Code is amended as follows:

105.6.45((~~7~~)) Wood products. An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m^3).

Section 61. Subsection 105.7 of the 2003 International Fire Code is amended as follows:

105.7 Required ((~~construction~~)) installation permits. The fire code official is authorized to issue ((~~construction~~)) installation permits for work as set forth in Sections 105.7.1 through 105.7.10((~~2~~)).

Point of Information

Building permits for construction are issued by the Department of Planning and Design

(DPD). The fire code official does not require separate Fire Department issued installation permits for the following:

- Automatic fire-extinguishing systems.
- Fire alarm and detection systems and related equipment.
- Standpipe systems.

All fire protection systems must be Confidence Tested in accordance with this code and Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

FIRE DEPARTMENT INSTALLATION AND OPERATIONAL PERMITS

Where an installation permit is required, if an operational permit is also required, the approved installation permit is renewable annually as an operational permit.

Section 62. Subsections 105.7.1, 105.7.2, 105.7.3, 105.7.4, 105.7.5, 104.7.6, 105.7.7, 105.7.8, 105.7.9, 105.7.10, 105.7.11 and 105.7.12 of the 2003 International Fire Code are amended as follows:

105.7.1 ((~~Automatic fire-extinguishing systems. A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~)) Battery systems. An installation permit is required to install stationary lead-acid battery systems having an electrolyte capacity of more than 50 gallons (189 L).

105.7.2 Compressed gases. When the compressed gases in use or storage exceed the amounts listed in Table 105.6.9, an installation ((~~construction~~)) permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a compressed gas system.

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Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan filed pursuant to Section 2701.6.3. The 30-day period is not applicable when approved based on special circumstances requiring such waiver.

((~~**105.7.3 Fire alarm and detection systems and related equipment.** A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.3((4)) Fire pumps and related equipment. An installation ((~~construction~~)) permit is required for installation of ((~~or modification to fire pumps and related~~)) fuel tanks relating to operation of fire pumps, jockey pumps, controllers, and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.4((~~5~~)) Flammable and combustible liquids. An installation ((~~construction~~)) permit is required:

1. To repair or modify a pipeline for the transportation of flammable or combustible liquids.
2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.

3. To install, alter, remove, abandon or otherwise dispose of a flammable or combustible liquid tank.

105.7.5((6)) Hazardous materials. An installation ((~~construction~~)) permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by Chapter 27 when the hazardous materials in use or storage exceed the amounts listed in Table 105.6.21.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.6((~~7~~)) Industrial ovens. An installation ((~~construction~~)) permit is required for installation of industrial ovens covered by Chapter 21.

Exceptions:

1. Routine maintenance.
2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.7((~~8~~)) LP-gas. An installation ((~~construction~~)) permit is required for installation of or modification to an LP-gas system.

((~~**105.7.9 Private fire hydrants.** A construction permit is required for the installation or modification of private fire hydrants.~~))

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105.7.8 Refrigeration equipment. An installation permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6.

105.7.9((~~10~~)) Spraying or dipping. An installation ((~~construction~~)) permit is required to install or modify a spray room, dip tank or booth.

((~~**105.7.11 Standpipe systems.** A construction permit is required for the installation, modification, or removal from service of a standpipe system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.10((~~2~~)) Temporary membrane structures, tents and canopies. An installation ((~~construction~~)) permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of 200 square feet (19 m^2), or a canopy in excess of 400 square feet (37 m^2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

((~~3. Fabric canopies and awnings open on all sides which comply with all of the following:~~

~~3.1. Individual canopies shall have a maximum size of 700 square feet (65 m^2).~~

~~3.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.~~

~~3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.~~))

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Section 63. Subsections 106.2 and 106.3 respectively of the 2003 International Fire Code are amended as follows:

106.2 Inspections. The fire code official is authorized to conduct such inspections as are deemed necessary to determine the extent of compliance with the provisions of this code and to approve reports of inspection by approved agencies or individuals. ((~~All reports of such inspections shall be prepared and submitted in writing for review and approval. Inspection reports shall be certified by a responsible officer of such approved agency or by the responsible individual.~~)) The fire code official is authorized to engage such expert opinion as deemed necessary to report upon unusual, detailed or complex technical issues subject to the approval of the governing body.

106.3 Concealed work. Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the fire code official shall have the authority to require that such work be exposed for inspection.

It shall be the joint and several duty of the permit applicant and contractor to cause the work to remain accessible and exposed for inspection purposes. Neither the fire code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

Section 64. A new subsection 106.4 is adopted to read as follows:

106.4 Special inspections. The fire code official is authorized to appoint qualified persons or agencies having special technical skills as special inspectors or plan reviewers and accept their inspection, plan review and evaluation of specialized fire protection equipment or systems.

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The fire code official is authorized to accept inspections performed by other jurisdictions and agencies and honor permits and certificates issued by other jurisdictions for activities regulated by this code, upon presentation to the fire code official of satisfactory evidence that such inspections, permits and certificates are substantially in accord with the fire safety requirements of this code.

Section 65. Section 108 of the 2003 International Fire Code is hereby repealed, and a new Section 108 is adopted to read as follows:

SECTION 108

APPEALS

108.1 Appeals. Appeals from decisions or actions pertaining to the application and interpretation of this Code shall first be addressed to the fire code official. If not resolved with the fire code official, the appellant may submit a written request to the fire code official for a review by the Fire Code Appeals Board in accordance with all applicable by-laws, rules, regulations and ordinances. The results of this review will be advisory only, in accordance with City of Seattle Ordinance 119799. Following receipt of the Fire Code Appeals Board recommendation the fire chief shall issue a final written decision.

Section 66. Subsection 109.1 of the 2003 International Fire Code is amended as follows:

109.1 Unlawful acts. It shall be unlawful for <u>any</u> person, firm, or corporation to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premises or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code. <u>It is a violation of the Seattle Fire Code for any person, firm or corporation to fail to comply with the Seattle Fire Code.</u>

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Section 67. Subsection 109.2 of the 2003 International Fire Code is amended as follows:

109.2 Notice of violation. When the fire code official finds a building, premises, vehicle, marine vessel, storage facility or outdoor area that is in violation of this code, the fire code official is authorized to issue ((~~prepare~~)) a written notice of violation describing the violation(s) ((~~conditions deemed unsafe~~)) and, when compliance is not immediate, specifying a time for reinspection. Nothing in this subsection shall be deemed to limit or preclude any other enforcement action or proceeding, and nothing in this section shall be deemed to obligate or require the fire code official to issue a notice of violation prior to the imposition of civil or criminal penalties.

* * *

Section 68. Subsection 109.3 of the 2003 International Fire Code is amended as follows:

109.3 ((~~Violation~~)) Civil penalties. Any person, firm or corporation ((~~Persons~~)) who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction or installation documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be subject to a cumulative civil penalty in an amount not to exceed $1,000 per day for each violation from the time the violation occurs or begins until compliance is achieved. The penalty shall be collected by civil action brought in the name of the City. The fire code official shall notify the City Attorney in writing of the name of any person, firm or corporation subject to the penalty, and the City Attorney shall, with the assistance of the fire code official, take appropriate action to collect the penalty. In any civil action for a penalty, the City has the burden of proving by a preponderance of the evidence that a violation exists or existed. ((~~guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~))

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Section 69. Subsection 109.3.1 of the 2003 International Fire Code is amended as follows:

109.3.1 Alternative criminal penalty. Any person, firm or corporation who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction or installation documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a gross misdemeanor subject to the provisions of Seattle Municipal Code Chapters 12A.02 and 12A.04, except that absolute liability shall be imposed for such a violation or failure to comply and none of the mental states described in Section 12A.04.030 need be proved, except for a violation of Subsection 104.11.2. The fire code official may request the City Attorney prosecute such violations criminally as an alternative to the civil penalties provision. Each day that a violation continues shall be deemed a separate offense. ((~~**Abatement of violation.** In addition to the imposition of the penalties herein described, the fire code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.~~))

Section 70. A new subsection 109.3.2 is adopted to read as follows:

109.3.2 Abatement of violation. In addition to the imposition of civil and criminal penalties, the fire code official is authorized to institute appropriate action to prevent unlawful construction or installation 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.

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Section 71. Section 110 the 2003 International Fire Code, title only, is amended as follows:

UNSAFE BUILDINGS, PREMISES, MOTOR VEHICLES, AND MARINE VESSELS

Section 72. Subsection 110.1 of the 2003 International Fire Code is amended as follows:

110.1 General. If ((~~during the inspection of~~)) a premises, a building or structure or any building system, motor vehicle or marine vessel, in whole or in part, endangers any property, the health or safety or the occupants, or the occupants of neighboring premises, buildings, motor vehicles or marine vessels, the public or fire department personnel ((~~constitutes a clear and inimical threat to human life, safety or health~~)), the fire code official may ((~~shall~~)) issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section. ((~~and~~)) The fire code official may ((~~shall~~)) refer ((~~the~~)) any unsafe premises or building to the ((~~building department~~)) Department of Planning and Development for any repairs, alterations, remodeling, removing or demolition required.

* * *

Section 73. Subsection 110.2 of the 2003 International Fire Code is amended as follows:

110.2 Evacuation. The fire code official or the fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied premises, building, motor vehicle, or marine vessel deemed unsafe when such premises, building, motor vehicle, or marine vessel has hazardous conditions that present imminent danger to ((~~building~~)) occupants. Persons so notified shall immediately leave the structure or premises, motor vehicle or marine vessel and shall not enter or re-enter until authorized to do so by the fire code official or the fire department official in charge of the incident.

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Section 74. Section 111 of the 2003 International Fire Code, title only, is amended as follows:

SECTION 111

STOP WORK OR USE ORDER

Section 75. Section 111 of the 2003 International Fire Code is amended as follows:

111.1 Order. Whenever the fire code official finds any work or use regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the fire code official is authorized to issue a stop work or use order.

111.2 Issuance. A stop work or use order shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work or use. Upon issuance of a stop work or use order, the cited work or use shall immediately cease. The stop work or use order shall state the reason for the order, and the conditions under which the cited work or use is authorized to resume.

111.3 Emergencies. Where an emergency exists, the fire code official shall not be required to give a written notice prior to stopping the work or use.

114.4 Failure to comply. It shall be a violation of this code for((~~A~~))any person ((~~who shall~~)) to continue any work or use after having been served with a stop work order or use order, except such work or use as that person is directed to perform to remove a violation or unsafe condition ((~~, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.~~))

Section 76. Subsection 201.3 of the 2003 International Fire Code is amended as follows:

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201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code*, *International Fuel Gas Code*, *International Mechanical Code* or ((~~*International*~~)) *Seattle Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

Section 77. A new subsection 201.5 is adopted to read as follows:

201.5 References to Other Codes. Whenever an International Code is referenced in this code, it shall mean the Seattle edition of that code, including local amendments. References to the "Building Code", "Fire Code", "Mechanical Code" and "Plumbing Code" mean the Seattle editions of those codes.

Section 78. Section 202 of the 2003 International Fire Code is amended by amending definitions of Educational Group E; Institutional Group I; Group I-1; Group I-2; Group I-4, day care facilities; and Residential Group R to read as follows:

* * *

[W] Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. Religious educational rooms and religious auditoriums, which are accessory to churches in accordance with Section 302.2 and have occupant loads of less than 100, shall be classified as Group A-3 occupancies.

Day care. The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than $2^1/_2$ years of age shall be classified as an E occupancy.

Exception: Family child day care homes licensed by the Washington State Department of Social and Health Services for the care of twelve or fewer children shall be classified as group R-3.

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* * *

[W] [B] Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people, cared for or living in a supervised environment and having physical limitations because of health or age, are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

Group I-1. This occupancy shall include buildings, structures or parts thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities
Group homes
Half-way houses
Residential board and care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer persons and adult family homes licensed by the Washington State Department of Social and Health Services shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2.

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A facility such as above, housing at least six and not more than 16 persons, shall be classified as Group R-4.

A facility such as the above providing licensed care to clients in one of the categories listed in Section 313.1 regulated by either the Washington Department of Health or the Department of Social and Health Services shall be classified as Licensed Care Group LC.

[W]**Group I-2.** This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

Hospitals

Nursing homes (both intermediate care facilities and skilled nursing facilities)

Mental hospitals

Detoxification facilities.

A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2.

A facility such as the above providing licensed care to clients in one of the categories listed in Section 313.1 regulated by either the Washington Department of Health or the Department of Social and Health Services shall be classified as Licensed Care Group LC.

A child care facility which provides care on a 24-hour basis to more than five children $2^1/_2$ years of age or less shall be classified as Group I-2.

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Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers

Detention centers

Jails

Prerelease centers

Prisons

Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.4.1 through 308.4.5 (see Section 408.1) of the International Building Code.

Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted, to the exterior via means of egress without restraint. A Condition 1 facility is permitted to be constructed as Group R.

Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.

Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping units and group activity spaces, where egress is impeded by remote-controlled release of means of egress from such smoke compartment to another smoke compartment.

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Condition 4. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

[W] **Group I-4, day care facilities.** This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code*. Places of worship during religious functions are not included.

Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services shall be classified as Group I-4.

Exception: Where the occupants are capable of responding to an emergency situation without physical assistance from the staff the facility shall be classified as Group A-3.

Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children $2^1/_2$ years of age or less shall be classified as Group I-4.

Exceptions:

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1. A child day care facility which provides care for more than five but no more than 100 children 2-1/2 years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

2. Family child day care homes licensed by the Washington State Department of Social and Health Services for the care of 12 or fewer children shall be classified as Group R-3.

* * *

[W][B] Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classed as Institutional Group I or Licensed Care Group LC. Residential occupancies shall include the following:

R-1 Residential occupancies where the occupants are primarily transient in nature including:

Boarding houses (transient)

Hotels (transient)

Motels (transient)

R-2 Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses

Boarding houses (not transient)

Convents

Dormitories

Fraternities and sororities

Hotels (nontransient)

Monasteries

Motels (nontransient)

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Vacation timeshare properties

R-3 Residential occupancies where the occupancies are primarily permanent in nature and not classified as R-1, R-2, or I and where buildings do not contain more than two dwelling units as applicable in Section 101.2, including adult family homes and family child day care homes for the care of 2 or fewer children, licensed by the Washington State Department of Social and Health Services, or adult and child care facilities that provide accommodations for five or fewer persons of any age for less than 24-hours. Adult and child care facilities that are within a single-family home are permitted to comply with the *International Residential Code* in accordance with Section 101.2.

R-4 Residential occupancies shall include buildings arranged for occupancy as Residential Care/Assisted Living Facilities including more than five but not more than 16 occupants.

Exception: Adult family homes, family child day care homes and foster family care homes shall be classified as Group R-3.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except for the height and area limitations provided in Section 503 of the *International Building Code* or shall comply with the *International Residential Code* in accordance with Section 101.2.

Section 79. Section 202 of the 2003 International Fire Code is amended by adopting thereto definitions of ADULT FAMILY HOME; BUILDING, LOW-RISE; CHILD DAY CARE; ELECTRICAL CODE; EMERGENCY POWER SYSTEM; EXIT PLACARD; EXIT SIGN; FAMILY CHILD DAY CARE HOME; FIRE DETECTION SYSTEM; FIRE DISTRICT; HIGH-RISE BUILDING; MOTOR VEHICLE; MOTOR VEHICLE,

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UNATTENDED; LICENSED CARE GROUP LC; OIL BURNING EQUIPMENT; PF DEVICE; PORTABLE SCHOOL CLASSROOM; POWER TAP and STANDBY POWER SYSTEM to read as follows:

* * *

[W] ADULT FAMILY HOME means a dwelling in which a person or persons provide personal care, special care, room and board to more than one but not more than six adults who are not related by blood or marriage to the person or person providing the services.

* * *

BUILDING, LOW–RISE. Enclosed or partially enclosed buildings that comply with the following conditions.

1. Mean roof height, *h*, less than or equal to 60 feet (18 288 mm).
2. Mean roof height, *h*, does not exceed least horizontal dimension.

* * *

[W] CHILD DAY CARE, shall, for the purposes of these regulations, mean the care of children during any period of a 24-hour day.

* * *

[W] ELECTRICAL CODE is the National Electrical Code promulgated by the National Fire Protection Association, as adopted by this jurisdiction.

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* * *

[B] EMERGENCY POWER SYSTEM. See Section 602.1.

* * *

[B] EXIT PLACARD. See Section 1002.1.

[B] EXIT SIGN. See Section 1002.1.

* * *

[W] FAMILY CHILD DAY CARE HOME is a child day care facility, licensed by the state, located in the dwelling of the person or persons under whose direct care and supervision the child is placed, for the care of twelve or fewer children, including children who reside at the home.

* * *

FIRE DECTECTION SYSTEM. See Section 902.1.

* * *

[B] FIRE DISTRICT. See Section 2202.1.

* * *

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HIGH-RISE BUILDING means a building having one or more floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

* * *

MOTOR VEHICLE. See Section 2202.1.

MOTOR VEHICLE, UNATTENDED. See Section 2202.1.

* * *

[W] LICENSED CARE GROUP LC. Licensed Care Group LC includes the use of a building, structure, or portion thereof, for the business of providing licensed care to clients in one of the following categories regulated by either the Washington Department of Health or the Department of Social and Health services:

1. Adult residential rehabilitation facility.
2. Alcoholism intensive inpatient treatment service.
3. Alcoholism detoxification service.
4. Alcoholism long-term treatment service.
5. Alcoholism recovery house service.
6. Boarding home.
7. Group care facility.
8. Group care facility for severely and multiple handicapped children.
9. Residential treatment facility for psychiatrically impaired children and youth.

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Exception: Where the care provided at an alcoholism detoxification service is acute care similar to that provided in a hospital, the facility shall be classified as a Group I-2 Occupancy.

* * *

OIL-BURNING EQUIPMENT. See Section 602.1.

* * *

PF DEVICE. See Section 2602.1.

* * *

[W] PORTABLE SCHOOL CLASSROOM. See 902.1.

POWER TAP. See Section 602.1.

* * *

[B] STANDBY POWER SYSTEM. See Section 602.1.

* * *

Section 80. Section 302.1 of the 2003 International Fire Code is amended as follows:

302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

BONFIRE. An outdoor fire utilized for ceremonial or recreational purposes and exceeding the size of a recreational fire.

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HI-BOY. A cart used to transport hot roofing materials on a roof.

OPEN BURNING. The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames, bonfires or recreational fires. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

POWERED INDUSTRIAL TRUCK. A forklift, tractor, platform lift truck or motorized hand truck powered by an electrical motor or internal combustion engine. Powered industrial trucks do not include farm vehicles or automotive vehicles for highway use.

RECREATIONAL FIRE. An outdoor fire burning materials other than rubbish where the fuel being burned ((~~is not contained in an incinerator, outdoor fireplace, barbeque grill or barbeque pit and~~))has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes. A recreational fire may be contained in an incinerator, outdoor fireplace, barbeque grill or barbeque pit.

Section 81. Subsection 302.2 of the 2003 International Fire Code is amended as follows:

303.2 Location. Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other approved means. Asphalt

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(tar) kettles and pots shall not be utilized inside or on the roof of a building or structure. Roofing kettles and operating asphalt (tar) kettles shall not block means of egress, gates, roadways or entrances.

Exception: When a practical difficulty is satisfactorily demonstrated, tar kettles may be located on a roof. All rooftop kettles shall require a temporary permit.

Section 82. A new subsection 303.10 is adopted to read as follows:

303.10 LPG fuel containers. The maximum individual LPG container capacity and the aggregate quantity of LPG allowed to be used in conjunction with tar kettles shall be in accordance with Chapter 38.

Section 83. Subsection 304.3.2 of the 2003 International Fire Code is amended as follows:

304.3.2 Capacity exceeding 5.33 cubic feet. Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m^3) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or approved combustible materials.

Exception: Waste accumulated for collection by the solid waste utility shall be stored in containers (to include recycling containers) specified in the City's solid waste collection contracts authorized by ordinance.

Section 84. A new subsection 306.1.1 is adopted to read as follows:

306.1.1 Fire extinguishers. Two approved fire extinguishers with a minimum 10-B:C rating shall be installed and maintained ready for use in projection rooms.

Section 85. Subsection 307.1 of the 2003 International Fire Code is amended as follows:

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307.1 General. ((~~A person shall not kindle or maintain or authorize to be kindled or maintained any open burning unless conducted and approved in accordance with this section.~~)) Open burning is prohibited in the City of Seattle. Bonfires and recreational fires shall be in accordance with Section 307.

Section 86. Subsections 307.2.1 and 307.2.2 of the 2003 International Fire Code are hereby repealed.

Section 87. Subsections 307.3 and 307.4 of the 2003 International Fire Code are amended as follows:

((~~**307.3 Location.** The location for open burning shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.~~

~~**Exceptions:**~~

~~1. Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.~~

~~2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.~~))

307.3((~~.1~~)) Bonfires. A bonfire is not allowed except by permit from the fire code official. ((~~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.~~))

307.4((~~3.2~~)) Recreational fires. Recreational fires shall not exceed a pile size of 3 feet (914mm) in diameter and 2 feet (610 mm) in height and shall not be conducted within 25 feet (7620 mm) of a structure or combustible material or vegetation. Trash, yard waste, rubbish and

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paper are prohibited as fuel for recreational fires. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

307.5((4)) Attendance. ((~~Open burning, b~~))Bonfires ((~~or~~))and recreational fires 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.

Point of Information

See SFD Information Bulletin *Recreational and Cooking Fire Regulations* at www.seattle.gov/fire. For air quality and burn ban status information and regulations contact the Puget Sound Clean Air Agency as referenced in the above information bulletin.

Section 88. Subsection 308.1of the 2003 International Fire Code is amended as follows:

308.1 General. This section shall control open flames, fire and burning on all premises.

Exception: Bonfires and recreational fires shall be in accordance with Section 307.

Section 89. Subsections 308.3.1 and 308.3.1.1 of the 2003 International Fire Code are hereby repealed.

Section 90. Subsection 308.3.5 of the 2003 International Fire Code is amended as follows:

308.3.5 Religious ceremonies. ((~~When, in the opinion of the fire code official, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles. Hand-held candles shall not be passed from one person to another while lighted.~~))

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Nothing in this code shall prevent the participants in religious ceremonies from carrying hand-held candles. (Ref. RCW 19.27.030 (3)). It is the objective of the fire code to prevent the risk of injury arising from the use of hand-held candles in places of public assembly by children aged 12 or under. A competent adult shall remain within 15 feet of the child at all times, unless an alternative equal safety standard is approved.

Section 91. Subsection 308.3.7 of the 2003 International Fire Code is amended as follows:

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

Exceptions:

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

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

   1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.6 provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants.

   1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants.

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.

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4. Where approved under permit by the fire code official.

Section 92. A new subsection 308.3.7.1 is adopted to read as follows:

308.3.7.1 Permit required . A permit is required for open-flame in a Group A occupancy.

Section 93. Subsection 310.3 of the 2003 International Fire Code is amended as follows:

310.3 "No Smoking" signs. The fire code official is authorized to order the posting of "No Smoking" signs in a conspicuous location in each structure or location in which smoking is prohibited. The content, lettering, size, color and location of required "No Smoking" signs shall be approved.

Point of Information

See Seattle Municipal Code 10.64 for requirements of posting "No Smoking" signs in public places.

Section 94. Subsection 311.1.1 of the 2003 International Fire Code is amended as follows:

311.1.1 Abandoned premises. Buildings, structures and premises for which an owner cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties shall be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the ((~~*International Property Maintenance Code* and the~~)) *International Building Code* and the *Seattle Municipal Code*.

Section 95. Subsection 311.3 of the 2003 International Fire Code is amended as follows:

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311.3 Removal of combustibles. Persons owning, or in charge or control of, a vacant building or portion thereof, shall remove therefrom all accumulations of combustible materials, flammable or combustible waste or rubbish and shall securely lock or otherwise secure doors, windows and other openings to prevent entry by unauthorized persons. The premises shall be maintained clear of waste or hazardous materials.

Exception((s)):

((~~1.~~)) Buildings or portions of buildings undergoing additions, alterations, repairs, or change of occupancy in accordance with the *International Building Code*, where waste is controlled and removed as required by Section 304.

((~~2. Seasonally occupied buildings.~~))

Section 96. Section 313 of the 2003 International Fire Code is amended as follows:

SECTION 313

FUELED EQUIPMENT, MOTOR VEHICLES AND WATERCRAFT

313.1 Fueled equipment. Fueled equipment, including but not limited to ((~~motorcycles, mopeds~~)) portable generators, lawn-care equipment and portable cooking equipment, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. ((~~Where allowed by Section 313.~~)) When under a temporary permit for exhibits, trade shows or special events in accordance with Section 105.6.14.

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313.2 Fueled motor vehicles and watercraft. Fueled motor vehicles and watercraft, including but not limited to motorcycles, mopeds and motor boats shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. When under a temporary permit for exhibits, trade shows or special events in accordance with Sec. 105.6.14.

313.3((~~1.1~~)) Removal. The fire code official is authorized to require removal of fueled equipment, motor vehicles or watercraft from locations where the presence of such equipment, vehicles or crafts is determined by the fire code official to be hazardous.

313.4((~~2~~)) Group R occupancies. Motor ((~~V~~))vehicles and watercraft powered by flammable liquids, Class II combustible liquids, or compressed flammable gases shall not be stored within the living space of Group R buildings and shall be separated from other occupancies in accordance with the *International Building Code*.

Section 97. A new subsection 315.2.2.1 is adopted to read as follows:

315.2.2.1 Storage under stairways. Storage is prohibited under exit stairways.

Exception: Exit stairways in accordance with Section 1019.1.5.

Section 98. A new subsection 315.2.5 is adopted to read as follows:

315.2.5 Storage arrangements. Storage shall be within 20 feet of two aisles each at least 44 inches wide. No block pile shall exceed 40 X 40 feet unless approved by the fire code official. No dead end aisle shall be longer than 10 times the width. All storage in unsprinklered areas

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shall be within 150 feet aisle travel of fire department exterior access openings. Storage shall not obstruct access to extinguishers, standpipe outlets, sprinkler control shut down and safety controls or fire department access openings. (For high-piled storage see Chapter 23).

Section 99. New sections 316 and 317 are adopted to read as follows:

SECTION 316

FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS

316.1 Fixed guideway transit and passenger rail systems. Fixed guideway transit and passenger rail systems shall be in accordance with NFPA 130 as amended in this code.

SECTION 317

ROAD TUNNELS, BRIDGES AND OTHER LIMITED ACCESS HIGHWAYS

317.1 Road tunnels, bridges, and other limited access highways. Road tunnels, bridges, and other limited access highways shall be in accordance with NFPA 502 as amended in this code.

Section 100. Subsections 401.2, 401.3, and 401.4 of the 2003 International Fire Code are amended as follows:

401.2 Approval. Where required by this code, fire safety and evacuation plans((,)) and high-rise emergency operations plans, emergency procedures, and employee training programs shall be approved by the fire code official.

401.3 ((~~Emergency forces~~)) Fire Department notification. In the event an unwanted fire or other emergency occurs on a property, the owner or occupant shall immediately report such condition to the fire department. Building employees and tenants shall implement the appropriate emergency plans and procedures. No person shall, by verbal or written directive, require any delay in the reporting of a fire or other emergency to the fire department.

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401.3.1 ((~~Making false report~~)) False alarms and reports. It shall be unlawful for a person to give, signal, or transmit, willfully and without cause, a false alarm or to make a false report of fire or other emergency.

401.3.2 Alarm activations. Upon activation of a fire or emergency alarm signal, employees or building staff shall immediately notify the fire department.

401.3.3 Emergency evacuation drills. Nothing in this section shall prohibit the sounding of a fire or emergency alarm signal for the carrying out of an emergency evacuation drill in accordance with the provisions of Section 405.

401.4 Interference with fire department operations. It shall be unlawful to interfere with, attempt to interfere with, conspire to interfere with, obstruct or restrict the mobility of or block the path of travel of a fire department emergency vehicle in any way, or to interfere with, attempt to interfere with, conspire to interfere with, obstruct or hamper any fire department operation. Failure to obey a lawful order of a Fire Department officer to evacuate a building or premises in the event of fire or other emergency is a violation of this code.

Section 101. A new subsection 401.6 is adopted to read as follows:

401.6 Evacuation required. In the event of activation of a fire or emergency alarm, 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

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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 102. Section 404 of the 2003 International Fire Code is amended as follows:

SECTION 404

FIRE SAFETY AND EVACUATION PLANS AND HIGH-RISE EMERGENCY OPERATIONS PLANS

404.1 Fire safety and evacuation plans.

404.1.1 General. Fire safety and evacuation plans shall comply with the requirements of this section.

404.1.2 Where required. ((~~An approved f~~)) Fire safety and evacuation plans shall be prepared and maintained for the following occupancies and buildings.

1. Group A having an occupant load of 100 or more. ((~~, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000~~.))

2. Group B having an occupant load of 100 or more.

((~~2~~))3. Group E.

((~~3~~))4. Group H.

((4))5. Group I.

((~~5~~))6. Group R-1.

((~~6~~)) 7.Group R-4.

((~~7. High-rise buildings.~~))

8. Group M buildings having an occupant load of 500 or more persons or more than 100

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persons above or below the lowest level of exit discharge.

9. Covered malls exceeding 50,000 square feet (4645 m^2) in aggregate floor area.

10. Underground buildings.

11. Buildings with an atrium and having an occupancy in Group A, E or M.

404.1.3 Approval required. Fire safety and evacuation plans for Group A occupancies with an occupant load of 100 or more shall be approved by the fire code official.

Point of Information

See Seattle Fire Dept. web page at www.seattle.gov/fire for guidelines and information regarding fire safety and evacuation plans.

((**404.3 Contents.** Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.))

404.1.4 ((404.3.1)) Fire safety and evacuation plans. Fire safety and evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where approved, by selected floors or areas only.
2. The preferred and any alternative means of notifying occupants of a fire or emergency.
3. Identification and assignment of personnel responsible for carrying out duties in response to a fire emergency.
4. Procedures for personnel carrying out duties in response to a fire emergency.
5. The procedure for reporting a fire or other emergency to the fire department.
6. Procedures for accounting for employees and occupants after evacuation has been completed.

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7. Floor plans indicating the following:

7.1 Occupancy assembly point.

7.2 Exits.

7.3 Primary and secondary evacuation routes.

7.4 Areas of refuge.

7.5 Location of manual fire alarm boxes.

7.6 Location of portable fire extinguishers.

7.7 Location of occupant-use hose cabinets.

7.8 Location of fire alarm annunciators and controls.

((~~2. Procedures for employees who must remain to operate critical equipment before evacuating.~~

~~3. Procedures for accounting for employees and occupants after evacuation has been completed.~~

~~4. Identification and assignment of personnel responsible for rescue or emergency medical aid.~~

~~5. The preferred and any alternative means of notifying occupants of a fire or emergency.~~

~~6. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.~~

~~7. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.~~

~~8. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.~~

~~404.3.2 Fire Safety Plans~~

~~Fire safety plans shall include the following:~~

~~1. The procedure for reporting a fire or other emergency.~~

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~~2. The life safety strategy and procedures for notifying, relocating, or evacuating occupants.~~

~~3. Site plans indicating the following:~~

~~3.1. The occupancy assembly point.~~

~~3.2. The locations of fire hydrants.~~

~~3.3. The normal routes of fire department vehicle access.~~

~~4. Floor plans identifying the locations of the following:~~

~~4.1. Exits.~~

~~4.2. Primary evacuation routes.~~

~~4.3. Secondary evacuation routes.~~

~~4.4. Accessible egress routes.~~

~~4.5. Areas of refuge.~~

~~4.6. Manual fire alarm boxes.~~

~~4.7. Portable fire extinguishers.~~

~~4.8. Occupant-use hose stations.~~

~~4.9. Fire alarm annunciators and controls.~~

~~5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.~~

~~6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.~~

~~7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.~~))

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

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Section 1. Responsibilities.

Section 2. Fire Reporting.

Section 3. Evacuation.

Section 4. Fire Control Procedures.

Section 5. Post Fire Operations.

Section 6. Confidence Testing.

Section 7. High Value List.

Section 8. Shut-Off Valve List.

Section 9. Floor Plans.

404.3((4)) Maintenance. Fire safety and evacuation plans and high-rise emergency operations plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy, or the physical arrangement of the building.

404.4((5)) Availability. Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request. High-rise emergency operations plans shall be posted in the high-rise fire command center and one copy shall be furnished to the fire code official.

Section 103. Section 405 of the 2003 International Fire Code is amended by amending Table 405.2 to read as follows:

TABLE 405.2

FIRE AND EVACUATION DRILL

FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION

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Group A	Quarterly	Employees
Group E	Monthly[a]	All occupants
Group I	Quarterly on each shift	Employees((b))
Group R-1	Quarterly on each shift	Employees
Group R-4	Quarterly on each shift	Employees((b))
High-rise buildings	Annually	Staff and occupants[b]

a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.

((~~b. Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.~~))

b. **Exception:** Jail inmates, hospital patients, hotel guests and occupants of apartment or residential condominium units, unless such occupant is also a member of the high-rise building staff.

Section 104. Subsection 405.4 of the 2003 International Fire Code is hereby repealed.

Section 105. Subsections 405.5, 405.6, 405.7, 405.8 and 405.9 respectively of the 2003 International Fire Code are amended as follows:

405.4((~~5~~)) Record keeping. Records shall be maintained of required emergency evacuation drills and include the following information:

1. Identity of the person conducting the drill.
2. Date and time of the drill.
3. Notification method used.
4. Staff members on duty and participating.

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5. Number of occupants evacuated.

6. Special conditions simulated.

7. Problems encountered.

~~((8. Weather conditions when occupants were evacuated.~~

~~9~~)) 8. Time required to accomplish complete evacuation.

405.5((6)) Notification. Where required by the fire code official, prior notification of emergency evacuation drills shall be given to the fire code official.

405.6((7)) Initiation. Where a fire alarm system is provided, emergency evacuation drills shall be initiated by activating the fire alarm system. For buildings with central station monitoring, the responsible party for the building shall notify the central station monitoring company in advance of the drill in order to prevent a fire department response to the alarm activation.

405.7((8)) Accountability. As building occupants arrive at the assembly point, efforts shall be made to determine if all occupants have been successfully evacuated or have been accounted for.

405.8((9)) Recall and reentry. An electrically or mechanically operated signal used to recall occupants after an evacuation shall be separate and distinct from the signal used to initiate the evacuation. The recall signal initiation means shall be manually operated and under the control of the person in charge of the premises or the official in charge of the incident. No one shall reenter the premises until authorized to do so by the official in charge.

Section 106. Subsection 408.5.3 of the 2003 International Fire Code is amended as follows:

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408.5.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. ((~~Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program.~~)) Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

Section 107. Subsection 408.5.5 of the 2003 International Fire Code is amended as follows:

408.5.5 Resident participation. Emergency evacuation drills shall involve ((~~the actual evacuation of all residents to a selected assembly point.~~)) all residents participating in the drill according to the emergency instructions applicable to them.

Section 108. Subsection 408.10.3 of the 2003 International Fire Code is amended as follows:

408.10.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. ((~~Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program.~~)) Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

Section 109. Subsection 408.10.5 of the 2003 International Fire Code is amended as follows:

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408.10.5 Resident participation. Emergency evacuation drills shall be in accordance with the building fire safety and evacuation plan and shall involve residents participating in the drill according to the emergency instructions applicable to them. ((~~involve the actual evacuation of all residents to a selected assembly point and shall provide residents with experience in exiting through all required exits. All required exits shall be used during emergency evacuation drills.~~

~~**Exception:** Actual exiting from windows shall not be required. Opening the window and signaling for help shall be an acceptable alternative.~~))

Section 110. Subsections 408.11.1.1 and 408.11.1.2 respectively of the 2003 International Fire Code are amended as follows:

408.11.1.1 Approval. The lease plan shall be submitted to the fire code official ((~~for approval,~~)) and shall be maintained on site for immediate reference by responding fire service personnel.

408.11.1.2 Revisions. The lease plans shall be revised annually or as often as necessary to keep them current. Changes in use or occupancy classification ((~~Modifications or changes in tenants or occupancies~~)) shall not be made without prior approval of the fire code official and building official.

Section 111. Subsection 501.1 of the 2003 International Fire Code is amended as follows:

501.1 Scope. Fire service features for buildings, structures and premises shall comply with this chapter and Appendix D as amended.

Section 112. Section 502.1 of the 2003 International Fire Code is amended as follows:

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

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FIRE DEPARTMENT MASTER KEY. A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on specified properties.

Point of Information

The fire code official has approved the "Knox Box" as the access key box for use in the City of Seattle.

* * *

Section 113. Subsection 503.1.1 of the 2003 International Fire Code is amended as follows:

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.

Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where:

1. 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. 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.
3. There are not more than two Group R-3 or Group U occupancies.

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Section 114. Subsection 503.2.1 of the 2003 International Fire Code is amended as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ((~~13 feet 6 inches (4115 mm)~~)) 14 feet (4267 mm).

Exceptions:

1. Access roads serving not more than two Group R-3 or Group U occupancies shall have an unobstructed width of not less than 12 feet (3658 mm).
2. Public streets shall be in accordance with Seattle Department of Transportation requirements.

Section 115. Subsection 503.2.3 of the 2003 International Fire Code is amended as follows:

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. See AASHTO Highway Standard 20.

Section 116. Subsection 503.2.7 of the 2003 International Fire Code is amended as follows:

503.2.7 Grade. The grade of the fire apparatus access road shall ((~~be~~)) not exceed 10 percent unless approved by the fire code official. ((~~within the limits established by the fire code official based on the fire department's apparatus.~~))

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Section 117. Subsection 503.6 of the 2003 International Fire Code is amended as follows:

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire ((~~chief~~))code official. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times.

Section 118. Subsections 505.1 and 505.2 of the 2003 International Fire Code are amended as follows:

505.1 Address numbers. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. ((~~Numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).~~)) Letters or numbers shall be a minimum 3 inches (76 mm) in height for occupancies in Group R2 and R3 and not less than 5 inches (127 mm) for other occupancies. Letters and numbers shall have a minimum stroke of 0.5 inch (12.7 mm) of a contrasting color to the background itself.

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

Point of Information

Where marking is required, the signs shall be posted by the Seattle Department of Transportation for city streets and right of ways, and by the owner for private property.

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Section 119. Subsection 506.1 of the 2003 International Fire Code is amended as follows:

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the fire code official.

Point of Information

The fire code official has approved the "Knox Box" as the access key box for use in the City of Seattle.

Section 120. A new subsection 506.3 is adopted to read as follows:

506.3 Elevator key box. An elevator key box locked and keyed to the standard City elevator access key shall be provided. The elevator key box shall meet the following standards:

1. Dimensions - eight inches high, six inches wide and one inch deep.
2. Material - sixteen gauge steel welded.
3. Color - red (unless located in the main lobby above the call button, six feet nominal above the floor).
4. Labeling - "FOR FIRE DEPARTMENT USE."
5. Lock - Ace one-inch cylinder cam lock key #39504.

The elevator key box is to be installed at the designated recall floor above the Phase I recall switch or in the main lobby above the hall call button when no recall feature exists. The elevator key box is to be mounted six feet nominal above the floor. Other locations may be approved by the building official upon request, with notification to the fire code official.

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506.3.1 Elevator Keys. Keys for access to and for the operation of elevator equipment shall be tagged, labeled, and retained in the key box. The elevator key box shall contain fire emergency service keys (Phase I and II, one key for each switch). The elevator key box may in addition contain keys for any or all of the following:

1. Machine room door;
2. Secondary level door;
3. Pit door;
4. Roof door;
5. Independent, hospital emergency and/or attendant operation;
6. Hoistway access;
7. Mechanical hoist access devices (broken arm, lunar, etc.);
8. Miscellaneous switch keys;
9. Fire alarm panel room;
10. Sprinkler valve control room.

Point of Information

Due to security consideration, elevator key boxes should not contain master keys to tenant spaces. Keys in elevator key boxes should be limited to those for access of the building systems and equipment as listed in SFC 506.3.1.

Section 121. Subsection 508.3 of the 2003 International Fire Code is amended as follows:

508.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an approved method <u>and shall be in accordance with Appendix B as amended</u>. <u>Unless otherwise approved by the fire code official, only those hydrants that meet all of the following conditions may be used to meet the fire flow requirements:</u>

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1. Provide a minimum of 1,000 gpm at 20 psi flowing independently,

2. Provide a minimum of 500 gpm at 20 psi flowing simultaneously,

3. Are located within 500 feet of the building as measured by an approved route.

Section 122. Subsection 508.5.1 of the 2003 International Fire Code is amended as follows:

508.5.1 Where required. Where any portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than ((~~400 feet (122 m)~~)) 500 feet (152 m) 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. The number of fire hydrants required to be within 500 ft of any portion of a building or facility shall be determined by dividing the required fire flow by 2,000 and rounding up to the next whole number.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement from a hydrant shall be 600 feet (183 m)((~~.~~)), unless the building is equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.3.
2. For buildings 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 from a hydrant shall be 600 feet (183 m).

Section 123. A new subsection 508.7 is adopted to read as follows:

508.5.7 Hydrant marking. Hydrants shall be marked in a manner in accordance with Seattle Public Utilities.

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Section 124. Subsection 601.2 of the 2003 International Fire Code is amended as follows:

601.2 Permits. Permits shall be obtained for refrigeration systems, ((~~and~~)) battery systems and fuel tanks connected to emergency and standby power systems as set forth in Section 105.6.

Section 125. Subsection 602.1 of the 2003 International Fire Code is amended as follows:

602.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

BATTERY, LEAD ACID. A group of electrochemical cells interconnected to supply a nominal voltage of DC power to a suitably connected electrical load. The number of cells connected in series determines the nominal voltage rating of the battery. The size of the cells determines the discharge capacity of the entire battery.

BATTERY SYSTEM, STATIONARY LEAD ACID. A system which consists of three interconnected subsystems:

1. A lead-acid battery.
2. A battery charger.
3. A collection of rectifiers, inverters, converters, and associated electrical equipment as required for a particular application.

[M] COMMERCIAL COOKING APPLIANCES. Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-

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jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or a portion thereof used for the preparation and serving of food.

[B] EMERGENCY POWER SYSTEM means electrical systems that comply with the *Seattle Electrical Code* Article 700.

[M] HOOD. An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

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

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

REFRIGERATION SYSTEM. A combination of interconnected refrigerant-containing parts constituting one closed refrigerant circuit in which a refrigerant is circulated for the purpose of extracting heat and in which a compressor is used for compressing the refrigerant vapor.

[B] STANDBY POWER SYSTEM means an electrical power system that complies with *Seattle Electrical Code* Article 701 Legally Required Standby Systems.

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Section 126. Subsection 603.1.3 of the 2003 International Fire Code is amended as follows:

603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with ((~~oil-burning equipment~~)) fuel-fired appliances shall be installed and maintained in accordance with Section 605 and the ((~~ICC~~)) *Electrical Code*.

Section 127. Subsection 603.1.6 of the 2003 International Fire Code is amended as follows:

603.1.6 Testing, diagrams and instructions. After installation of the fuel-fired appliances ((~~oil-burning equipment~~)), operation and combustion performance tests shall be conducted to determine that the ((~~burner~~)) appliance is in proper operating condition and that all accessory equipment, controls, and safety devices function properly.

603.1.6.1 Diagrams. Contractors installing industrial fuel-fired appliances ((~~oil-burning systems~~)) shall furnish not less than two copies of diagrams showing the main ((~~oil~~)) fuel lines and controlling valves, one copy of which shall be posted at the fuel-fired appliances ((~~oil-burning equipment~~)) and another at an approved location that will be accessible in case of emergency.

* * *

Section 128. Subsection 603.1.7 of the 2003 International Fire Code is amended as follows:

603.1.7 Clearances. Working clearances between oil-fired appliances and electrical panelboards and equipment shall be in accordance with the ((~~ICC~~)) *Electrical Code*. ((~~Clearances between oil-fired equipment and oil supply tanks shall be in accordance with NFPA 31~~)) A minimum 5-ft

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(1.5-m) separation shall be maintained between oil-fired appliances and equipment and fuel oil supply tanks.

Section 129. Subsection 603.3 of the 2003 International Fire Code is amended as follows:

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

Exception: Fuel-oil tanks containing Class II or III combustible liquids not exceeding an individual or aggregate capacity of 275-gallons connected to oil-burning equipment and located inside buildings are allowed outside of a Group H Occupancy. All other applicable requirements of Chapter 34 apply.

~~((**603.3.1 Maximum outside fuel oil storage above ground.** Where connected to a fuel oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall comply with NFPA 31.~~

~~**603.3.2 Maximum inside fuel oil storage.** Where connected to a fuel oil piping system, the maximum amount of fuel oil storage allowed inside any building shall be 660 gallons (2498 L). Where the amount of fuel oil stored inside a building exceeds 660 gallons (2498 L), the storage area shall be in compliance with the *International Building Code*.~~

~~**603.3.3 Underground storage of fuel oil.** The storage of fuel oil in underground storage tanks shall comply with NFPA 31.~~))

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Section 130. Subsection 603.4 of the 2003 International Fire Code is amended as follows:

603.4 Portable unvented heaters. Portable unvented fuel-fired heating equipment shall be prohibited in occupancies in Groups A, E, I, R-1, R-2, R-3 and R-4.

Exceptions:

1. Listed and approved unvented fuel-fired heaters in one- and two-family dwellings.
2. Gas-fired heating appliances located outdoors at permanent Group A drinking and dining establishments are allowed in accordance with Section 603.4.2.

603.4.1 Prohibited locations. Unvented fuel-fired heating equipment shall not be located in, or obtain combustion air from, any of the following rooms or spaces: sleeping rooms, bathrooms, toilet rooms or storage closets.

603.4.2 Portable gas-fired heating appliances at permanent drinking and dining establishments. Portable gas-fired heating appliances located outdoors at permanent drinking and dining establishments frequented by the public shall be in accordance with this section.

603.4.2.1 Location.

603.4.2.1.1 Prohibited locations. The storage or use of portable gas-fired heating appliances are prohibited:

1. inside Group A occupancies when connected to the fuel gas container,
2. on tabletops, and
3. inside tents, canopies and membrane structures.

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603.4.2.1.2 Buildings. Portable gas-fired heating appliances shall be located at least 5 feet from buildings.

603.4.2.1.3 Near combustible materials. Portable gas-fired heating appliances shall not be located beneath combustible overhangs, awnings, sunshades or similar combustible decorations.

603.4.2.1.4 Near exits. Portable gas-fired heating appliances shall not be located within 5 feet of exits or exit discharges.

603.4.2.2 Portable gas-fired heating appliance.

603.4.2.2.1 Listing and approval. Only listed and approved heating appliances utilizing a gas container that is integral to the appliance shall be used.

603.4.2.2.2 Installation and maintenance. Heating appliances shall be installed and maintained in accordance with the manufacturer's instructions.

603.4.2.2.3 Automatic shutoff device. Portable gas-fired heating appliances shall be equipped with an automatic device that will shut off the flow of gas to the main burner and, if applicable, the pilot in the event the flame is extinguished.

603.4.2.2.4 Tip-over switch. Heating appliances shall be equipped with a tilt or tip-over switch that automatically shuts off the flow of gas if the appliance is tilted more than 19 degrees from vertical.

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603.4.2.2.5 Guard against contact. The heating element or combustion chamber shall be permanently guarded so as to prevent accidental contact by persons or material.

603.4.2.3 Gas containers.

603.4.2.3.1 Approved containers. Only approved U.S. DOT or ASME gas containers shall be used.

603.4.2.3.2 Refilling containers. Gas containers shall not be refilled onsite.

603.4.2.3.3 Container replacement. Replacement of gas containers in the heating appliance shall not be conducted while the public is present.

603.4.2.3.4 Gas container storage.

603.4.2.3.4.1 Container capacity. The maximum individual capacity of gas containers used in connection with portable gas-fired heating appliances shall not exceed 20 pounds.

603.4.2.3.4.2 Maximum storage quantity. The maximum aggregate quantity of gas containers onsite awaiting use shall not exceed 100 pounds (5 x 20-lb. containers) and shall be stored outside in accordance with Section 603.4.2.3.4.5.

603.4.2.3.4.3 Indoor storage prohibited. Gas containers shall not be stored inside.

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603.4.2.3.4.4 Storage locker. Gas containers shall be located outside within lockable, ventilated metal storage lockers or racks to prevent unauthorized access.

603.4.2.3.4.5 Storage locker location. Ventilated metal storage lockers or racks shall be located at least 20 feet from exits, building openings, public ways and designated smoking areas.

603.4.2.3.4.6 Security of storage locker. Ventilated metal storage lockers or racks shall be secured against unauthorized entry.

603.4.2.3.4.7 Vehicle protection. Ventilated metal storage lockers for gas containers shall be protected from vehicular impact if subject to possible vehicle impact.

603.4.2.3.4.8 Container position. Gas containers shall be stored in an upright position such that the pressure relief valve is in direct contact with the vapor phase of the container.

603.4.2.4 Ignition sources. Smoking and open flame devices (e.g. candles, flaming food or beverage preparation) shall be prohibited within 5 feet of any gas-fired heating appliance. NO SMOKING signs shall be posted at affected areas.

603.4.2.5 Fire extinguishers. At least one portable fire extinguisher having a minimum rating of 2A:40BC shall be provided and mounted with the top located no higher than 5 feet above grade. Travel distance to the extinguisher shall not exceed 50 feet.

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603.4.2.6 Leaking gas. In the event of a gas leak or suspected leak, the container shall be immediately removed from the premises. Periodic leak tests (with the use of soapy water) shall be conducted by trained personnel to ensure the container and fittings are tight.

603.4.2.7 Means of Egress. Drinking and dining areas where portable gas-fired heating appliances are used shall be provided with at least two means of egress.

Section 131. Subsection 603.5.2 of the 2003 International Fire Code is amended as follows:

603.5.2 Heating appliance installation. Heating appliances shall be installed in accordance with the manufacturer's instructions, the *International Building Code*, the *International Mechanical Code*, the *International Fuel Gas Code* and the ((~~ICC~~)) *Electrical Code.*

Section 132. Subsection 604.1 of the 2003 International Fire Code is amended as follows:

604.1 Installation. Emergency and standby power systems shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval.

Section 133. Subsection 604.2.2 of the 2003 International Fire Code is amended as follows:

604.2.2 Smoke control systems. ((~~Standby~~))Emergency power shall be provided for smoke control systems in accordance with Section 909.11.

Exception: Standby power is acceptable for shaft pressurization systems in low-rise buildings in accordance with Section 909.22.

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Section 134. Subsection 604.2.13 of the 2003 International Fire Code is amended as follows:

604.2.13 Covered mall buildings. Covered mall buildings exceeding 50,000 square feet (4645 m 2) shall be provided with ((~~standby~~))emergency power systems which are capable of operating the emergency voice/alarm communication.

Section 135. Subsection 604.2.14 of the 2003 International Fire Code is amended as follows:

604.2.14 High-rise buildings. ((~~Standby p~~))Power, light and emergency systems in high-rise buildings shall comply with the requirements of Sections 604.2.14.1 through 604.2.14.3.

604.2.14.1 ((~~Standby~~))Emergency power. An emergency((~~standby~~)) power system shall be provided. Where the emergency((~~standby~~)) system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire-resistance-rated fire barrier assemblies. System supervision with manual start and transfer features shall be provided at the fire command center.

604.2.14.1.1 Fuel supply. An on-premises fuel supply, sufficient for not less than 2-hour full-demand operation of the system, shall be provided.

((~~**Exception:** Where the system is supplied with pipeline natural gas and is approved.~~))

604.2.14.1.2 Capacity. The emergency((~~standby~~)) system shall have a capacity and rating that supplies all equipment required to be operational at the same time. The generating capacity is not required to be sized to operate all of the connected electrical equipment simultaneously.

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604.2.14.1.3 ((~~Connected facilities.~~ ~~Power and lighting facilities for the fire command center and elevators specified in Sections 403.8 and 403.9 of the *International Building Code*, as applicable, and electrically powered fire pumps required to maintain pressure, shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.~~)) Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10.

2. Elevator car lighting.

3. Emergency voice/alarm communications systems.

4. Automatic fire detection systems.

5. Fire alarm systems.

6. Power and lighting for the fire command center.

7. Lighting for mechanical rooms.

8. Electrically powered fire pumps.

9. Ventilation and automatic fire detection equipment for smokeproof enclosures.

10. Smoke control systems.

11. A selected elevator in each bank in accordance with Seattle Building Code Section 3016.7. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system---all elevators that respond to a single call button constitute a bank of elevators. All elevators shall be transferable to emergency power.

604.2.14.2 Separate circuits and fixtures. Separate lighting circuits and fixtures shall be required to provide sufficient light with an intensity of not less than 1 foot-candle (11 lux) measured at floor level in all means of egress corridors, stairways, smokeproof enclosures, elevator cars and lobbies, and other areas which are clearly a part of the escape route.

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((**~~604.2.14.2.1 Other circuits.~~** ~~Circuits supplying lighting for the fire command center and mechanical equipment rooms shall be transferable to the standby source.~~))

((**~~604.2.14.3 Emergency systems.~~** ~~Exit signs, exit illumination as required by Chapter 10, and elevator car lighting are classified as emergency systems and shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.~~

~~Exception:~~ ~~Exit sign, exit and means of egress illumination are permitted to be powered by a standby source in buildings of Group F and S occupancies.~~))

Section 136. Subsection 604.2.15 of the 2003 International Fire Code is amended as follows:

604.2.15 Underground buildings. Emergency ((~~and standby~~)) power systems in underground buildings covered in Chapter 4 of the *International Building Code* shall comply with Section((~~s~~)) 604.2.15.1. ((~~and 604.2.15.2.~~))

604.2.15.1 ((~~Standby~~))Emergency power. An emergency((~~standby~~)) power system complying with the ((~~ICC~~))*Electrical Code* shall be provided for ((~~standby~~))emergency power loads as specified in Section 604.2.15.1.1.

604.2.15.1.1 ((~~Standby~~))Emergency power loads. The following loads are classified as ((~~standby~~))emergency power loads:

1. Smoke control system.
2. Ventilation and automatic fire detection equipment for smokeproof enclosures.
3. Fire pumps.

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4. ((~~Standby~~))Emergency power shall be provided for elevators in accordance with Section 3003 of the *International Building Code*.

5. Emergency voice/alarm communication systems.

6. Fire alarm systems.

7. Automatic fire detection systems.

8. Elevator car lighting.

9. Means of egress lighting and exit sign illumination as required by Chapter 10.

~~(([B] 604.2.15.1.2 Pickup time. The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

~~604.2.15.2 Emergency power. An emergency power system complying with the ICC *Electrical Code* shall be provided for emergency power loads as specified in Section 604.2.15.2.1.~~

~~604.2.15.2.1 Emergency power loads. The following loads are classified as emergency power loads:~~

~~1. Emergency voice/alarm communication systems.~~

~~2. Fire alarm systems.~~

~~3. Automatic fire detection systems.~~

~~4. Elevator car lighting.~~

~~5. Means of egress lighting and exit sign illumination as required by Chapter 10.~~))

Section 137. Subsection 604.2.18 of the 2003 International Fire Code is amended as follows:

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604.2.18 Elevators. In buildings and structures where ((~~standby~~))emergency power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 604.2.18.1 through 604.2.18.4 and *Seattle Building Code* Section 3016.7.

604.2.18.1 Manual transfer. ((~~Standby~~))Emergency power shall be manually transferable to all elevators in each bank.

604.2.18.2 One elevator. Where only one elevator is installed, the elevator shall automatically transfer to ((~~standby~~))emergency power within ((~~60~~))10 seconds after failure of normal power.

604.2.18.3 Two or more elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to ((~~standby~~))emergency power within ((~~60~~))10 seconds after failure of normal power where the ((~~standby~~))emergency power source is of sufficient capacity to operate all elevators at the same time. Where the ((~~standby~~))emergency power source is not of sufficient capacity to operate all elevators at the same time, all elevators shall transfer to ((~~standby~~))emergency power in sequence, return to the designated landing and disconnect from the ((~~standby~~))emergency power source. After all elevators have been returned to the designated level, at least one elevator shall remain operable from the ((~~standby~~))emergency power source.

604.2.18.4 Venting. Where ((~~standby~~))emergency power is connected to elevators, the machine room ventilation or air conditioning shall be connected to the ((~~standby~~))emergency power source.

Section 138. A new subsection 604.2.19 is adopted to read as follows:

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604.2.19 Refrigeration systems. When treatment, detection, or continuous ventilation systems are required for refrigeration systems, such systems shall be connected to a secondary source of power to automatically supply electrical power in the event of loss from the primary source.

Section 139. Subsection 604.3.2 of the 2003 International Fire Code is amended as follows:

604.3.2 Written record. Written records of the inspection, testing and maintenance of emergency and standby power systems shall include the date of service, name of the servicing technician, a summary of conditions noted and a detailed description of any conditions requiring correction and what corrective action was taken. Such records shall be kept on the premises served by the emergency or standby power system and ((~~be available for inspection by~~))submitted to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 140. Subsection 605.1 of the 2003 International Fire Code is amended as follows:

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

Section 141. Subsection 605.3 of the 2003 International Fire Code is amended as follows:

605.3 Working space and clearance. A working space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided in

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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 ((~~ICC~~)) *Electrical Code*.
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).

* * *

Section 142. Subsection 605.4 of the 2003 International Fire Code is amended as follows:

605.4 Multiplug adapters. Multiplug adaptors, such as cube adaptors, unfused plug strips or any other device not complying with the ((~~ICC~~)) *Electrical Code* shall be prohibited.

* * *

Section 143. Subsection 605.9 of the 2003 International Fire Code is amended as follows:

605.9 Temporary wiring. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of the ((~~ICC~~)) *Electrical Code*.

Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities.

* * *

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Section 144. Subsection 606.8 of the 2003 International Fire Code is amended as follows:

606.8 Refrigerant detectors.

606.8.1 Within machinery rooms. Machinery rooms shall contain a refrigerant detector connected to an alarm system utilizing listed and approved fire alarm signaling devices capable of generating a sound level, distinctive from other alarm signals, of at least 15dB above the operating ambient sound pressure level of the space in which they are installed and initiating an approved distinctive visual alarm. ((~~with an audible and visual alarm~~.))

Where continuous mechanical ventilation is provided, failure of the ventilation system shall activate an audible and visual alarm.

The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant from a leak will concentrate. The alarm shall be actuated at a value not greater than the corresponding TLV-TWA values shown in the *International Mechanical Code* for the refrigerant classification.

Exception: Machinery room vapor detectors for ammonia systems shall actuate an alarm at a detection level not to exceed 1,000 ppm and shall automatically exhaust air from the machinery room in accordance with the International Mechanical Code Section 1105.6.4 for emergency conditions.

Detectors and alarms shall be placed in approved locations.

((~~**Exception:** Detectors are not required for ammonia systems where the machinery room complies with Section 1106.3 of the *International Mechanical Code*~~.))

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606.8.2 Outside of machinery rooms. Where evaporators and piping containing refrigerants in excess of the quantities in *International Mechanical Code* Table 1103.1 are located within rooms or spaces used exclusively for processing or storage of materials under refrigerated conditions, the refrigerated room or space shall be equipped with a refrigerant-vapor detector and alarm system complying with Section 606.8.1.

Activation of the refrigerant detector shall also automatically stop the flow of refrigerant to evaporators within the space and stop the flow of refrigerant in all supply lines leaving a machinery room whenever the refrigerant vapor concentration is detected at or above 50 percent of the IDLH or 25 percent of the LFL, whichever is lower.

Section 145. Subsection 606.15 of the 2003 International Fire Code is amended as follows:

606.15 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 requirements of the ((~~ICC~~)) *Electrical Code*.

Exception: Ammonia machinery rooms that are provided with ventilation in accordance with Section 1106.3 of the *International Mechanical Code*.

Section 146. A new subsection 606.16 is adopted to read as follows:

606.16 Secondary power source. When treatment, detection, continuous ventilation or alarm systems are required, such systems shall be connected to a secondary source of power to automatically supply electrical power in the event of loss of power from the primary source. See Section 604.2 and the Electrical Code.

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Section 147. Subsection 607.1 of the 2003 International Fire Code is amended as follows:

607.1 Required. Existing elevators with a travel distance of 25 level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.

Exception: Phase I recall will be initiated on any activation of the building's fire alarm system.

Section 148. Subsection 608.3 of the 2003 International Fire Code is amended as follows:

608.3 Room design and construction. Enclosure of stationary lead-acid system rooms shall comply with the *International Building Code*. See SBC Section 302. The battery systems are permitted to be in the same room with the equipment they support.

Section 149. Subsection 609.4 of the 2003 International Fire Code is amended as follows:

609.4 Room design and construction. Enclosure of VRLA battery system rooms shall comply with the *International Building Code*. See SBC Section 302. The battery systems are permitted to be in the same room with the equipment they support. When VRLA battery systems are installed in a separate equipment room accessible only to authorized personnel, they shall be allowed to be installed on an open rack for ease of maintenance. When a VRLA battery system is situated in an occupied work center, it shall be housed in a noncombustible cabinet or other enclosure to prevent access by unauthorized personnel.

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Section 150. Subsection 610.1 of the 2003 International Fire Code is amended as follows:

[M] 610.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this code and the *International Mechanical Code.* See also Section 904.11.

Section 151. A new subsection 803.1.4 is adopted to read as follows:

803.1.4 Atria

803.1.4.1 Fuel load. Combustible furnishings and decorative materials within atria shall be approved when located within an area that is more than 20 feet (6096 mm) below ceiling level sprinklers.

803.1.4.2 Decorative materials. Decorative material in atria shall be non-combustible, flame resistant or treated with a flame-retardant.

Section 152. Subsection 804.1 of the 2003 International Fire Code is amended as follows:

804.1 Natural cut trees. Natural cut trees, where permitted by this section, shall have the trunk bottoms cut off at least 0.5 inch (12.7 mm) above the original cut and shall be placed in a support device complying with Section 804.1.2.

804.1.1 Restricted occupancies. Natural cut trees shall be prohibited in Group ((~~A, E,~~)) 1-1, 1-2, 1-3, 1-4, LC, ((~~M, R-1, R-2~~)) and R-4 occupancies.

((**Exception:** ~~Trees located in areas protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 shall not be prohibited in Groups A, E, M, R-1 and R-2~~)).

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804.1.2 Support devices. The support device that holds the tree in an upright position shall be of a type that is stable and that meets all of the following criteria:

1. The device shall hold the tree securely and be of adequate size to avoid tipping over of the tree.

2. The device shall be capable of containing a minimum ((~~2-day~~)) supply of water in accordance with Table 804.1.2

3. The water level, when full, shall cover the tree stem at least 2 inches (51 mm). The water level shall be maintained above the fresh cut and checked at least once daily.

TABLE 804.1.2—SUPPORT STAND WATER CAPACITY

TREE STEM DIAMETER (inches)	MINIMUM SUPPORT STAND WATER CAPACITY (gallons)	TYPICAL DAILY WATER EVAPORATION AMOUNT (gallons)
Up to 4	1	¼ to 1
4 to 6	1-1/2	1-1/4 to 1-1/2
7 to 8	2	1-3/4 to 2
9 to 12	3	2-1/4 to 3
13 and over	4	Over 3

804.1.3 Dryness. The tree shall be removed from the building whenever the tree is determined to be dry by a needle pliability, discoloration or other approved means as approved by the fire code official ((~~needles or leaves fall off readily when a tree branch is shaken or if the needles are brittle and break when bent between the thumb and index finger~~)). The tree shall be checked daily for dryness.

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Section 153. Subsection 901.1 of the 2003 International Fire Code is amended as follows:

901.1 Scope. The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all fire protection systems. For the purposes of this chapter, fire walls not located on a property line shall not constitute a separate building.

Section 154. Subsection 901.4 of the 2003 International Fire Code is amended as follows:

901.4 Installation. Individuals who install, service, or maintain life safety systems and equipment shall obtain the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

Fire protection systems shall be maintained in accordance with the original installation standards for that system. Required systems shall be extended, altered, or augmented as necessary to maintain and continue protection whenever the building is altered, remodeled or added to. Alterations to fire protection systems shall be done in accordance with applicable standards.

* * *

Section 155. Subsection 901.5 of the 2003 International Fire Code is amended as follows:

901.5 Installation acceptance testing. Fire detection and alarm systems, fire-extinguishing systems, 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

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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. Individuals who perform acceptance tests on fire and life safety systems shall obtain the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

* * *

Section 156. Subsection 901.6 of the 2003 International Fire Code is amended as follows:

901.6 Inspection, testing and maintenance. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Fire and life safety systems shall be confidence tested in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*. Nonrequired fire protection systems and equipment shall be inspected, tested and maintained in an operative condition or removed when approved by the code official.

* * *

Section 157. Subsection 901.6.2 of the 2003 International Fire Code is amended as follows:

901.6.2 Records. Records of all system inspections, tests, and maintenance required by the referenced standards shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request. In addition, confidence test documentation shall be submitted to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

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Section 158. Subsection 901.7 of the 2003 International Fire Code is amended as follows:

901.7 Systems out of service. Where a ((~~required~~)) fire protection system is out of service the procedures detailed in Administrative Rule 9.06.04 *Out-Of-Service Fire Alarm, Standpipe, Fire Sprinkler and Emergency Alarm Systems* shall be implemented. ((~~, 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.

* * *

Section 159. Section 902 of the 2003 International Fire Code is amended by adding thereto definitions for FIRE DETECTION SYSTEM and PORTABLE SCHOOL CLASSROOM to read as follows:

* * *

FIRE DECTION SYSTEM: A system of smoke or heat detectors monitored at an approved central station, with no requirement for notification appliances in the building.

* * *

[W] PORTABLE SCHOOL CLASSROOM A structure, transportable in one or more sections, which requires a chassis to be transported, and is designed to be used as an educational space with or without a permanent foundation. The structure shall be trailerable and capable of being demounted and relocated to other locations as needs arise.

* * *

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Section 160. Subsection 903.2 of the 2003 International Fire Code is amended as follows:

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

Exception: Spaces or areas ((~~in telecommunications buildings~~)) used exclusively for telecommunications equipment, associated electrical power distribution equipment, and batteries ((~~and standby engines~~)), provided those spaces or areas are equipped throughout with an automatic ((~~fire alarm~~)) smoke detection system and are separated from the remainder of the building by a wall with a fire-resistance rating of not less than 1 hour and a floor/ceiling assembly with a fire-resistance rating of not less than 2 hours.

* * *

Section 161. Subsection 903.2.1.2 of the 2003 International Fire Code is amended as follows:

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (464.5 m^2);
2. The fire area has an occupant load of ((~~300~~)) 100 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Item 3 does not apply to fire areas that include space located one floor above the level of exit discharge where the occupant load of the upper floor is less than 50.

Section 162. Subsection 903.2.2 of the 2003 International Fire Code is amended as follows:

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[W] 903.2.2 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m^2) in area.
2. Throughout every portion of educational buildings below the level of exit discharge.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.
3. Throughout all newly constructed Group E Occupancies having an occupant load of 50 or more for more than 12 hours per week or four hours in any one day. A minimum water supply meeting the requirements of NFPA 13 shall be required. The fire code official may reduce fire flow requirements for buildings protected by an approved automatic sprinkler system.

For the purpose of this section, additions exceeding 60 percent of the value of such building or structure, or alterations and repairs to any portion of a building or structure within a twelve-month period that exceeds 100 percent of the value of such building or structure shall be considered new construction. In the case of additions, fire walls shall define separate buildings.

Exceptions:

1. Portable school classrooms , provided aggregate areas of clusters of portable school classrooms does not exceed 5,000 square feet (1465$m^{2)}$; and clusters of portable school classrooms shall be separated as required in Chapter 5 of the *Seattle Building Code.*
2. Group E Day Care.

When not required by other provisions of this chapter, a fire-extinguishing system installed in accordance with NFPA 13 may be used for increases and substitutions allowed in

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Section 504.2, 506.3 and Table 601 of the *Seattle Building Code.*

Section 163. Subsection 903.2.5 of the 2003 International Fire Code is amended as follows:

903.2.5.1 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed in Group I-1 facilities.

Section 164. A new subsection 903.2.5.2 is adopted to read as follows:

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

Exception: An automatic sprinkler system need not be installed in any Group LC Occupancy licensed for six or fewer clients.

Section 165. A new subsection 903.2.6.2 is adopted to read as follows:

903.2.6.2 Covered Mall Buildings. The covered mall building and buildings connected shall be provided throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, which shall comply with the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the covered mall building prior to occupancy of any tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with alternate protection, as approved by the fire code official.
2. Sprinkler protection for the mall 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 by separate shut off valves.

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Exception: An automatic sprinkler system shall not be required in spaces or areas of open parking garages constructed in accordance with Section 406.3 of the Seattle Building Code.

Section 166. Subsection 903.2.7 of the 2003 International Fire Code is amended as follows:

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

Exception: Buildings complying with the *International Residential Code* and Chapter 5 of this code are not required to be sprinklered.

Section 167. A new subsection 903.2.8.3 is adopted to read as follows:

903.2.8.3 Liquor Warehouses. An automatic sprinkler system shall be installed in liquor warehouses.

Point of Information
Stockrooms of retail liquor sales outlets are not liquor warehouses.

Section 168. Subsection 903.2.10.1.1 of the 2003 International Fire Code is amended as follows:

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

Section 169. New subsections 903.2.10.4, 903.2.10.5, 903.2.10.6, 903.2.10.7, 903.2.10.8 and 903.2.10.9 are adopted to read as follows:

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903.2.10.4 Basement storage and sale of combustible materials. An automatic sprinkler system shall be installed throughout basements that are not stories above grade plane that are used for storage or sale of combustible materials.

Exceptions:

1. Sprinklers are not required in portions of the basement not containing combustible materials and protected by a fire barrier with at least a one-hour fire-resistance rating.
2. Sprinklers are not required in storage rooms meeting the following criteria:
   - 2.1. The area of the room does not exceed 500 square feet;
   - 2.2. The room is protected by a fire barrier with at least a one-hour fire-resistance rating;
   - 2.3. The room contains no material classified as a flammable liquid, hazardous material or highly combustible material;
   - 2.4. The room is served by exterior fire access or interior access by a one-hour fire-resistance rated corridor.
   - 2.5 No more than three such rooms are permitted in any one basement.

903.2.10.5 High-rise buildings. High-rise 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 903.3.5.2.

Exception: An automatic sprinkler system shall not be required in spaces or areas used exclusively for telecommunications equipment, associated electrical power distribution equipment, and batteries, provided those spaces or areas are equipped throughout with an automatic smoke detectors and are separated from the remainder of the building by a wall

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with a fire-resistance rating of not less than 1 hour and a floor/ceiling assembly with a fire-resistance rating of not less than 2 hours.

903.2.10.5.1 High-rise building sprinkler system design. Combination standpipe/sprinkler risers in high-rise buildings using 6 in. pipe minimum, shall be used with the sprinkler system interconnected between and served from two standpipe risers. Shut-off valves, water-flow devices, and check valves (or pressure reducing valves) shall be provided on each floor at the sprinkler system connection to each standpipe. Two four-way fire department connections 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.

Exception: Dry pipe sprinkler systems serving parking garages may be supplied separately from the standpipe risers and use a single, separate two-way fire department connection.

903.2.10.6 Atriums. An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed throughout buildings containing an atrium.

Exceptions:

1. That area of the building adjacent to or above the atrium need not be sprinklered provided that portion of the building is separated from the atrium portion by a 2-hour fire barrier wall or horizontal assembly or both.
2. Where the ceiling of the atrium is more than 55 feet (16,764 mm) above any floor area open to the atrium, sprinkler protection at the ceiling of the atrium is not required.

903.2.10.7 Special amusement buildings. Special amusement buildings shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where the

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special amusement building is temporary, the sprinkler water supply shall be of an approved temporary means.

Exception: Automatic fire sprinklers are not required where the total floor area of a temporary special amusement building is less than 1,000 square feet (93 m 2) and the travel distance from any point to an exit is less than 50 feet (15 240 mm).

903.2.10.8 Stages. Stages shall be equipped with an automatic fire-extinguishing system in accordance with Chapter 9. The system shall be installed under the roof and gridiron, in the tie and fly galleries and in places behind the proscenium wall of the stage and in dressing rooms, lounges, workshops and storerooms accessory to such stages.

Exceptions:

1. Sprinklers are not required under stage areas less than 4 feet (1219 mm) in clear height utilized exclusively for storage of tables and chairs, provided the concealed space is separated from the adjacent spaces by not less than 5 /8 -inch (15.9 mm) Type X gypsum board.
2. Sprinklers are not required for stages 1,000 square feet (93 m 2) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs and a single backdrop.

903.2.10.9 Underground buildings. The highest level of exit discharge serving the underground portions of an underground building and all levels below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1. Water-flow switches and control valves shall be supervised in accordance with Section 903.4.

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Section 170. Subsection 903.3.1 of the 2003 International Fire Code is amended as follows:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Sections 903.3.1.1, 903.3.1.2 or 903.3.1.3, except as required by Administrative Rule 9.03.04 *Automatic Sprinklers and Standpipes*.

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.

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. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

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Section 171. Subsection 903.3.1.2 of the 2003 International Fire Code is amended as follows:

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in LC Occupancies and buildings of Group R, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R.

~~((**903.3.1.2.1 Balconies.** Sprinkler protection shall be provided for exterior balconies and ground floor patios of dwelling units where the building is of Type V construction. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members, and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies that are constructed of open wood joist construction.))~~

Section 172. Subsection 903.3.1.3 of the 2003 International Fire Code is amended as follows:

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one- and two-family dwellings, and townhouses where each unit has its own water service and when approved by the fire code official, shall be installed throughout in accordance with NFPA 13D.

Section 173. Subsection 903.3.2 of the 2003 International Fire Code is amended as follows:

903.3.2 Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

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1. Throughout all spaces within a smoke compartment containing patient sleeping units in Group I-2 in accordance with the *International Building Code.*
2. Dwelling units and sleeping units in Group R, LC and I-1 occupancies.
3. Light-hazard occupancies as defined in NFPA 13.

Section 174. Subsection 903.3.3 of the 2003 International Fire Code is amended 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 ((~~with due regard to obstructions that will delay activation or obstruct the water distribution pattern.~~)) In addition, ((~~A~~))automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width and depth. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exceptions:

1. Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.
2. Temporary covered booths, kiosks, or concession stands less than 300 square feet in area that are in spaces operating under a temporary place of assembly permit.

Section 175. Subsection 903.3.5.1.2 of the 2003 International Fire Code is amended as follows:

903.3.5.1.2 ((~~Residential e~~))Combination services. A single combination water supply shall be permitted for buildings that are not high-rise buildings provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

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Section 176. Subsection 903.3.5.2 of the 2003 International Fire Code is amended as follows:

903.3.5.2 Secondary water supply. A secondary on-site water supply ((~~equal~~)) of at least 15,000 gallons automatically available to the sprinkler system ((~~to the hydraulically calculated sprinkler demand, including the hose stream requirement,~~)) shall be provided for high-rise buildings. ((~~in Seismic Design Category C, D, E or F as determined by the *International Building Code*. The secondary water supply shall have a duration not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.~~))

Exception: Existing buildings including those undergoing substantial renovation.

Section 177. A new subsection 903.3.8 is adopted to read as follows:

903.3.8 System Type. Sprinkler systems protecting dwelling units and sleeping units shall be wet pipe systems.

Section 178. A new subsection 903.3.9 is adopted to read as follows:

903.3.9 Balconies. Sprinkler protection shall be provided for exterior balconies and ground floor patios of dwelling units where the building has combustible exterior siding, and the balcony or patio is recessed 4 feet (1.2 m) or more into the building, the roof or balcony above exceeds 4 feet (1.2 m) in depth, or the deck is enclosed. A deck is enclosed if less than 25% of its perimeter is open to the exterior. Solid railings less than 4 feet (1.2 m) in height are not considered enclosures. Storage closets on decks shall be sprinklered. Sprinklers shall be installed in accordance with NFPA 13 and the listing requirements of the sprinkler head.

Section 179. Subsection 903.4 of the 2003 International Fire Code is amended as follows:

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

Exceptions:

1. Non-required ((A))automatic sprinkler systems protecting one- and two-family dwellings.
2. Limited area systems serving fewer than 20 sprinklers.
3. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the automatic sprinkler system, and a separate shutoff valve for the automatic sprinkler system is not provided.
4. Jockey pump control valves that are sealed or locked in the open position.
5. Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.
6. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
7. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.

Section 180. Subsection 903.4.1 of the 2003 International Fire Code is amended as follows:

903.4.1 Signals. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to a central station service that is listed in the current edition of the Underwriter's Laboratories *Fire Protection Equipment Directory* under the category Central Station (UUFX) as a Full Service Company or as a Monitoring Company. Fire alarm systems in high-rise buildings and Group I and Group A occupancies (other than A-5) shall be monitored by a central station service that is listed in the current edition of the Underwriter's Laboratories *Fire Protection Equipment Directory* under the category Central Station (UUFX) as a Full

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Service Company or as a Fire Alarm Service – Local Company which subcontracts the monitoring, retransmission, and associated record keeping and reporting to a listed Full Service Company or Monitoring Company. The listing shall indicate that the Full Service Company or Fire Alarm Service – Local Company provides service to the Seattle area. ((~~an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.~~))

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves, located in limited area sprinkler system supply piping, shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

Section 181. Subsection 904.3 of the 2003 International Fire Code is amended as follows:

904.3 Installation. Automatic fire-extinguishing systems shall be installed in accordance with this section by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

* * *

Section 182. Subsections 904.5, 904.6 and 904.7 of the 2003 International Fire Code are amended as follows:

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904.5 Wet-chemical systems. Wet-chemical extinguishing systems shall be installed, maintained, periodically inspected and tested in accordance with NFPA 17A and their listing by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

904.5.1 System test. Systems shall be inspected and tested for proper operation at 6-month intervals by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*. Tests shall include a check of the detection system, alarms and releasing devices, including manual stations and other associated equipment. Extinguishing system units shall be weighed and the required amount of agent verified. Stored pressure-type units shall be checked for the required pressure. The cartridge of cartridge-operated units shall be weighed and replaced at intervals indicated by the manufacturer. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

904.5.2 Fusible link maintenance. Fixed temperature-sensing elements shall be maintained to ensure proper operation of the system.

904.6 Dry-chemical systems. Dry-chemical extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 17 and their listing.

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904.6.1 System test. Systems shall be inspected and tested for proper operation at 6-month intervals. Tests shall include a check of the detection system, alarms and releasing devices, including manual stations and other associated equipment. Extinguishing system units shall be weighed, and the required amount of agent verified. Stored pressure-type units shall be checked for the required pressure. The cartridge of cartridge-operated units shall be weighed and replaced at intervals indicated by the manufacturer. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

904.6.2 Fusible link maintenance. Fixed temperature-sensing elements shall be maintained to ensure proper operation of the system.

904.7 Foam systems. Foam-extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 11, NFPA 11A and NFPA 16 and their listing.

904.7.1 System test. Foam-extinguishing systems shall be inspected and tested at intervals in accordance with NFPA 25. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 183. Subsection 904.8 of the 2003 International Fire Code is amended as follows:

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904.8 Carbon dioxide systems. Carbon dioxide extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12 and their listing.

* * *

Section 184. Subsection 904.8.1 of the 2003 International Fire Code is amended as follows:

904.8.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 185. Subsection 904.9 of the 2003 International Fire Code is amended as follows:

904.9 Halon systems. Halogenated extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12A and their listing.

* * *

Section 186. Subsection 904.9.1 of the 2003 International Fire Code is amended as follows:

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904.9.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 187. Subsection 904.10 of the 2003 International Fire Code is amended as follows:

904.10 Clean-agent systems. Clean-agent fire-extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 2001 and their listing.

* * *

Section 188. Subsection 904.10.1 of the 2003 International Fire Code is amended as follows:

904.10.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 189. Subsection 904.11 of the 2003 International Fire Code is amended as follows:

904.11 Commercial cooking systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems of the type and arrangement protected. Preengineered automatic dry- and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. Other types of automatic fire-extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations. The system

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shall be installed by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with this code, its listing and the manufacturer's installation instructions. Automatic fire-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

1. Carbon dioxide extinguishing systems, NFPA 12.
2. Automatic sprinkler systems, NFPA 13.
3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
4. Dry-chemical extinguishing systems, NFPA 17.
5. Wet-chemical extinguishing systems, NFPA 17A.

Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 197 and listed, labeled and installed in accordance with Section 304.1 of the *International Mechanical Code.*

* * *

Section 190. Subsection 904.11.6.4 of the 2003 International Fire Code is amended as follows:

904.11.6.4 Extinguishing system service. Automatic fire-extinguishing systems shall be serviced by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety System*.

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Section 191. Subsection 905.2 of the 2003 International Fire Code is amended as follows:

905.2 Installation standards. Standpipe systems shall be installed in accordance with this section and NFPA 14, and Administrative Rule 9.03.04 *Automatic Sprinklers and Standpipes*.

Section 192. Subsection 905.3.2 of the 2003 International Fire Code is amended as follows:

905.3.2 Group A. Class I automatic or manual wet standpipes shall be provided in nonsprinklered Group A buildings having an occupant load exceeding 1,000 persons.

Exception((s)):

((~~1.~~))Open-air-seating spaces without enclosed spaces.

((~~2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 75 feet (22 860 mm) or less above the lowest level of fire department vehicle access.~~))

Section 193. Subsection 905.3.3 of the 2003 International Fire Code is amended as follows:

905.3.3 Covered mall buildings. A covered mall building shall be equipped throughout with a class I manual standpipe system with ((~~where required by Section 905.3. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3 shall be equipped with Class I hose connections connected to a system sized to deliver 250 gallons per minute (946.4 L/min) at the most hydraulically remote outlet. H~~)) hose connections ((~~shall be~~)) provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.

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Section 194. A new subsection 905.3.7 is adopted to read as follows:

905.3.7 High-rise building standpipes. Standpipe risers in high-rise buildings shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 in. Two 2 ½ in. hose connections shall be provided on every intermediate floor level landing in every required stairway. Where pressure reduction valves (prv) 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.

Section 195. Subsection 905.4 of the 2003 International Fire Code is amended as follows:

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

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.
3. In every exit passageway at the entrance from the exit passageway to other areas of a building.
4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall, and at each floor-level landing within enclosed stairways opening directly onto the mall.
5. ((~~Where the roof has a slope less than four units vertical in 12 units horizontal (33.3 percent slope), each~~)) At least one standpipe shall be provided with ((~~a~~)) two 2½ in. hose connections located ((~~either~~)) on the roof at least 10 feet (3048 mm) from the roof edge.

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skylight, light well or other opening, unless protected by a 42 in. high guardrail or equivalent. Additional roof connections shall be provided so that all portions of the roof are within 200 ft. of hose travel distance from a standpipe hose connection. Where stairs are required to provide roof access, the standpipe roof connections shall be located adjacent to the stair opening.

The roof hose connections shall be arranged to be operable without entering the building.

Roof connections in high-rise buildings are allowed to be located ((~~or~~)) at the highest landing of stairways 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 protected locations that are accessed through protected enclosures. Additional hose connections in parking garages are not required to be accessed through or located in protected enclosures. Protected enclosures and protected locations are either smoke barriers or exit enclosures constructed in accordance with the *Seattle Building Code.* ((~~the fire code official is authorized to require that additional hose connections be provided in approved locations.~~))

* * *

Section 196. Subsections 905.8 and 905.9 of the 2003 International Fire Code are amended as follows:

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905.8 Dry standpipes. Dry standpipes are acceptable in other than high-rise buildings. ((~~shall not be installed.~~

~~**Exception:** Where subject to freezing and in accordance with NFPA 14.~~))

905.9 Valve supervision. Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall also be transmitted to the control unit.

Exceptions:

1. Valves to underground key or hub valves in roadway boxes provided by the municipality or public utility do not require supervision.
2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system nor provided with monitoring by a central station service.

Section 197. Subsection 906.1 of the 2003 International Fire Code is amended as follows:

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

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

Exception: Fire extinguishers are not required for residential buildings that do not have interior common space, such as townhouses. ((~~In all Group A, B and E occupancies equipped throughout with quick- response sprinklers, fire extinguishers shall be required only in special hazard areas.~~))

2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or combustible liquids are stored, used or dispensed.

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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.

Section 198. Subsection 907.1 of the 2003 International Fire Code is amended as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures, and new fire alarm systems being installed in existing structures. The requirements of Section 907.3 are applicable to existing buildings and structures. All fire alarm and fire detection systems shall be designed, installed and maintained in accordance with the requirements of NFPA 72, except for the locations of initiating devices which shall meet Section 907 of the Seattle Fire Code.

Buildings required by this section to be provided with a fire alarm system shall be provided with a single fire alarm system.

Exception: A single system is not required in existing buildings that are being increased in size and the existing fire alarm system is unable to expand into the new space. In those cases the multiple systems shall be arranged as described below for non- required fire alarm systems.

Buildings not required by this section to be provided with a fire alarm system may be provided with multiple partial fire alarm systems provided:

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1. The systems are connected so that all systems simultaneously activate alarm notification appliances upon a signal from any of the fire alarm systems in the building.

2. The location of each systems annunciator panel (or main panel) is also provided with annunciator panels with reset capability for every other system in the building.

* * *

Section 199. Subsection 907.2 of the 2003 International Fire Code is amended as follows:

907.2 Where required—new buildings and structures. An approved manual, automatic, or manual and automatic fire alarm system shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23. Where automatic sprinkler protection installed in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

((~~An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall comply with Section 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector.~~))

* * *

Section 200. Subsection 907.2.5 of the 2003 International Fire Code is amended as follows:

907.2.5 Group H. A manual fire alarm system shall be installed in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings. An automatic

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smoke detection system shall be installed ((~~for~~)) in spaces containing highly toxic gases, organic peroxides and oxidizers in accordance with Chapters 37, 39 and 40, respectively.

Section 201. Subsections 907.2.6 of the 2003 International Fire Code is amended as follows:

907.2.6 Group I. A manual fire alarm system and an automatic ((~~fire~~)) smoke detection system shall be installed in Group I occupancies. An electrically supervised, automatic smoke detection system shall be provided in waiting areas that are open to corridors.

Exception: Manual fire alarm boxes in patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.1 are not exceeded.

* * *

Section 202. Subsection 907.2.6.1 of the 2003 International Fire Code is amended as follows:

907.2.6.1 Group I-2. Corridors in nursing homes (both intermediate care and skilled nursing facilities), detoxification facilities and spaces open to the corridors shall be equipped with an automatic ((~~fire~~)) smoke detection system.

Exceptions:

1. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each patient sleeping unit and shall provide an audible and visual alarm at the nursing station attending each unit.

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2. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping unit doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

Section 203. Subsection 907.2.7 of the 2003 International Fire Code is amended as follows:

907.2.7 Group M. A manual fire alarm system shall be installed in Group M occupancies, other than covered mall buildings complying with Section 402 of the *International Building Code*, having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge. See section 907.2.20 for covered mall building fire alarm requirements.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system and the alarm notification appliances will activate upon sprinkler water flow.

((~~**907.2.7.1 Occupant notification.** During times that the building is occupied, in lieu of the automatic activation of alarm notification appliances, the manual fire alarm system shall be allowed to activate an alarm signal at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.2.12.2. 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.~~))

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Section 204. Subsection 907.2.8.1 of the 2003 International Fire Code is amended as follows:

907.2.8.1 Manual and automatic fire alarm system. A ((~~manual~~)) fire alarm system shall be installed in Group R-1 occupancies.

Exceptions:

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

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

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

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

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

Section 205. Subsection 907.2.8.2 of the 2003 International Fire Code is amended as follows:

907.2.8.1.1((~~2~~)) Automatic ((~~fire alarm~~)) detection ((~~system~~)). ((~~An a~~)) Automatic ((~~fire alarm system~~)) smoke detectors shall be installed throughout all interior corridors serving guestrooms. Automatic heat detectors shall be provided in any unsprinklered interior areas outside guestrooms other than attics and crawl spaces.

Exception: ((~~An automatic fire detection system is~~)) Smoke detectors are not required in buildings that do not have interior corridors serving guestrooms and each guestroom has a means of egress door opening directly to an exterior exit access that leads directly to an exit.

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Section 206. Subsection 907.2.8.3 of the 2003 International Fire Code is amended as follows:

907.2.8.1.2((3)) Smoke alarms. Smoke alarms shall be installed as required by Section 907.2.10. In buildings that are not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the smoke alarms in guestrooms shall be connected to an emergency electrical system and shall be annunciated by guestroom at a constantly attended location from which the fire alarm system is capable of being manually activated.

Section 207. Subsection 907.2.9 of the 2003 International Fire Code is amended as follows:

907.2.9 Group R-2. A manual and automatic fire alarm system shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

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

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

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

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

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

~~3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Sections 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1022.6, Exception 4.~~))

Section 208. A new subsection 907.2.9.1 is adopted to read as follows:

907.2.9.1 Automatic detection. Automatic heat detectors shall be provided in any unsprinklered interior areas outside dwelling units other than attics and crawl spaces.

Section 209. Subsection 907.2.12 of the 2003 International Fire Code is amended as follows:

907.2.12 High-rise buildings. Buildings having floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communication system in accordance with Section 907.2.12.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412 of the *International Building Code.*
2. Open parking garages in accordance with Section 406.3 of the *International Building Code.*

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3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code.*

4. Low-hazard special occupancies in accordance with Section 503.1.2 of the *International Building Code.*

((~~5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code.*~~))

Section 210. Subsection 907.2.12.1 of the 2003 International Fire Code is amended as follows:

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

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

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Section 211. Subsection 907.2.12.2 of the 2003 International Fire Code is amended as follows:

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

((~~1. Elevator lobbies.~~

~~2. Corridors.~~

~~3. Rooms and tenant spaces exceeding 1,000 square feet (93 m^2) in area.~~

~~4. Dwelling units and sleeping units in Group R-2 occupancies.~~

~~5. Sleeping units in Group R-1 occupancies.~~

~~6. Areas of refuge as defined in Section 1002.~~))

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

Section 212. Subsection 907.2.12.3 of the 2003 International Fire Code is amended as follows:

907.2.12.3 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 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms,

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areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway. Eight portable handsets for the communication system shall be provided in the fire command center.

Exception: Fire department radio systems where approved by the fire department.

Section 213. Subsection 907.2.18.1 of the 2003 International Fire Code is amended as follows:

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

1. ((~~Mechanical equipment, e~~)) Electrical, transformer, 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 m^3/s) and serving not more than 10 air inlet openings.
5. Within 5 feet (1524 mm) of doors exiting into stairways that are smokeproof enclosures or are pressurized stairways.

Section 214. A new subsection 907.2.24 is adopted to read as follows:

907.2.24 Group LC. Fire alarm systems shall be installed in Group LC occupancies that are three or more stories above grade plane in height or have more than 16 clients. The alarm system shall include manual pull stations at every exit from every level and smoke detectors throughout exit paths.

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Section 215. Subsection 907.4.1 of the 2003 International Fire Code is amended as follows:

907.4.1 Location. Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each exit at every floor level. Additional manual fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet (60 960 mm).

Exception: Manual fire alarm boxes are not required on sprinklered floors of Group F, M, S and B occupancies, other than Group B laboratory facilities. ((~~shall not be required in Group E occupancies where the building is equipped throughout with an approved automatic sprinkler system, the notification appliances will activate on sprinkler water flow and manual activation is provided from a normally occupied location.~~))

Section 216. Subsection 907.7 of the 2003 International Fire Code is amended as follows:

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

1. ((~~Required automatic fire alarm system.~~)) Automatic heat and smoke detectors, other than duct detectors, and dwelling unit smoke alarms.
2. Sprinkler water-flow devices.
3. ((~~Required m~~))Manual fire alarm boxes.
4. Any other fire suppression system installed within the building, except for laboratory fume hood suppression systems.

Section 217. Subsection 907.9.1 of the 2003 International Fire Code is amended as follows:

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907.9.1 Annunciator panel. ((~~**Zoning indicator panel.** A zoning indicator panel and the associated controls shall be provided in an approved location.~~)) Annunciator panels shall be located inside the building at the main entrance. The fire code official may approve exterior annunciator panels designed specifically for that purpose. Graphic annunciators, when provided, shall be mounted to maintain the viewer's directional orientation. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of an audible-alarm silencing switch.

Alarm panels and annunciators shall not be installed where they would obstruct exiting. The required exit width plus 12 inches shall be provided when the panel is located in a means of egress. Alarm panels shall not be installed in an exit enclosure providing the sole exit from any space.

Section 218. Subsection 907.10.2 of the 2003 International Fire Code is amended as follows:

907.10.2 Audible alarms. Audible alarm notification appliances shall be provided and sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. 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 occupied space within the building, or in the case of non-required partial fire alarm systems, throughout the space that is being provided with the fire alarm system. The minimum sound pressure levels shall be: 70 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. The maximum sound pressure level for audible alarm notification appliances shall be 120 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances

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shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required. In assembly facilities with high sound levels such as nightclubs, bars, etc. an interface shall be provided between the fire alarm system and noise source to reduce the noise level upon activation of the fire alarm system.

Exceptions:

1. Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.
2. Audibility is not required for fire detection systems monitored by an approved central station.

Section 219. A new subsection 907.2.10.2.1 is adopted to read as follows:

907.10.2.1 Audible alarms in existing buildings. Required fire alarm systems in existing residential buildings shall provide a sound level of 60 dBa minimum or 15 dBa above ambient noise levels in sleeping rooms.

Section 220. Subsection 907.12 of the 2003 International Fire Code is amended as follows:

907.12 Duct smoke detectors. Duct smoke detectors shall be connected to the building's fire alarm control panel as a supervisory signal when a fire alarm system is provided. Duct detectors shall not activate a fire alarm signal. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors are monitored by a central station alarm service ((~~activate the building's alarm notification appliances~~)).

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2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Section 221. Subsection 907.15 of the 2003 International Fire Code is amended as follows:

907.15 Monitoring. Where required by this chapter or by the *International Building Code*, an approved supervising station in accordance with NFPA 72 shall monitor fire alarm systems.

Exception: Supervisory service is not required for:

1. Single- and multiple-station smoke alarms required by Section 907.2.10.
2. Smoke detectors in Group I-3 occupancies.
3. Non-required ((~~A~~))automatic sprinkler systems in one- and two-family dwellings.

Section 222. Subsection 907.17 of the 2003 International Fire Code is amended as follows:

907.17 Acceptance tests. Upon completion of the installation of the fire alarm system and after the electrical inspector has signed off on the installation, alarm notification appliances and circuits, alarm-initiating devices and circuits, supervisory-signal initiating devices and circuits, signaling line circuits, and primary and secondary power supplies shall be tested in accordance with NFPA 72 in the presence of the fire code official, by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.

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Section 223. Subsection 907.20 of the 2003 International Fire Code is amended as follows:

907.20 Inspection, testing and maintenance. The maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with this section and Chapter 7 of NFPA 72. The systems shall be worked on only by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.* Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

* * *

Section 224. A new subsection 907.21 is adopted to read as follows:

907.21 Fire Alarm Equipment. Alarm-initiating devices, alarm-signaling devices, and annunciators shall not be concealed, obstructed, deactivated, or impaired.

Exception: When authorized by the fire code official.

Fire alarm equipment shall not be reset upon activation unless authorized by the fire code official.

Section 225. Subsections 909.1 and 909.2 of the 2003 International Fire Code are amended as follows:

[B] 909.1 Scope and purpose. This section applies to mechanical or passive smoke control systems when they are required for new buildings or portions thereof by provisions of the *International Building Code* or 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.

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These provisions are not intended for the preservation of contents, the timely restoration of operations, or for assistance in fire suppression or overhaul activities. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-venting provisions found in Section 910. Mechanical smoke control systems shall not be considered exhaust systems under Chapter 5 of the *International Mechanical Code*.

[B] 909.2 General design requirements. Buildings, structures, or parts thereof required by the *International Building Code* or this code to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of Section 909 and the generally accepted and well-established principles of engineering relevant to the design. The construction documents shall include sufficient information and detail to describe adequately the elements of the design necessary for the proper implementation of the smoke control systems. These documents shall be accompanied with sufficient information and analysis to demonstrate compliance with these provisions.

Code Alternate CA909: Smoke control systems complying with the following in lieu of Sections 909.6, 909.7, 909.8 and 909.18.6 may be approved for high-rise buildings.

1. Building Ventilation. Natural or mechanical ventilation for the removal of products of combustion shall be provided in every story and basement in accordance with either item 1.1, 1.2 or 1.3.

1.1. Manually operable windows or panels shall be distributed around the perimeter of the building at not more than 50-foot (15 240 mm) intervals, and shall be aligned vertically. The operable area of the windows or panels shall not be less than 20 square feet per 50 linear feet of perimeter. The windows shall be identified with a white dot 2 inches in diameter located in the bottom one-third of the window.

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1. In Group R, Division 1 hotel occupancies, each guest room or suite having an exterior wall may be provided with 2 square feet (.19 m^2) of venting area in lieu of the area specified above.

2. Windows may be of fixed tempered glass provided that no coating or film is applied which will modify the natural breaking characteristics of the glass.

1.2. The mechanical air-handling equipment may be designed to accomplish smoke removal in lieu of the requirements of Item 1.1 above. Under fire conditions, the return and exhaust air shall be moved directly to the outside without recirculation to other sections of the building. The air-handling system shall provide a minimum of one exhaust air change each 10 minutes for the area involved.

1.3. Any other approved design which will produce equivalent results.

2. Shaft Pressurization. Shafts shall be protected by a shaft pressurization system complying with following:

2.1. All elevator shafts shall be pressurized to 0.10 inch of water column. Enclosed stairways shall be pressurized to 0.15 inch of water column. Exit passageways connecting pressurized stairways to the exterior shall be pressurized to 0.15 inches of water column. Other vertical shafts may be required to be pressurized as determined by the building official at the predesign conference. The pressure difference shall be measured between the shaft and the main occupied area on each floor.

EXCEPTION: Subject to the approval of the building official, pressurization may be omitted for elevators and enclosed stairways less than 75 feet (22 860 mm) in height.

2.2. Shaft pressurization shall be activated by a fire alarm system on each floor located in a manner approved by the building official and the fire chief. The fire alarm system shall include a smoke detector installed outside the enclosure and within

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15 feet (4572 mm) of shaft enclosure doors.

2.3. Areas separated by two-hour enclosure walls served by common ventilation equipment shall have automatic-closing dampers to prevent loss of pressurization.

2.4. Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by a minimum of two-hour fire-resistive construction. Duct work shall be constructed of noncombustible materials conforming to the requirements of the Mechanical Code.

2.5. Air for stairway pressurization shall be introduced supplied near the bottom of the shaft and at intervals sufficient to maintain the required pressure throughout the shaft. several other points in the shaft.

Note: The performance goal for item 2.5 is compliance with minimum and maximum pressures at all levels of the shaft, and to ensure upward flow of air and smoke.

2.6 Shaft pressurization air intakes shall be located at the exterior of the building.

EXCEPTION: Intakes for elevator shaft pressurization may be located within the building provided they are located no more than 20 feet (6096 mm) from major openings in the building exterior such as loading docks and vehicular entrances. Such intake shall be provided with smoke detectors which shall deactivate the pressurization system for that shaft.

2.7. Whenever shaft pressurization is activated, all horizontal exit doors which have hold-open devices shall be automatically released to close.

2.8. Other measures to prevent loss of pressurization shall be provided in the design and construction of shafts, such as quality of workmanship and caulking of penetrations and joints.

2.9. Exit enclosures shall be equipped with a barometric dampered relief opening at the top, and a motorized damper as required by the Energy Code. The motorized

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damper shall be of the normally open type (open with the power off). The enclosure shall be supplied mechanically with sufficient air to discharge a minimum of 2,500 cubic feet per minute through the relief opening while maintaining a minimum positive pressure of 0.15-inch water column in the shaft relative to atmospheric pressure with all doors closed. Supply air ducts shall be enclosed in construction at least equivalent to that of the exit enclosure between the exterior of the building and the exit enclosure. Activation of the mechanical equipment shall be initiated by the building fire alarm system. Such equipment shall also be activated by actuation of the automatic sprinkler system.

Section 226. Subsection 909.11 of the 2003 International Fire Code is amended as follows:

909.11 Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved ((~~standby~~)) emergency power system ((~~source~~)) complying with the ((~~ICC~~)) *Seattle Electrical Code*. The ((~~standby~~)) emergency power source and its transfer switches shall be in a separate room from the normal power transformers and switch gear and shall be enclosed in a room constructed of not less than 1-hour fire-resistance-rated fire barriers ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes. Transfer to full ((~~standby~~)) emergency power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with the ((~~ICC~~)) *Seattle Electrical Code*.

* * *

Section 227. Subsection 909.12.1 of the 2003 International Fire Code is hereby repealed.

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Section 228. Subsection 909.12.2 of the 2003 International Fire Code is amended as follows:

909.12.1((2)) Activation. Smoke control systems shall be activated in accordance with this section.

909.12.1.1((.2.1)) Pressurization, airflow or exhaust method. Mechanical smoke control systems using the pressurization, airflow or exhaust method shall have completely automatic control.

909.12.1.2((2.2)) Passive method. Passive smoke control systems actuated by approved spot-type detectors listed for releasing service shall be permitted.

Section 229. A new subsection 909.22 is adopted to read as follows:

909.22 Pressurization for low-rise buildings. Where elevator or stairway shaft pressurization is provided in accordance with exception 5 to Section 707.14.1 or exception 4 of Section 1018.2, the pressurization system shall comply with the following:

1. Shafts shall be pressurized to 0.15 inch of water column relative to the main occupied area on each floor.

   Exception: Elevator shafts in buildings that are protected throughout with an automatic sprinkler system may be pressurized to not less than 0.10 inch of water column.

Stairway pressurization shall be measured with all stairway doors closed. Elevator pressurization shall be measured with elevator cars at the designated recall level with the doors in the open position.

2. The shaft pressurization shall be activated by smoke detectors in the corridors located near the shaft on each floor as approved by the building official and the fire chief. If the

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building has a fire alarm panel, smoke detectors shall be connected to it, with power supplied by it.

3. Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by construction equal to that required for the shaft.
4. Air intakes for shafts other than elevators shall be located at the exterior of the building. Intakes for elevator shaft pressurization may be located within the building provided they are located no more than 20 feet (6096 mm) from major openings in the building exterior such as loading docks and vehicular entrances. Such intake shall be provided with smoke detectors which shall deactivate the pressurization system for that shaft.
5. An emergency source of power shall be provided for the fire alarm system.
6. A standby source of power shall e provided for the pressurization system according to Seattle Electrical Code Section 701.11. A connection ahead of the service disconnecting means shall be permitted as the sole source of power to the pressurization system.
7. Other measures to prevent loss of pressurization shall be provided in the design and construction of shafts, such as quality of workmanship and caulking of penetrations and joints.

Section 230. Section 1002 of the 2003 International Fire Code is amended by adding thereto new definitions of EXIT PLACARD and EXIT SIGN to read as follows:

* * *

EXIT PLACARD. A non-illuminated sign or a sign painted on a wall indicating the direction of egress.

EXIT SIGN. An internally-illuminated sign indicating the direction of egress.

* * *

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Section 231. Table 1004.1.2 of the 2003 International Fire Code is amended as follows:

TABLE 1004.1.2

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Assembly with fixed seats	See Section 1004.7
Assembly without fixed seats	
Concentrated (chairs only—not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas <u>and commercial laboratories</u>	100 gross
<u>Without sprinkler protection</u>	<u>130 gross</u>
<u>With sprinkler protection</u>	

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Courtrooms—other than fixed seating areas	40 net
Dormitories	50 gross
Educational Classroom area Shops, laboratories and other vocational room areas	 20 net 50 net
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient treatment areas Outpatient areas Sleeping areas	 240 gross 100 gross 120 gross
Kitchens, commercial	200 gross
Library Reading rooms Stack area	 50 net 100 gross
Locker rooms	50 gross
Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	 60 gross 30 gross 300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	

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Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room[1]	300 gross
Warehouses	500 gross

For SI:1 square foot = 0.0929 m^2.

1. For electrical equipment areas, see also Sections 110-26 and 110-33 of the *Seattle Electrical Code.*

Section 232. Section 1006 of the 2003 International Fire Code is amended as follows:

[B]SECTION 1006

MEANS OF EGRESS ILLUMINATION

1006.1 Illumination required. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

Exceptions:

1. Occupancies in Group U.
2. Aisle accessways in Group A.
3. Dwelling units and sleeping units in Groups R-1, R-2 and R-3.
4. Sleeping units of Group I occupancies.

1006.2 Illumination locations ((~~level~~)). Illumination shall be provided at every point in ((~~T~~))the means of egress ((~~illumination level shall not be less than 1 foot-candle (11 lux) at the floor level~~)) Luminaires shall be installed whenever exit signs are required as specified in Section 1011.

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Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the floor level is permitted to be reduced during performances to not less than 0.2 foot-candle (2.15 lux) provided that the required illumination is automatically restored upon activation of a premise's fire alarm system where such system is provided.

Code Alternate CA1006.2: Compliance with the following paragraphs will be deemed to satisfy the requirement for means of egress illumination at every point in the means of egress. Means of egress illumination systems that comply with this Code Alternate shall also comply with Sections 1006.3 and 1006.4.

1. **Location and Fixture Placement**. Means of egress illumination shall be located in stairways, corridors, halls, passenger elevator cars, lobbies, rooms with an occupant load of 100 or more, and other areas required to provide safe egress from the premises and immediately outside of the building exit when required by the building official. Fixtures shall be installed to not less than the following schedule:

Interior and exterior stairways and landings and outside building exit	At least one per landing
Corridors and halls and designated means of egress paths in parking garages	At least one for each 40 lineal feet
Lobbies, vestibules, foyers, elevator cars and other similar areas as required	At least one for each 250 sq. ft.
Warehouses	See Item 2 below.

These fixtures may be included in the watts per square foot calculation for means of egress illumination.

2. **Amount of Illumination**. Where means of egress illumination is required, illumination shall be provided at the rate of 0.1 watt of fluorescent illumination per square foot of area.

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Installations using incandescent lamps shall have a minimum wattage of at least 3 times the fluorescent requirements. Use of other light sources shall be subject to the approval of the building official.

EXCEPTIONS:

1. In warehouses, the allowable minimum illumination may be 0.1 watt per square foot (0.03 watts for fluorescent) provided fixtures are placed either:

   1.1 Where means of egress pathways are not designated, fixtures shall be placed to cover an area not larger than 1,600 square feet, or

   1.2 Where means of egress pathways are designated, fixtures shall be placed at least one for every 40 lineal feet.

2. In theaters, auditoriums or other places of assembly where motion pictures or other projections are made by means of directed light, the minimum allowable illumination may be reduced to 0.05 watts per square foot of floor area (0.02 watts for fluorescent). The higher level of required illumination shall be automatically restored upon activation of a premise's fire alarm system where such system is provided.

3. In Groups B, F-1, M and S-1 Occupancies, when approved by the building official, the minimum allowable illumination may be reduced to 0.05 watts per square foot (0.02 watts for fluorescent) of floor area.

4. In Group B Occupancies and open parking garages, when approved by the building official, the illumination may be eliminated when within 50 feet of a window wall or open side and where light is not totally obscured.

Means of egress illumination fixtures shall be spaced and designed to give adequate distribution of light for safe egress and so that the failure of any individual lighting element, such as the burning out of a light bulb, will not leave any space in total darkness. Illumination from

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battery operated fixtures shall provide the same level of illumination required for hard-wired fixtures.

1006.3 Power supply. ((~~Illumination emergency power.~~)) The power supply for means of egress illumination shall normally be provided by the premise's electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate the following areas:

1. Exit access corridors, passageways and aisles in rooms and spaces which require two or more means of egress.
2. Exit access corridors and exit stairways located in buildings required to have two or more exits.
3. Exterior egress components at other than the level of exit discharge until exit discharge is accomplished for buildings required to have two or more exits.
4. Interior exit discharge elements, as permitted in Section 1023.1, in buildings required to have two or more exits.
5. The portion of the exterior exit discharge immediately adjacent to exit discharge doorways in buildings required to have two or more exits.

The emergency power system shall provide power for a duration of not less than 90 minutes 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 Section 2702 of the *Seattle Building Code*.

1006.4 ((~~Performance of system~~)) Illumination levels.

1006.4.1 Normal power. When under normal power, the illumination level shall be not less than one foot candle at floor level at every point in the means of egress.

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1006.4.2 Emergency power. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle (6 lux) average and a minimum at any point of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

Section 233. Subsection 1008.1 of the 2003 International Fire Code is amended as follows:

1008.1 Doors. Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1017.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. See Section 3201 for doors swinging over public property.

Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on means of egress doors. Means of egress doors shall not be concealed by curtains, drapes, decorations or similar materials.

* * *

Section 234. Subsection 1008.1.2 of the 2003 International Fire Code is amended as follows:

1008.1.2 Door swing. Egress doors shall be side-hinged or pivoted swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.

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2. Group I-3 occupancies used as a place of detention.

3. Doors within or serving a single dwelling unit in Groups R-2 and R-3 as applicable in Section 101.2.

4. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.

5. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.

6. Power-operated doors in accordance with Section 1008.1.3.2.

7. In other than H occupancies, manually-operated horizontal sliding doors are permitted in a means of egress from occupied spaces with an occupant load of 10 or less.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15-pound (67 N) force. Forces shall be applied to the latch side. Within an accessible route, at exterior doors where environmental conditions require a closing pressure greater than 8.5 pounds, power operated doors shall be used within the accessible route of travel.

Section 235. Subsection 1008.1.3.4 of the 2003 International Fire Code is amended as follows:

1008.1.3.4 Access-controlled egress doors. The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, M, R-1 and R-2 are permitted to be equipped with an

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approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.

2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.

3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.

4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.

5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.

6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.

7. The access control system shall be listed or shall be comprised of approved components.

Note: Components bearing a "recognized component" mark from an approved agency shall be approved.

Section 236. Subsection 1008.1.4 of the 2003 International Fire Code is amended as follows:

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1008.1.4 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 as applicable in Section 101.2 where the following apply:
   1.1. A door is permitted to open at the top step of a((~~n interior~~)) flight of stairs, provided the door does not swing over the top step.
   1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1017.2, which are not on an accessible route.
3. In Group R-3 occupancies, the landing at an exterior doorway shall not be more than $7^3/_4$ inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).
5. Exterior decks, patios or balconies that are part of Type B dwelling units and have impervious surfaces, and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.

Section 237. Subsection 1008.1.5 of the 2003 International Fire Code is amended as follows:

1008.1.5 Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is the greater. Doors in the fully open position shall not reduce a required

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dimension by more than 7 inches (178 mm). When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. When doors open over landings, doors in any position shall not reduce the landing length to less than 12 inches (305 mm). Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

Exception: Landing length in the direction of travel in Group R-3 as applicable in Section 101.2 and Group U and within individual units of Group R-2 as applicable in Section 101.2, need not exceed 36 inches (914 mm).

Interpretation I1008.1.5: Landing length, width and slope shall be measured as specified in Section 1009.4 and 1009.5.1. See Figures 1008.1.5(1) and 1008.1.5(2) of the Seattle Building Code for illustrations of the requirements of this section.

Section 238. Subsection 1008.1.8.3 of the 2003 International Fire Code is amended as follows:

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint as approved by the building official.
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in churches, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   2.1. The locking device is readily distinguishable as locked,
   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED ((~~WHEN BUILDING IS OCCUPIED~~)) DURING BUSINESS HOURS. The sign shall be in letters 1 inch (25 mm) high on a contrasting background,

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2.3. The use of the key-operated locking device is revokable by the building official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware on the egress side of the door.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.

Section 239. Subsection 1008.1.8.4 of the 2003 International Fire Code is amended as follows:

1008.1.8.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted on required means of egress doors.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts or self-latching flush bolts are permitted on the inactive leaf.

Section 240. Subsection 1008.1.8.6 of the 2003 International Fire Code is amended as follows:

1008.1.8.6 Special Locking Arrangements

1008.1.8.6.1 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in

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accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. Delayed egress locks are permitted in libraries and Group A and E occupancies in locations other than at main exit doors. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

   Exception: Where approved, a delay of not more than 30 seconds is permitted.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6. Emergency lighting shall be provided at the door.

Section 241. Subsection 1009.1 of the 2003 International Fire Code is amended as follows:

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1009.1 Stairway width. The width of stairways shall be determined as specified in Section 1005.1, but such width shall not be less than 44 inches (1118 mm). See Section 1007.3 for accessible means of egress stairways.

Exceptions:

1. Stairways serving an occupant load of 50 or less shall have a width of not less than 36 inches (914 mm).
2. Spiral stairways as provided for in Section 1009.9.
3. Aisle stairs complying with Section 1024.
4. Where a stairway lift is installed on stairways serving occupancies in Group R-3, or within dwelling units in occupancies in Group R-2, both as applicable in Section 101.2, a clear passage width not less than 20 inches (508 mm) shall be provided. If the seat and platform can be folded when not in use, the distance shall be measured from the folded position.
5. Stairways that are not part of a required means of egress.

Section 242. Subsection 1009.3 of the 2003 International Fire Code is amended as follows:

1009.3 Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm). Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads

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are narrower and a minimum tread depth of 10 inches (254 mm). The greatest winder tread depth at the 12-inch (305 mm) walk line within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm).

Exceptions:

1. Circular stairways in accordance with Section 1009.7.
2. Winders in accordance with Section 1009.8.
3. Spiral stairways in accordance with Section 1009.9.
4. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1024.11.2.
5. In occupancies in Group R-3, as applicable in Section 101.2, within dwelling units in occupancies in Group R-2, as applicable in Section 101.2, and in occupancies in Group U, which are accessory to an occupancy in Group R-3, as applicable in Section 101.2, the maximum riser height shall be 7.75 inches (197 mm) and the minimum tread depth shall be 10 inches (254 mm), the minimum winder tread depth at the walk line shall be 10 inches (254 mm), and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).

((~~6. See the *International Existing Building Code* for the replacement of existing stairways.~~))

Section 243. Subsection 1009.3.1 of the 2003 International Fire Code is amended as follows:

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1009.3.1 Dimensional uniformity. Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser or between the largest and smallest tread shall not exceed 0.375 inch (9.5 mm) in any flight of stairs.

Exceptions:

1. Nonuniform riser dimensions of aisle stairs complying with Section 1024.11.2.
2. Consistently shaped winders, complying with Section 1009.8, differing from rectangular treads in the same stairway flight.

Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope ((~~to less than 4 inches (102 mm) in height with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8 percent slope) of stairway width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).~~))

Section 244. Subsection 1009.6 of the 2003 International Fire Code is amended as follows:

1009.6 Vertical rise. A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings.

Exceptions:

1. Aisle stairs complying with Section 1024.
2. Stairways that are not part of a required means of egress.

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Section 245. Subsections1009.11.4 and 1009.11.5 of the 2003 International Fire Code are amended as follows:

1009.11.4 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a stair landing.
2. Within a dwelling unit, the use of a volute, turnout or starting easing is allowed on the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions and provided further that for each 0.5 inch (13 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1.5 inches (38 mm) shall be permitted to be reduced by 0.125 inch (3 mm).
4. Handrails on stairways that are not part of a required means of egress need not be continuous.

1009.11.5 Handrail extensions. Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight. Where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser.

Exceptions:

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
2. Aisle handrails in Group A occupancies in accordance with Section 1024.13.

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3. Handrail extensions are not required on handrails on stairways that are not part of a required means of egress.

Section 246. Subsection 1009.12 of the 2003 International Fire Code is amended as follows:

1009.12 Stairway to roof. In buildings four or more stories in height above grade at least one stairway shall extend to the roof surface through a penthouse complying with Section 1509.2 of the *Seattle Building Code*. ((~~unless the roof has a slope steeper than four units vertical in 12 units horizontal (33 percent slope). In buildings without an occupied roof, access to the roof from the top story shall be permitted to be by an alternating tread device.~~))

Exceptions:

1. A stairway to the roof is not required in Group R-3 occupancies.
2. Penthouses are not required for roofs with a slope steeper than four units vertical in 12 units horizontal (33 percent slope).

1009.12.1 Roof access. Where a stairway is provided to ((~~roof, access to the roof shall be provided through a penthouse complying with Section 1509.2 of the *International Building Code.*~~)) -)) he top floor of any building four or more stories in height and a penthouse is not required, an approved ladder and roof hatch openable to the exterior shall be provided at the highest point of the stair shaft. The roof hatch shall be not less than 11 square feet (1.1 m^2) in area and shall have a minimum dimension of 2 feet, 6 inches (762 mm). See Section 403 of the *Seattle Building Code* for provisions for high-rise buildings.

Exception: A roof hatch need not be provided for stairways that extend to the roof with an opening onto that roof.

((~~**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 (1.5 m^2) in area and having a minimum dimension of 2 feet (610 mm).~~))

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Section 247. A new subsection 1009.13 is adopted to read as follows:

[W] 1009.13 Ladders. Stairs or ladders used in the interior of individual dwelling units to gain access to areas 200 square feet (18.6 m^2) or less which do not contain the primary bathroom or kitchen are exempt from the requirements of Section 1019.

Section 248. Subsection 1010.8 of the 2003 International Fire Code is amended as follows:

1010.8 Handrails. Ramps with a rise greater than 6 inches (152 mm) shall have handrails on both sides complying with Section 1009.11. At least one handrail shall extend in the direction of ramp run not less than 12 inches (305 mm) horizontally beyond the top and bottom of the ramp runs.

Section 249. Section 1011 of the 2003 International Fire Code is amended as follows:

SECTION 1011

EXIT SIGNS

1011.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. Either exit signs or exit placards shall be located at any other location determined by the building official to be necessary to clearly indicate the direction of egress.

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Exceptions:

1. Exit signs are not required in rooms or areas which require only one exit or exit access other than in buildings designed with a single exit stairway according to Code Alternate CA1004.2b.
2. Main exterior exit doors or gates which obviously and clearly are identifiable as exits need not have exit signs where approved by the building official.
3. Exit signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. Exit signs are not required in sleeping areas in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.
6. Exit signs are not required within individual tenant spaces of Group B offices.
7. Exit signs shall not be required on exterior stairways serving exterior exit balconies.

Interpretation I1011.1a: Exit placards may be used to identify exits in occupancies where exit signs are not required.

1011.2 Illumination. Exit signs shall be internally or externally illuminated at all times.

Exception: Tactile signs required by Section 1011.3 need not be provided with illumination.

1011.3 Tactile exit signs. A tactile sign stating EXIT and complying with ICC A117.1 shall be provided adjacent to each door to an egress stairway, an exit passageway and the exit discharge.

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1011.4 ((~~Internally illuminated~~)) Listing of exit signs. ((~~Internally illuminated~~)) All exit signs shall be listed and labeled and shall be installed in accordance with the manufacturer's instructions and Section 2702. Exit signs shall be illuminated at all times.

1011.5 Externally illuminated exit signs. Externally illuminated exit signs shall comply with Sections 1011.5.1 through 1011.5.3.

1011.5.1 Graphics. Every exit sign, exit placard and directional exit sign shall have plainly legible green letters not less than 6 inches (152 mm) high with the principal strokes of the letters not less than 0.75 inch (19.1 mm) wide. The word "EXIT" shall have letters having a width not less than 2 inches (51 mm) wide except the letter "I," and the minimum spacing between letters shall not be less than 0.375 inch (9.5 mm). Signs and placards larger than the minimum established in this section shall have letter widths, strokes and spacing in proportion to their height.

The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when the exit sign illumination means is or is not energized. If an arrow is provided as part of the exit sign or placard, the construction shall be such that the arrow direction cannot be readily changed.

EXCEPTION: Existing exit signs or placards with letters at least 5 inches (127 mm) in height may be reused.

((~~**1011.5.2 Exit sign illumination.** The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 foot-candles (54 lux).~~))

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1011.5.2((3)) Power source. Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

Exception: Approved exit sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.

1011.5.3 Not-an-Exit Warnings. Placards reading "NOT AN EXIT" shall be installed at all doorways, passageways or stairways which are not exits, exit accesses or exit discharges, and which may be mistaken for an exit. A sign indicating the use of the doorway, passageway or stairway, such as "TO BASEMENT", "STORE ROOM", "LINEN CLOSET", is permitted in lieu of the "NOT AN EXIT" sign.

Section 250. Subsection 1013.2 of the 2003 International Fire Code is amended as follows:

1013.2 Egress through intervening spaces. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served; are not a high-hazard occupancy and provide a discernible path of egress travel to an exit. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. An exit access shall not pass through a room that can be locked to prevent egress. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms. Unless approved by the building official, where

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two or more exits are required, exit travel shall not pass through an exit enclosure as the only way to reach another exit.

Exceptions:

1. Means of egress are not prohibited through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or sleeping unit.
2. Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H occupancy when the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

Section 251. Subsection 1013.5.1 of the 2003 International Fire Code is amended as follows:

1013.5.1 Wall separation. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.

Exceptions:

1. Separation is not required where the exterior egress balcony is served by at least two stairs and a dead-end travel condition does not require travel past an unprotected opening to reach a stair.
2. Separation is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Section 252. Subsection 1014.2.1 of the 2003 International Fire Code is amended as follows:

1014.2.1 Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit

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doors or exit access doorways. Interlocking or scissor stairs and stairways that share a wall with other exit enclosures shall be counted as one exit stairway.

Exceptions:

1. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1016, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
3. Where approved by the building official, exits from retail and office tenant spaces in Group B and M Occupancies shall be as far apart as reasonably practicable.

Section 253. Table 1015.1 of the 2003 International Fire Code is amended as follows:

TABLE 1015.1

EXIT ACCESS TRAVEL DISTANCE[a]

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, I-1, M, R, S-1	200	250[b]
B	200	300[c]
F-2, S-2, U	300	400[b]
H-1	Not Permitted	75[c]
H-2	Not Permitted	100[c]
H-3	Not Permitted	150[c]

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H-4	Not Permitted	175[c]
H-5	Not Permitted	200[c]
I-2, I-3, I-4	150	200[c]

For SI:1 foot = 304.8 mm.

a. See the following sections for modifications to exit access travel distance requirements:

Section 402: For the distance limitation in malls.

Section 404: For the distance limitation through an atrium space.

Section 1015.2: For increased limitation in Groups F-1 and S-1.

Section 1024.7: For increased limitation in assembly seating.

Section 1024.7: For increased limitation for assembly open-air seating.

Section 1018.2: For buildings with one exit.

Chapter 31: For the limitation in temporary structures.

b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where sprinkler systems according to Section 903.3.1.2 are permitted.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Note: Where standpipes are required in open parking garages, additional standpipe connections may be required where hose travel distances are exceeded. See Section 905.4

Section 254. Subsection 1016.1 and Table 1016.1 of the 2003 International Fire Code are amended as follows:

1016.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1016.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for fire partitions.

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Exceptions:

1. A fire-resistance rating is not required for corridors in an occupancy in Group E where each room that is used for instruction has at least one door directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.
2. A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.
3. A fire-resistance rating is not required for corridors in open parking garages.
4. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1014.1.
5. In office areas located in buildings of Types IA or IB construction, corridor walls need not be of fire-resistive construction where the corridor side of the corridor walls is finished with materials having a maximum Class B rating as defined in Chapter 8. This exception does not apply to outpatient clinics and medical offices.
6. The occupant load of Group B conference rooms, lunch rooms without grease-producing cooking and other assembly rooms with an occupant load of less than 50 in each room need not be considered when determining whether corridor construction is required, provided such rooms are accessory to an office tenant located in a building of Type IA or IB construction. This provision may be used in other construction types when the floor on which the assembly room is located is equipped with an automatic sprinkler system.

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TABLE 1016.1

CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING(hours)	
		Without sprinkler system	With sprinkler system[c]
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	((~~Greater than 10~~)) All	1	((~~0.5~~)) 1
I-2[a], I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1[b]

a. For requirements for occupancies in Group I-2, see Section 407.3.

b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.7.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.

Section 255. Subsections 1016.3 and 1016.4 of the 2003 International Fire Code are amended as follows:

1016.3 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors. In other than Group B office occupancies in Types IA and IB construction, dead ends shall not be more than ((~~20~~)) 25 feet (((~~6096~~)) 7620 mm) in length. In buildings of Types IA and IB construction, areas containing Group B offices may have dead ends not exceeding 75 feet (22 860 mm) in length, provided the

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cumulative occupant load shall not exceed 50 for all areas for which the dead end serves as the only means of egress.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section202, definition of Occupancy Group I-3), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B and F where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

1016.4 Air movement in corridors. Exit access corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts except as allowed by Seattle Mechanical Code Section 601.2.

((~~**Exceptions:**~~

~~1. Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall be permitted provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor.~~

~~2. Where located within a dwelling unit, the use of corridors for conveying return air shall not be prohibited.~~

~~3. Where located within tenant spaces of 1,000 square feet (93 m^2) or less in area, utilization of corridors for conveying return air is permitted.~~))

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Section 256. Subsection 1017.2 of the 2003 International Fire Code is amended as follows:

1017.2 Exterior exit doors. Buildings or structures used for human occupancy shall have at least one exterior door that meets the requirements of Section 1008.1.1 and Section 1008.1.2.

* * *

Section 257. Subsection 1018.1 of the 2003 International Fire Code is amended as follows:

1018.1 Minimum number of exits. All rooms and spaces within each story shall be provided with and have access to the minimum number of approved independent exits as required by Table 1018.1 based on the occupant load, except as modified in Section 1014.1 or 1018.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way.

Exceptions:

1. Occupied roofs with an occupant load of 10 or less may have one exit.
2. Access to only one exit or exit-access doorway is permitted for floors below the first story above grade plane where:
   - 2.1 The area of the floor does not exceed 900 square feet (83.61 m^2);
   - 2.2 Travel distance is less than 50 feet (15 240 mm); and
   - 2.3 The floor contains only storage rooms, laundry rooms, and maintenance offices.

* * *

Section 258. Subsection 1018.2 of the 2003 International Fire Code is amended as follows:

1018.2 Buildings with one exit. Only one exit shall be required in buildings as described below:

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1. Buildings described in Table 1018.2, provided that the building has not more than one level below the first story above grade plane.
2. Buildings of Group R-3 occupancy.
3. Single-level buildings with the occupied space at the level of exit discharge provided that the story or space complies with Section 1014.1 as a space with one means of egress.

4. Not more than 5 stories of Group R-2 occupancy in buildings not over 6 stories may be served by a single exit under the following conditions:

4.1. There shall be no more than four dwelling units on any floor.

4.2. The building shall be of not less than one-hour fire-resistive construction and shall also be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. Residential type sprinkler heads shall be used in all habitable spaces in each dwelling unit.

4.3. There shall be no more than two single exit stairway conditions on the same property.

4.4. An exterior stairway or exit enclosure shall be provided. The exit enclosure, including any related exit passageway, shall be pressurized in accordance with Section 909.22. Doors in the exit enclosure shall swing into the exit enclosure regardless of the occupant load served, provided that doors from the exit enclosure to the building exterior may swing in the direction of exit travel.

4.5. A corridor shall separate each dwelling unit entry/exit door from the door to an exit enclosure, including any related exit passageway, on each floor. Dwelling unit doors shall not open directly into an enclosed stairway. Dwelling unit doors may open directly into an exterior stairway.

4.6. There shall be no more than 20 feet (6096 mm) of travel distance to the exit stairway from the entry/exit door of any dwelling unit.

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4.7. The exit shall not terminate in an exit court where the court depth exceeds the court width unless it is possible to exit in either direction to the public way.

4.8. Elevators shall be pressurized in accordance with Section 909.22 or shall open into elevator lobbies. Elevator lobbies shall be separated from the remainder of the building and from the exit stairway with fire partitions. Doors shall be automatic closing actuated by smoke detector. Where approved by the building official, natural ventilation may be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases.

4.9. Other occupancies are permitted in the same building provided they comply with all the requirements of this code. Except for parking garages accessory to the Group R occupancy, other occupancies shall not communicate with the Group R occupancy portion of the building or with the single-exit stairway.

4.10. There shall be no openings within 10 feet (3048 mm) of unprotected openings into the stairway other than required exit doors having a one-hour fire-resistance rating.

Section 259. Subsection 1019.1 and 1019.2 of the 2003 International Fire Code are amended as follows:

1019.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers. Exit enclosures shall have a fire-resistance rating of not less than 2 hours where connecting more than four stories ((~~or more~~)) and not less than 1 hour where connecting ((~~less than~~)) four and fewer stories. The number of stories connected by the shaft enclosure shall include any basements but not any mezzanines. An exit enclosure shall not be used for any purpose other than means of egress, circulation and access. Enclosures shall be constructed as fire barriers in accordance with Section 706. Exit enclosures shall terminate at the exterior of

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the building or an exit passageway shall connect the exit enclosures to the exterior of the building.

Exceptions:

1. In other than Group H and I occupancies, a stairway serving an occupant load of less than 10 not more than one story above the level of exit discharge is not required to be enclosed.
2. Exits in buildings of Group A-5 where all portions of the means of egress are essentially open to the outside need not be enclosed.
3. Stairways serving and contained within a single residential dwelling unit or sleeping unit in occupancies in Group R-2 or R-3 and sleeping units in occupancies in Group R-1 are not required to be enclosed.
4. Stairways that are not a required means of egress element are not required to be enclosed where such stairways comply with Section 707.2.
5. Stairways in open parking structures which serve only the parking structure are not required to be enclosed.
6. Stairways in occupancies in Group I-3 as provided for in Section 408.3.6 are not required to be enclosed.
7. Means of egress stairways as required by Section 410.5.4 are not required to be enclosed.
8. In other than occupancy Groups H and I, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors.
9. In other than occupancy Groups H and I, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be

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enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories.

1019.1.1 Openings and penetrations. Exit enclosure opening protectives shall be in accordance with the requirements of Section 715 of the *International Building Code.*

Except as permitted in Section 402.4.6 of the *International Building Code*, openings in exit enclosures other than unexposed exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure.

Interpretation I1019.1.1: Elevators and accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into an exit enclosure.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door conforming to the requirements in Section 715.3 of the *International Building Code*. Fire door assemblies in exit enclosures shall comply with Section 715.3.4 of the *International Building Code*

1019.1.2 Penetrations. Penetrations into and openings through an exit enclosure are prohibited except for required exit doors, equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and sprinkler monitoring, and electrical raceway serving the exit enclosure and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Piping used exclusively for the drainage of rainfall runoff from roof areas is permitted to penetrate exit enclosures, provided the roof is not used for a helistop or heliport. Such penetrations shall be protected in accordance with Section 712 of the *International Building Code*. Unfired unit heaters required

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for freeze protection of fire protection equipment may penetrate one membrane. The conduit serving the heater may penetrate both membranes. There shall be no penetrations or communication openings, whether protected or not, between adjacent exit enclosures.

Section 260. Subsection 1019.1.7 and subsection 1019.1.8 of the 2003 International Fire Code are amended as follows:

1019.1.7 Stairway ((~~floor number~~)) signs. A sign shall be provided at each floor landing in interior vertical exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and the identification of the stair. The signage shall also state the story of, and the direction to the exit discharge, ((~~and the availability of~~)) whether there is roof access from the stairway for the fire department, and whether the roof is accessed by roof hatch. The sign shall be located 5 feet (1524 mm) above the floor landing in a position which is readily visible when the doors are in the open and closed positions.

1019.1.8 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with Section 909.20 of the *International Building Code.*

Exception: Smokeproof enclosures are not required in buildings that comply with CA909.

* * *

Section 261. A new subsection 1019.1.9 is adopted to read as follows:

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1019.1.9 Equipment in exit enclosures. Equipment is prohibited in exit enclosures except for equipment necessary for independent pressurization, sprinkler piping, standpipes, electrical equipment for fire department communication and sprinkler monitoring, and unit heaters required to protect fire protection equipment from freezing.

Section 262. Section 1020 of the 2003 International Fire Code is amended as follows:

[B] SECTION 1020

EXIT PASSAGEWAYS

1020.1 Exit passageway. Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of this section. An exit passageway shall not be used for any purpose other than as a means of egress, circulation and access.

1020.2 Width. The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches (1118 mm), except that exit passageways serving an occupant load of ((~~less than~~)) 50 or less shall not be less than 36 inches (914 mm) in width.

The required width of exit passageways shall be unobstructed.

Exception: Doors, when fully opened, and handrails, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) on each side.

1020.3 Construction. Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than that required for any connecting exit

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enclosure. Exit passageways shall be constructed as fire barriers in accordance with Section 706 of the *International Building Code.*

1020.4 Openings and penetrations. Exit passageway opening protectives shall be in accordance with the requirements of Section 715 of the *International Building Code.*

Except as permitted in Section 402.4.6 of the *International Building Code*, openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.

Interpretation I1020.4: Accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into exit passageways.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door conforming to the requirements in Section 715.3 of the *International Building Code*. Fire door assemblies in exit passageways shall comply with Section 715.3.4 of the *International Building Code.*

Elevators shall not open into an exit passageway.

1020.5 Penetrations. Penetrations into and openings through an exit passageway are prohibited except for required exit doors, equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceway serving the exit passageway and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Such penetrations shall be protected in accordance with Section 712 of the *International Building Code*. There shall be no penetrations or communicating openings, whether protected or not, between adjacent exit passageways.

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Exception: Unfired unit heaters allowed by Section 1020.1 to be installed in exit enclosures may penetrate one membrane. The conduit serving the heater may penetrate both membranes.

Section 263. Subsection 1022.3 of the 2003 International Fire Code is amended as follows:

1022.3 Open side. Exterior exit ramps and stairways serving as an element of a required means of egress shall be at least 50 percent open on at least one side. An open side shall have a minimum of ((~~35~~)) 28 square feet (((~~3.3~~)) 2.6 m^2) of aggregate open area adjacent to each floor. The open area shall be distributed to prevent accumulation of smoke or toxic gases. ((~~level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or landing level.~~))

Section 264. Subsection 1023.1 of the 2003 International Fire Code is amended as follows:

1023.1 General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building except into an exit or as otherwise approved by the building official.

Exceptions:

1. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through areas on the level of discharge provided all of the following are met:
   1.1. Such exit enclosures egress to a free and unobstructed way to the exterior of the building, which way is readily visible and identifiable from the point of termination of the exit enclosure.

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1.2. The entire area of the level of discharge is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.

1.3. The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exits.

2. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through a vestibule provided all of the following are met:

2.1. The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.

2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).

2.3. The area is separated from the remainder of the level of exit discharge by construction providing protection at least the equivalent of approved wired glass in steel frames.

2.4. The area is used only for means of egress and exits directly to the outside.

3. Stairways in open parking garages complying with Section 1019.1, Exception 5, are permitted to egress through the open parking garage at the level of exit discharge.

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Section 265. Subsection 1023.5.2 of the 2003 International Fire Code is amended as follows:

1023.5.2 Construction and openings. Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall be not less than 1-hour fire-resistance-rated exterior walls complying with Section 704 of the *International Building Code* for a distance of 10 feet (3048 mm) above the floor of the court, and openings therein shall be equipped with fixed or self-closing, $^3/_4$-hour opening protective assemblies.

Exceptions:

1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving Group R-3 as applicable in Section 1001.1.
3. In buildings other than those which have a single means of egress under Section 1018.2 exception 4, opening protection need not be provided where it is possible to exit in two directions from the court.

Section 266. Subsection 1023.6 of the 2003 International Fire Code is amended as follows:

1023.6 Access to a public way. The exit discharge shall provide a direct and unobstructed access to a public way.

Exception: Where access to a public way cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate at least 5 square feet (0.28 m^2) for each person.
2. The area shall be located on the same property at least 50 feet (15 240 mm) away from the building requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.

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4. The area shall be provided with a safe and unobstructed path of travel from the building.

5. The area shall be provided with at least two gates.

Section 267. Subsection 1024.9.5 of the 2003 International Fire Code is amended as follows:

1024.9.5 Assembly aisle termination. Each end of an aisle shall terminate at cross aisle, foyer, doorway, vomitory or concourse having access to an exit.

Exceptions:

1. Dead-end aisles shall not be greater than ((~~20~~)) 25 feet (((~~6096~~)) 7620 mm) in length.
2. Dead-end aisles longer than 20 feet (6096 mm) are permitted where seats beyond the 20-foot (6096 mm) dead-end aisle are no more than 24 seats from another aisle, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row.
3. For smoke-protected assembly seating, the dead-end aisle length of vertical aisles shall not exceed a distance of 21 rows.
4. For smoke-protected assembly seating, a longer dead-end aisle is permitted where seats beyond the 21-row dead-end aisle are not more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row.

Section 268. Subsection 1024.11 of the 2003 International Fire Code is amended as follows:

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1024.11 Assembly aisle walking surfaces. Aisles with a slope not exceeding one unit vertical in eight units horizontal (12.5-percent slope) shall consist of a ramp having a slip-resistant walking surface. Aisles with a slope exceeding one unit vertical in eight units horizontal (12.5-percent slope) shall consist of a series of risers and treads that extends across the full width of aisles and complies with Sections 1024.11.1 through 1024.11.3.

[W] EXCEPTION: When provided with fixed seating, aisles in Group A-1 Occupancies are permitted to have a slope not steeper than one unit vertical to five units horizontal (20-percent slope).

1024.11.1 Treads. Tread depths shall be a minimum of ((~~11~~)) 10 inches (((~~279~~)) 254 mm) and shall have dimensional uniformity.

Exception: The tolerance between adjacent treads shall not exceed 0.188 inch (4.8 mm).

* * *

Section 269. Subsection 1024.13 of the 2003 International Fire Code is amended as follows:

1024.13 Handrails. Ramped aisles having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and aisle stairs shall be provided with handrails located either at the side or within the aisle width.

Exceptions:

1. Handrails are not required for ramped aisles having a gradient no greater than one unit vertical in ((~~eight~~)) five units horizontal (((~~12.5~~)) 20 percent slope) and seating on both sides.
2. Handrails are not required if, at the side of the aisle, there is a guard that complies with the graspability requirements of handrails.

* * *

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Section 270. Subsection 1024.13.2 of the 2003 International Fire Code is hereby repealed.

Section 271. Subsection 1101.3 of the 2003 International Fire Code is amended as follows:

1101.3 Permits. For permits to operate aircraft-refueling vehicles, application of flammable or combustible finishes, and hot work, see Section 105.6. For permits to operate helicopters to move suspended loads over populated areas see Section 105.6.22.2 Helicopter lifts.

Section 272. Subsection 1207.3 of the 2003 International Fire Code is amended as follows:

1207.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall conform to the requirements of Chapter 34 and be located underground or outside, above ground.

Exceptions: ((~~As provided in NFPA 32 for inside storage or treatment tanks.~~))

1. Solvent storage tanks located within solvent tank storage rooms in accordance with Section 1207.2 where the individual tank capacity does not exceed 1,500 gallons and the aggregate quantity of solvent inside the room does not exceed 3,000 gallons.
2. Solvent tanks located within approved rooms or buildings in accordance with Section 3404.3.7 for the use, mixing and dispensing of flammable and combustible liquids.

Section 273. A new subsection 1303.1.1 is adopted to read as follows:

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1303.1.1 Static accumulation. When processes or conditions exist where combustible dust could be ignited by static electricity, means shall be provided to prevent the accumulation of a static charge.

Section 274. Subsection 1404.5 of the 2003 International Fire Code is amended as follows:

1404.5 Fire watch. Fire watch for buildings under construction or alteration shall be provided in accordance with Administrative Rule 9.06.04 *Out-Of-Service Fire Alarm, Standpipe, Fire Sprinkler and Emergency Alarm Systems.* When required by the fire code official for building 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.

Section 275. Subsection 1408.1 of the 2003 International Fire Code is amended as follows:

1408.1 Program superintendent. Where required ((~~The~~))the owner shall designate a person to be the Fire Prevention Program Superintendent who shall be responsible for the fire prevention program 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.

Section 276. Subsection 1410.1 of the 2003 International Fire Code is amended as follows:

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1410.1 Required access. Approved vehicle access for fire fighting shall be provided to within 100 feet (30480 mm) of all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30480 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.

Section 277. Subsection 1413.1 of the 2003 International Fire Code is amended as follows:

1413.1 Where required. Buildings four or more stories in height shall be provided with not less than one Class I standpipe in accordance with Section 905 for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet (12 192 mm) in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

Section 278. Subsection 1414.1 of the 2003 International Fire Code is amended as follows:

1414.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the *International-Building Code*, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 105.3.3 and Administrative Rule 9.06.04 *Partial / Phased Occupancy, Occupancy During Construction and Temporary Certificates of Occupancy*.

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Section 279. Subsection 1503.2.1 of the 2003 International Fire Code is amended as follows:

1503.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall comply with this chapter and the ((~~ICC~~)) *Electrical Code*.

* * *

Section 280. Subsection 1503.2.1.1 of the 2003 International Fire Code is amended as follows:

1503.2.1.1 Spray ((~~spaces~~)) areas and vapor areas. Electrical wiring and equipment in spray ~~spaces~~ areas and vapor areas shall be of an explosion-proof type approved for use in such hazardous locations. Such areas shall be considered to be Class I, Division 1 or Class II, Division 1 hazardous locations in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 281. Subsection 1503.2.1.1of the 2003 International Fire Code is amended as follows:

1503.2.1.2 Electrical wiring and equipment in resin application areas. Electrical wiring and equipment located in resin application areas shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 282. Subsection 1503.2.1.5 of the 2003 International Fire Code is amended as follows:

1503.2.1.5 Areas subject to overspray deposits. Electrical equipment in spraying areas located such that deposits of combustible residues could readily accumulate thereon shall be specifically approved for locations containing deposits of readily ignitable residue and explosive vapors in accordance with the ((~~ICC~~)) *Electrical Code*.

Exceptions:

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1. Wiring in rigid conduit.

2. Boxes or fittings not containing taps, splices or terminal connections.

3. Equipment allowed by Sections 1504 and 1506 and Chapter 21.

Section 283. Subsection 1503.2.1.6 of the 2003 International Fire Code is amended as follows:

1503.2.1.6 Flexible power cords. The use of flexible power cords shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 284. Subsection 1503.2.2 of the 2003 International Fire Code is amended as follows:

1503.2.2 Open flames and sparks. Open flames and spark-producing devices shall not be located in spray ((~~spaces~~)) areas or vapor areas and shall not be located within 20 feet (6096 mm) of such areas unless separated by a permanent partition.

Exception: Drying and baking apparatus complying with Section 1504.7.2.

Section 285. Subsections 1503.2.4, 1503.2.5, and 1503.2.6 of the 2003 International Fire Code are amended as follows:

1503.2.4 Equipment enclosures. Equipment or apparatus that is capable of producing sparks or particles of hot metal that would fall into a spray ((~~space~~)) area or vapor area shall be totally enclosed.

1503.2.5 Grounding. Metal parts of spray booths, exhaust ducts and piping systems conveying Class I or II liquids shall be electrically grounded in accordance with the ((~~ICC~~)) *Electrical Code*. Metallic parts located in resin application areas, including but not limited to exhaust

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ducts, ventilation fans, spray application equipment, workpieces and piping, shall be electrically grounded.

1503.2.6 Smoking prohibited. Smoking shall be prohibited in spray ((~~spaces~~)) areas or vapor areas. "No Smoking" signs complying with Section 310 shall be conspicuously posted in such areas.

Section 286. Subsection 1504.1 of the 2003 International Fire Code is amended as follows:

1504.1 Location of spray-finishing operations. Spray-finishing operations conducted in buildings used for Group A, E, I or R occupancies shall be located in a spray room protected with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 and separated vertically and horizontally from other areas in accordance with the *International Building Code*. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or limited spraying space approved for such use.

Spray-finishing operations shall not be conducted in basements.

* * *

Section 287. Subsections 1504.1.3 of the 2003 International Fire Code is amended as follows:

1504.1.3 Spray((~~ing spaces~~)) areas. Spray((~~ing spaces~~)) areas shall be designed and constructed in accordance with the *International Building Code* and Sections 1504.1.3.1, 1504.2, 1504.3, 1504.4, 1504.5 and 1504.6 of this code.

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1504.1.3.1 Floor. Combustible floor construction in spraying ((~~spaces~~)) areas shall be covered by approved, non- combustible, nonsparking material, except where combustible coverings, such as thin paper or plastic and strippable coatings are utilized over noncombustible materials to facilitate cleaning operations in spraying spaces.

Section 288. Subsection 1504.1.4 of the 2003 International Fire Code is amended as follows:

1504.1.4 Limited spraying spaces. Limited spraying spaces shall comply with Sections 1504.1.4.1 through 1504.1.4.4.

Limited spraying spaces are prohibited when they are used as the exclusive location for spray finishing operations where auto refinishing and collision repair are the primary business.

* * *

Section 289. Subsection 1504.1.4.4 of the 2003 International Fire Code is amended as follows:

1504.1.4.4 Electrical wiring. Electrical wiring within 10 feet (3048 mm) of the floor and 20 feet (6096 mm) horizontally of the limited spraying space shall be de-signed for Class I, Division 2 locations in accordance with the ((~~ICC~~)) *Electrical Code.*

Section 290. Subsection 1504.3.5 of the 2003 International Fire Code is amended as follows:

1504.3.5 Filter disposal. Discarded filter pads shall be immediately ((~~removed to a safe, detached location or~~)) placed in a noncombustible container with a tight-fitting lid and disposed of ((~~properly~~)) in accordance with local and state hazardous waste regulations.

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Section 291. Subsection 1504.5 of the 2003 International Fire Code is amended as follows:

1504.5 Illumination. Where spraying ((~~spaces~~)) areas, spray rooms or spray booths are illuminated through glass panels or other transparent materials, only fixed lighting units shall be utilized as a source of illumination.

* * *

Section 292. Subsection 1504.7.2.2 of the 2003 International Fire Code is amended as follows:

1504.7.2.2 Portable infrared apparatus. When portable infrared drying apparatus is used, electrical wiring and portable infrared drying equipment shall comply with the ((~~ICC~~)) *Electrical Code.* Electrical equipment located within 18 inches (457 mm) of floor level shall be approved for Class I, Division 2 hazardous locations. Metallic parts of drying apparatus shall be electrically bonded and grounded. During spraying operations, portable drying apparatus and electrical connections and wiring thereto shall not be located within spray booths, spray rooms or other areas where spray residue would be deposited thereon.

Section 293. Subsection 1504.7.2.3 of the 2003 International Fire Code is amended as follows:

1504.7.2.3 Sources of ignition. Except as specifically provided in ((~~this section~~))Section 1504.7.2.2, drying or baking units utilizing a heating system having open flames or which are capable of producing sparks, shall not be installed in a spraying area.

Section 294. Subsection 1703.2.1 of the 2003 International Fire Code is amended as follows:

1703.2.1 Electricity. Electricity shall be shut off.

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Exception: Circulating fans that have been specifically designed for utilization in hazardous atmospheres and installed in accordance with the ((~~ICC~~)) *Electrical Code* and temporary remote control power leads with control switches located outside the fumigant space for powering such fans.

Section 295. Subsection 2201.1 of the 2003 International Fire Code is amended as follows:

2201.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities and repair garages shall be in accordance with this chapter and the *International Building Code, International Fuel Gas Code* and the *International Mechanical Code*. Such operations shall include both operations that are accessible to the public and private operations.

For provisions relating to the transfer of flammable and combustible liquids directly from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments, see Section 3406.5.4.5.

Section 296. Subsection 2201.5 of the 2003 International Fire Code is amended as follows:

2201.5 Electrical. Electrical wiring and equipment shall be suitable for the locations in which they are installed and shall comply with Section 605, NFPA 30A and the ((~~ICC~~)) *Electrical Code*.

Section 297. Subsection 2202.1 of the 2003 International Fire Code is amended as follows:

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2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

* * *

FIRE DISTRICT shall consist of that part of the city within the boundary described in Section 401 of the *Seattle Building Code* as follows:

Beginning at the intersection of the center line of Alaskan Way and Clay Street; thence northeasterly along the center line of Clay Street to an intersection with the center line of Denny Way; thence easterly along the center line of Denny Way to an intersection with the center line of Yale Avenue; thence southeasterly along the center line of Yale Avenue to an intersection with the center line of Interstate Highway 5; thence southerly and south-easterly along the center line of Interstate 5 to an intersection with the center line of 7th Avenue South; thence southerly along the center line of 7th Avenue South to an intersection with the center line of Dearborn Street; thence westerly along the center line of Dearborn Street to an intersection with the center line of Airport Way; thence northwesterly along the center line of Airport Way to an intersection with the center line of 4th Avenue South; thence southerly along the center line of 4th Avenue south to an intersection with the center line of South Royal Brougham Way; thence westerly along said center line of South Royal Brougham Way to an intersection with the center line of South Alaskan Way; thence southerly along the center line of South Alaskan Way to an intersection with the center line of South Massachusetts Street, thence westerly along the centerline of South Massachusetts Street to the Outer Harbor Line in Elliott Bay, thence northerly and northwesterly along said Outer Harbor Line to an intersection with the center line of West Harrison Street, thence easterly along the center line of West Harrison Street to an intersection with the center line of Alaskan Way, then southeasterly along the center line of Alaskan Way to the point of beginning.

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For a map of the City of Seattle Fire District, see the *Seattle Building Code.*

* * *

MARINE MOTOR FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as fuel for ((~~watercraft~~)) marine vessels are stored and dispensed from fixed equipment on shore, piers, wharves, floats or barges into the fuel tanks of ((~~watercraft~~))marine vessels and shall include all other facilities used in connection therewith.

Point of Information

Marine motor fuel-dispensing facilities are not to be confused with marine bulk plants that transfer fuel by way of flange to flange connections. Marine motor fuel-dispensing facilities use automotive type dispensing equipment for fueling primarily pleasure craft.

MOTOR VEHICLE includes, but is not limited to, a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in the transportation of passengers or property. It does not include a vehicle, locomotive, or car operated exclusively on a rail or rails, or a trolley bus operated by electric power derived from a fixed overhead wire, furnishing local passenger transportation similar to street-railway service. The term "motor vehicle" also includes freight containers or cargo tanks used, or intended for use, in connection with motor vehicles. For reference, see 49 CFR Pt. 171.8 (October 2002).

MOTOR VEHICLE, UNATTENDED means a motor vehicle where the driver cannot see the motor vehicle or hear noises in or near the motor vehicle.

Exceptions:

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1. Necessary absence in connection with loading and unloading the motor vehicle.

2. Stops for meals during the day or night, if the point of parking is well lighted.

3. When in case of accident or other emergency, the driver must leave to obtain assistance.

* * *

Section 298. Subsection 2203.2 of the 2003 International Fire Code is amended as follows:

2203.2 Emergency disconnect switches. An approved, clearly identified and readily accessible emergency disconnect switch shall be provided at an approved location, to stop the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. An emergency disconnect switch for exterior fuel dispensers shall be located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, the fuel dispensers. For interior fuel-dispensing operations, the emergency disconnect switch shall be installed at an approved location. Such devices shall be distinctly labeled as: EMERGENCY FUEL SHUTOFF. Signs shall be provided in approved locations and letters shall not be less than 3 inches (76.2 mm) in height and ½ inch (12.7 mm) in stroke.

Section 299. Subsection 2204.4.1 of the 2003 International Fire Code is amended as follows:

2204.4.1 Approved containers required. Class I, II and IIIA liquids shall not be dispensed into a portable container unless such container is of approved material and construction, and has a tight closure with screwed or spring-loaded cover so designed that the contents can be dispensed without spilling. Liquids shall not be dispensed into portable tanks or cargo tanks.

It shall be unlawful to sell, offer for sale, or distribute any container for the storage and/or handling of flammable liquids, unless such container has been approved for such purpose

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under applicable provisions of this code.

Section 300. Subsection 2205.1.2 of the 2003 International Fire Code is amended as follows:

2205.1.2 Tank capacity calculation. The driver, operator or attendant of a tank vehicle shall, before making delivery to a tank, shall manually gauge the tank to determine the unfilled, available capacity of such tank ((~~by an approved gauging device~~)).

Section 301. Subsection 2206.2.1 of the 2003 International Fire Code is amended as follows:

2206.2.1 Underground tanks. Underground tanks for the storage of Class I, II and IIIA liquid fuels shall comply with Chapter 34.

Point of Information
The fire code official is authorized to defer regulation of underground storage tank installations to the Washington State Department of Ecology.

* * *

Section 302. Subsection 2206.2.2 of the 2003 International Fire Code is amended as follows:

2206.2.2 Above-ground tanks located inside buildings. Above-ground tanks for the storage of Class I, II and IIIA liquid fuels are allowed to be located in buildings. Such tanks shall be located in special enclosures complying with Section 2206.2.6, or in a liquid storage room or a liquid storage warehouse complying with Chapter 34((~~, or shall be listed and labeled as protected above-ground tanks~~)).

Exceptions:

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1. Above ground tanks listed and labeled as protected above ground tanks containing Class I flammable liquids and having an individual capacity not exceeding 120 gallons.

2. Above ground tanks listed and labeled as protected above ground tanks containing Class II or III-A combustible liquids and having an individual capacity not exceeding 240 gallons.

Section 303. Subsection 2206.2.3 of the 2003 International Fire Code is amended as follows:

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

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

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

3. Above-ground tanks containing Class I liquids for fueling motor vehicles are prohibited in the Fire District.

4. Above-ground tanks containing Class I liquids for fueling motor vehicles are allowed outside the Fire District only when located within an Industrial [I] zone, as defined in the Seattle Land Use Code.

((~~3~~))5. Tanks containing Class I liquid fuels shall not exceed 12,000 gallons (45 420 L) in individual capacity or ~~48,000~~ 12,000 gallons (((~~181 680~~)) 45 420 L) in aggregate capacity. Tanks containing Class II or III-A liquid fuels shall not exceed 12,000 gallons (45 420 L)

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in individual capacity or 48,000 gallons (181 680 L) in aggregate capacity. The total maximum aggregate quantity of all flammable and combustible liquids in aboveground storage tanks on site shall not exceed 48,000 gallons. Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30 480 mm).

((4))6. Tanks located at farms, construction projects, or rural areas shall comply with Section 3406.2.

Section 304. Subsection 2206.2.4.1 of the 2003 International Fire Code is amended as follows:

2206.2.4.1 Tank capacity limits. Tanks storing Class I liquids shall be limited to a maximum individual capacity of 12,000 gallons (45 420 L) and an aggregate capacity at an individual site of 12,000 gallons (45 420 L). Tanks storing ((~~and~~)) Class II and III-A liquids at an individual site shall be limited to a maximum individual capacity of ((~~15,000~~)) 12,000 gallons (((~~56 775~~)) 45 420 L) and an aggregate capacity of 48,000 gallons (181 680 L).

Section 305. Subsection 2206.2.4.2 of the 2003 International Fire Code is amended as follows:

2206.2.4.2 Above-ground tanks located in above-grade vaults or below-grade vaults at ((~~F~~))fleet vehicle motor fuel-dispensing facilities. Vaulted ((~~T~~))tanks storing Class II and Class IIIA liquids at a fleet vehicle motor fuel-dispensing facility shall be limited to a maximum individual capacity of 20,000 gallons (75 700 L) and an aggregate capacity of 80,000 gallons (302 800 L).

Section 306. Subsection 2206.7.6 of the 2003 International Fire Code is amended as follows:

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2206.7.6 Fuel delivery nozzles. A listed automatic-closing-type hose nozzle valve with ((~~or without~~)) a latch-open device shall be provided on island-type dispensers used for dispensing Class I, II or IIIA liquids. Overhead-type dispensing units shall be provided with a listed automatic-closing-type hose nozzle valve without a latch-open device.

Exception: A listed automatic-closing-type hose nozzle valve with latch-open device is allowed to be used on overhead-type dispensing units where the design of the system is such that the hose nozzle valve will close automatically in the event the valve is released from a fill opening or upon impact with a driveway.

Section 307. A new subsection 2207.1.1 is adopted to read as follows:

2207.1.1 Prohibited locations. Motor fuel-dispensing facilities for liquefied petroleum gas (LP-gas) fuel are prohibited in the Fire District.

Section 308. Subsection 2208.8.1.2.4 of the 2003 International Fire Code is amended as follows:

2208.8.1.2.4 Grounding and bonding. The structure or appurtenance used for supporting the cylinder shall be grounded in accordance with the ((~~ICC~~)) *Electrical Code*. The cylinder valve shall be bonded prior to the commencement of venting operations.

Section 309. A new subsection 2209.1.1 is adopted to read as follows:

2209.1.1 Prohibited locations. Hydrogen motor fuel-dispensing and generation facilities are prohibited in the Fire District.

Section 310. Subsection 2209.2.3 of the 2003 International Fire Code is amended as follows:

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2209.2.3 Electrical equipment. Electrical installations shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 311. Subsection 2211.3.1 of the 2003 International Fire Code is amended as follows:

2211.3.1 Equipment. Appliances and equipment installed in a repair garage shall comply with the provisions of the *International Building Code,* the *International Mechanical Code* and the ((~~ICC~~)) *Electrical Code.*

Section 312. Subsection 2211.8.1.2.4 of the 2003 International Fire Code is amended as follows:

2211.8.1.2.4 Grounding and bonding. Cylinders, containers or tanks and piping systems used for defueling shall be bonded and grounded. Structures or appurtenances used for supporting the cylinders, containers or tanks shall be grounded in accordance with the ((~~ICC~~)) *Electrical Code*. The valve of the vehicle storage tank shall be bonded with the defueling system prior to the commencement of discharge or defueling operations.

Section 313. Subsection 2301.1 of the 2003 International Fire Code is amended as follows:

2301.1 Scope. High-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 28.
2. Flammable and combustible liquids shall be in accordance with Chapter 34.
3. Hazardous materials shall be in accordance with Chapter 27.
4. Storage of combustible paper records shall be in accordance with NFPA 232((~~1C~~)).

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Section 314. Subsection 2307.2 of the 2003 International Fire Code is amended as follows:

2307.2 Fire protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire-resistance-rated fire barrier walls constructed in accordance with the *International Building Code*. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with the *International Building Code* and NFPA 13((~~231~~)).

2307.2.1 Shelf storage. Shelf storage greater than 12 feet (3658 mm) but less than 15 feet (4572 mm) in height shall be in accordance with the fire protection requirements set forth in NFPA 13 ((~~231~~)).

Section 315. Subsection 2308.2 of the 2003 International Fire Code is amended as follows:

2308.2 Fire protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire barrier walls constructed in accordance with the *International Building Code*. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with Section 903.3.1.1, the *International Building Code* and NFPA 13 ((~~231C~~)).

* * *

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Section 316. Subsection 2308.2.2 of the 2003 International Fire Code is amended as follows:

2308.2.2 Racks with solid shelving. Racks with solid shelving having an area greater than 20 ((~~32~~)) square feet (1.85 ((~~3~~)) m 2), measured between approved flue spaces at all four edges of the shelf, shall be in accordance with this section.

Exceptions:

1. Racks with mesh, grated, slatted or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising at least 50 percent of overall shelf area, and with approved flue spaces, are allowed to be treated as racks without solid shelves.
2. Racks used for the storage of combustible paper records, with solid shelving, shall be in accordance with NFPA 232 ((~~1C~~)).

Section 317. Subsection 2308.2.2.1 of the 2003 International Fire Code is amended as follows:

2308.2.2.1 Fire protection. Fire protection for racks with solid shelving shall be in accordance with NFPA ((~~231C~~))13.

Section 318. Subsection 2308.4 of the 2003 International Fire Code is amended as follows:

2308.4 Column protection. Steel building columns shall be protected in accordance with NFPA 13((~~231C~~)).

Section 319. Subsection 2310.1 of the 2003 International Fire Code is amended as follows:

2310.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be in accordance with Sections

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2306 and 2308 and NFPA 232 ((~~1C~~)). Palletized storage of records shall be in accordance with Section 2307.

Section 320. Subsection 2403.2 of the 2003 International Fire Code is amended as follows:

2403.2 Approval required. Tents and membrane structures having an area in excess of 200 square feet (19 m 2) and canopies in excess of 400 square feet (37 m 2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exceptions:

1. Tents used exclusively for recreational camping purposes.

((~~2. Fabric canopies open on all sides which comply with all of the following:~~

~~2.1. Individual canopies having a maximum size of 700 square feet (65 m 2).~~

~~2.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m 2) total.~~

~~2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.~~))

Section 321. Subsection 2403.12.6.1 of the 2003 International Fire Code is amended as follows:

2403.12.6.1 Exit sign illumination. Exit signs shall be of an approved self-luminous type or shall be internally or externally illuminated by fixtures supplied in the following manner:

1. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less; or

2. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from

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storage batteries or from the on-site generator set, and the system shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 322. Subsection 2404.5 of the 2003 International Fire Code is amended as follows:

2404.5 Combustible materials. Hay, straw, shavings or similar combustible materials shall not be located within any tent, canopy or membrane structure containing an assembly occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time. The areas within and adjacent to the tent or air-supported structure shall be maintained clear of all combustible materials or vegetation that could create a fire hazard within ((~~20~~)) 30 feet (((~~6096~~)) 9144 mm) from the structure. Combustible trash shall be removed at least once a day from the structure during the period the structure is occupied by the public.

Section 323. Subsection 2404.15.7 of the 2003 International Fire Code is amended as follows:

2404.15.7 Electrical heating and cooking equipment. Electrical cooking and heating equipment shall comply with the ((~~ICC~~)) *Electrical Code*.

Section 324. Subsection 2505.4 of the 2003 International Fire Code is amended as follows:

2505.4 Distance from lot lines and buildings. Tire storage piles shall be located at least 50 feet (15 240 mm) from lot lines and buildings.

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Exception: When stored on a single rack having dimensions not exceeding 68"x 48"x 76" for commercial display, the distance to property lines that can be built upon may be reduced to 10 ft and no separation is required from buildings on the same property.

Section 325. Subsection 2601.1 of the 2003 International Fire Code is amended as follows:

2601.1 Scope. Welding, cutting, open torches and other hot work operations and equipment shall comply with this chapter.

Exception: Hot work on board marine vessels at dock or under construction or repair shall be in accordance with Administrative Rules 26.01.04, *Cutting, Welding and Other Hot Work on Marine Vessels* and 26.02.04, *Designated Hot Work Facilities and Shipyards.*

Section 326. Subsection 2601.3 of the 2003 International Fire Code is amended as follows:

2601.3 Restricted areas. Hot work shall only be conducted in areas designed or authorized for that purpose by the personnel responsible for a Hot Work Program. Hot work shall not be conducted in the following areas unless specific approval has been obtained from the fire code official:

1. Areas where the sprinkler system is impaired.
2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.
3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.
4. On board ships at dock or ships under construction or repair.
5. At other locations as specified by the fire code official.

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Section 327. Subsection 2601.5 of the 2003 International Fire Code is amended as follows:

2601.5 Design and installation of oxygen-fuel gas systems. The design and installation of ((~~A~~))an oxygen-fuel gas system with two or more manifolded cylinders of oxygen shall be in accordance with NFPA 51.

Section 328. Subsection 2602.1 of the 2003 International Fire Code is amended as follows:

2602.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

* * *

HOT WORK. Operations including cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems, glass-blowing, weed burning, use of any open-flame or arc-producing device and any activity involving riveting, burning, silbrazing, use of powder-actuated tools or any similar spark, arc or flame producing activity. Grinding, drilling, heating of couplings or other machinery, abrasive blasting and similar spark-producing operations in areas where flammable or explosive atmospheres may be present or produced may be considered hot work ((~~or any other similar activity~~)).

* * *

HOT WORK EQUIPMENT. Electric or gas welding or cutting equipment or any other equipment used for hot work.

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HOT WORK PERMITS. Permits issued by the responsible person at the facility under the hot work permit program permitting welding or other hot work to be ((~~done~~)) conducted in locations referred to in Section 2603.3 and pre-permitted by the fire code official.

* * *

PF DEVICE. A wet or dry device (or assembly of devices) in a fuel gas line designed to perform the following three functions:
(a) Prevent backflow of oxygen into the fuel gas supply system;
(b) Prevent the passage of flame into the fuel gas supply system (flashback);
(c) Prevent the development of a fuel gas–oxygen mixture at sufficient pressure so that its ignition would achieve combustion pressures that could cause failure to perform functions (a) and (b). This device is given a diagram symbol, PF. A wet PF device is commonly known as a hydraulic seal, hydraulic valve, or hydraulic back-pressure valve.

* * *

Section 329. Subsection 2604.2 of the 2003 International Fire Code is amended as follows:

2604.2 Fire watch. Fire watches shall be established and conducted in accordance with Sections 2604.2.1 through 2604.2.6.

2604.2.1 When required. A fire watch shall be provided during hot work activities and shall continue for a minimum of 30 minutes after the conclusion of the work. The fire code official, or the responsible manager under a hot work program, is authorized to extend the fire watch based on the hazards or work being performed.

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((~~**Exception:** Where the hot work area has no fire hazards or combustible exposures.~~))

2604.2.2 Location. The fire watch shall include the entire hot work area and be positioned so that the extinguishment of a spot fire is not delayed. Hot work conducted in areas with vertical or horizontal fire exposures that are not observable by a single individual shall have additional personnel assigned to fire watches to ensure that exposed areas are monitored.

2604.2.3 Duties. Individuals designated to fire watch duty shall have no other duties except to watch for fire, ((~~have fire-extinguishing equipment readily available and shall be trained in the use of such equipment. Individuals assigned to fire watch duty shall be responsible for~~)) extinguish((~~ing~~)) spot fires and communicate((~~ing~~)) an alarm.

2604.2.4 Fire extinguishing equipment and training. The individuals responsible for performing the hot work and individuals responsible for providing the fire watch shall ((~~be trained in the use of portable fire extinguishers~~)) have fire-extinguishing equipment readily available and shall be trained in the use of such equipment.

2604.2.5 Fire hoses. Where hoselines are required, they shall be connected, charged and ready for operation.

2604.2.6 Fire extinguisher. A minimum of one portable fire extinguisher complying with Section 906 and with a minimum ((~~2-A:20-B:C~~)) 2-A:40-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.

Section 330. Section 2605 of the 2003 International Fire Code is amended as follows

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GAS ((~~WELDING AND CUTTING~~))HOT WORK

2605.1 General. Devices or attachments mixing air or oxygen with combustible gases prior to consumption, except at the burner or in a standard torch or blow pipe, shall not be allowed unless approved.

2605.2 Cylinder and container storage, handling and use. Storage, handling and use of compressed gas cylinders, containers and tanks shall be in accordance with this section and Chapter 30.

2605.3 Precautions. Cylinders, valves, regulators, hose and other apparatus and fittings for oxygen shall be kept free from oil or grease. Oxygen cylinders, apparatus and fittings shall not be handled with oily hands, oily gloves, or greasy tools or equipment.

2605.4 Fuel gases and liquid oxygen.

2605.4.1 Acetylene and other nonliquefied flammable gases.

2605.4.1.1 Prohibitions. Acetylene gas shall not be:

1. piped except in approved cylinder manifolds and cylinder manifold connections, or
2. utilized at a pressure exceeding 15 pounds per square inch gauge (psig) (103 kPa) unless dissolved in a suitable solvent in cylinders manufactured in accordance with DOTn 49 CFR.

2605.4.1.2 Unalloyed copper. Acetylene gas shall not be brought in contact with unalloyed copper, except in a blowpipe or torch.

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2605.4.1.3 Maximum acetylene and other nonliquefied flammable gas quantities inside buildings. The maximum quantity of acetylene and other nonliquefied flammable gas used and stored inside buildings in conjunction with hot work operations shall be in accordance with this section.

2605.4.1.3.1 Group A, B, E, I, M and R Occupancies. Acetylene gas and other nonliquefied flammable gas shall not be stored or used in Group A, B, E, I, M or R Occupancies.

Exceptions:

1. Individual cylinders not exceeding 150 cubic feet each at normal temperature and pressure (NTP). Aggregate quantity of flammable gas shall not exceed 1,000 cubic feet in unsprinklered buildings and 2,000 cubic feet in sprinklered buildings.
2. Buildings under construction or demolition where individual acetylene gas and other nonliquefied flammable gas cylinders do not exceed 300 cubic feet each at normal temperature and pressure and the aggregate storage quantity inside the building does not exceed 1,000 cubic feet.

2605.4.1.3.2 Group F and S Occupancies. Acetylene and other nonliquefied flammable gas shall not be stored or used in Group F and S Occupancies in excess of the maximum allowable quantities set forth in Table 2703.1.1 (1).

2605.4.1.3.3 Mixed use occupancies. Individual fuel gas cylinders within F or S occupancies in buildings having any other use shall be limited to 250 cubic feet at normal temperature and pressure and shall be limited to a total aggregate gas capacity

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of 1,000 cubic feet (70.8 m3) at normal temperature and pressure of acetylene or other nonliquefied flammable gas.

2605.4.2 Liquefied petroleum gas (LP-gas) and methylacetylenepropadiene (MAPP gas).

2605.4.2.1 Maximum LP-gas and MAPP gas quantities inside buildings. The maximum quantity of LP-gas and MAPP gas used and stored inside buildings in conjunction with hot work operations shall be in accordance with this section.

Point of Information

1 pound LP-gas capacity is equivalent to 2.2 pounds water capacity.

1 gallon of LP-gas at 60 F weighs 4.22 pounds.

1 gallon of water weighs 8.33 pounds.

2605.4.2.1.1 Group A, B, E, I , M and R Occupancies. LP-gas and MAPP shall not be stored or used in Group A, B, E, I, M or R Occupancies.

Exceptions:

1. A single LP-gas or a single MAPP gas cylinder not exceeding 50-pounds water capacity (nominal 20 pounds LP-gas) in Group E and M occupancies.
2. Individual LP-gas or MAPP gas cylinders not exceeding 12-pounds water capacity (nominal 5 pounds LP-gas) in Group I occupancies.
3. Unoccupied buildings under construction or demolition where individual LP-gas or MAPP gas cylinders do not exceed 240 pounds water capacity (nominal 100 pounds LP-gas) and the aggregate quantity inside the building does not exceed an aggregate water capacity of 735-pounds (nominal 300 pounds LP-gas on the site.

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4. Occupied buildings under construction or demolition where individual LP-gas or MAPP gas cylinders do not exceed 104 pounds water capacity (nominal 43.5 pounds LP-gas) and the aggregate quantity inside the building does not exceed 357 pounds water capacity (nominal 150 pounds LP-gas).

2605.4.2.1.2 Group F and S Occupancies. LP-gas and MAPP gas shall not be stored or used in excess of 735 pounds aggregate water capacity (nominal 300 pounds LP-gas) in Group F and S Occupancies.

2605.4.2.1.3 Mixed use occupancies. LP-gas and MAPP gas storage and use inside Group F and S occupancies within buildings having any other use shall be limited to cylinders having an individual water capacity not exceeding 50 pounds (nominal 20 pounds LP-gas) and a total aggregate water capacity not to exceed 144 pounds (nominal 60 pounds LP-gas).

2605.4.3 Liquid oxygen (LOX). Liquid oxygen shall not be stored or used in an unsprinklered building in an aggregate quantity exceeding 45 gallons per control area or an aggregate quantity of 90 gallons per control area in a sprinklered building.

2605.4.4 Separation of cylinders in storage. Fuel gas cylinders shall be separated from compressed oxygen cylinders and liquid oxygen containers by a minimum of 20 feet (6.1 m) or by a barrier of noncombustible construction at least five feet high having a fire-resistive rating of at least ½ hour. The barrier shall interrupt all lines of sight between oxygen and fuel gas cylinders within 20 feet of each other.

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2605.5 Remote locations. Oxygen and fuel-gas cylinders and acetylene generators shall be located away from the hot work area to prevent such cylinders or generators from being heated by radiation from heated materials, sparks or slag, or misdirection of the torch flame.

2605.6 Cylinders shutoff. The torch valve shall be closed and the gas supply to the torch completely shut off when gas ((~~welding or cutting~~)) hot work operations are discontinued for a period of 1 hour or more.

2605.7 Prohibited operation. ((~~Welding or cutting~~)) Hot work shall not be held or supported on compressed gas cylinders or containers.

2605.8 Tests. Tests for leaks in piping systems and equipment shall be made with soapy water. The use of flames shall be prohibited for leak testing.

Section 331. Subsection 2606.4 of the 2003 International Fire Code is amended as follows:

2606.4 Emergency disconnect. A switch or circuit breaker shall be provided so that fixed electric welders and control equipment can be disconnected from the supply circuit. The disconnect shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 332. A new subsection 2609.8 is adopted to read as follows:

2609.8 PF Devices. PF devices shall be designed and installed in fuel gas lines in accordance with NFPA 51.

Section 333. Subsection 2701.1 of the 2003 International Fire Code is amended as follows:

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2701.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter. This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that when specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. The quantities of alcoholic beverages, medicines, foodstuffs, cosmetics, and consumer or industrial products containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, in retail or wholesale sales occupancies, are unlimited when packaged in individual containers not exceeding 1.3 gallons (5 L).
2. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications when applied in accordance with the manufacturer's instructions and label directions.
3. The off-site transportation of hazardous materials when in accordance with DOT regulations.
4. Building materials not otherwise regulated by this code.
5. Refrigeration systems (see Section 606).
6. Stationary lead-acid batteries regulated by Section 608.
7. The display, storage, sale or use of fireworks and explosives in accordance with Chapter 33.
8. Corrosives utilized in personal and household products in the manufacturer's original consumer packaging in Group M occupancies.
9. The storage of distilled spirits and wines in wooden barrels and casks.
10. Hazardous materials handled at marine terminals in accordance with Section 2701.1.2.

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Section 334. Subsection 2701.1.1 of the 2003 International Fire Code is amended as follows:

2701.1.1 Waiver. The provisions of this chapter are waived when the fire code official determines that such enforcement is preempted by other codes, statutes or ordinances or that as a matter of fire and life safety, other satisfactory regulatory safeguards or satisfactory industry standards are in place. ((~~The details of any action granting such a waiver shall be recorded and entered in the files of the code enforcement agency.~~)) A request for such a determination by the fire code official shall be made in writing to the fire code official. The fire code official shall provide a written response, stating the fire code official's determination and giving the reason for the determination, within a reasonable period of time. A record of such determinations shall be kept by the fire marshal's office and made available to the public upon request.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology.

Section 335. A new subsection 2701.1.2 is adopted to read as follows:

2701.1.2 Hazardous materials at marine terminals. Hazardous materials which are handled and temporarily located at marine terminals and are incidental to transportation shall be in accordance with SFD Administrative Rule 27.01.04 *Marine Terminals*.

Section 336. Subsection 2701.5 of the 2003 International Fire Code is amended as follows:

2701.5 Permits. Permits shall be required as set forth in Sections 105.6 and 105.7.

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When required by the fire code official, permittees shall apply for approval to permanently close a storage, use or handling facility. Such application shall be submitted at least 30 days prior to the termination of the storage, use or handling of hazardous materials. The fire code official is authorized to require that the application be accompanied by an approved facility closure plan in accordance with Section 2701.((~~5~~))6.3.

* * *

Section 337. Subsection 2701.5.2 of the 2003 International Fire Code is amended as follows:

2701.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire code official, an application for a permit shall include an HMIS, such as SARA (Superfund Amendments and Reauthorization Act of 1986) Title III, Tier II Report, or other approved statement. The HMIS shall include the following information:

1. Manufacturer's name.
2. Chemical name, trade names, hazardous ingredients.
3. Hazard classification.
4. MSDS or equivalent.
5. United Nations (UN), North America (NA) or the Chemical Abstract Service (CAS) identification number.
6. Maximum quantity stored or used on-site at one time.
7. Storage conditions related to the storage type, temperature and pressure.

Point of Information

Prior to developing a HMIS, please contact the Hazardous Materials Section of the Fire Prevention Division for specific guidelines, format and assistance.

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Section 338. Subsection 2701.6 of the 2003 International Fire Code is amended as follows:

2701.6 Facility closure. Facilities shall be placed out of service in accordance with Sections 2701.6.1 through 2701.6.3.

2701.6.1 Temporarily out-of-service facilities. Facilities that are temporarily out of service shall continue to maintain a permit and be monitored and inspected. Facilities for which a closure plan is required in accordance with Section 2701.5 shall notify the fire code official when the facility out-of-service period exceeds 15 days.

2701.6.2 Permanently out-of-service facilities. Facilities for which a permit is not kept current or is not monitored and inspected on a regular basis shall be deemed to be permanently out of service and shall be closed in an approved manner. When required by the fire code official, permittees shall apply for approval to close permanently storage, use or handling facilities. The fire code official is authorized to require that such application be accompanied by an approved facility closure plan in accordance with Section 2701.((~~5~~))6.3.

2701.6.3 Facility closure plan. When a facility closure plan is required in accordance with Section 2701.((~~4~~))5 to terminate storage, dispensing, handling or use of hazardous materials, it shall be submitted to the fire code official at least 30 days prior to facility closure. The plan shall demonstrate that hazardous materials which are stored, dispensed, handled or used in the facility will be transported, disposed of or reused in a manner that eliminates the need for further maintenance and any threat to public health and safety.

Section 339. Subsection 2703.2.2.2 of the 2003 International Fire Code is amended as follows:

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2703.2.2.2 Additional regulations for supply piping for health-hazard materials. Supply piping and tubing for gases and liquids having a health-hazard ranking of 3 or 4 in accordance with NFPA704 shall be in accordance with ANSI B31.3, the *Seattle Mechanical Code* and the following:

1. Piping and tubing utilized for the transmission of highly toxic, toxic or highly volatile corrosive liquids and gases shall have welded, threaded or flanged connections throughout except for connections located within a ventilated enclosure if the material is a gas, or an approved method of drainage or containment is provided for connections if the material is a liquid.
2. Piping and tubing shall not be located within corridors, within any portion of a means of egress required to be enclosed in fire-resistance-rated construction or in concealed spaces in areas not classified as Group H occupancies.

   Exception: Piping and tubing within the space defined by the walls of corridors and the floor or roof above or in concealed spaces above other occupancies when installed in accordance with Section 415.9.6.3 of the *International Building Code* for Group H-5 occupancies.

Section 340. Subsection 2703.2.4.1 of the 2003 International Fire Code is amended as follows:

2703.2.4.1 Underground tanks.

2703.2.4.1.1 General. Underground tanks used for the storage of liquid hazardous materials shall be located, installed and protected in accordance with this code and applicable state and federal regulations.

Point of Information

Permits and inspections relating to underground storage tank installations are deferred

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to the Washington State Department of Ecology.

2703.2.4.1.2 Secondary containment for underground tanks. Underground tanks used for the storage of liquid hazardous materials shall be provided with secondary containment. In lieu of providing secondary containment for an underground tank, an aboveground tank in an underground vault complying with Section 3404.2.8 shall be permitted. Underground vaults shall be otherwise regulated as underground tank installations.

Section 341. Subsection 2703.2.6 of the 2003 International Fire Code is amended as follows:

2703.2.6 Maintenance. In addition to the requirements of Section 2703.2.3, equipment, machinery and required detection and alarm systems associated with hazardous materials shall be maintained as specified by the manufacturer and in an operable condition. Defective containers, cylinders and tanks shall be removed from service, repaired or disposed of in an approved manner. Defective equipment or machinery shall be removed from service and repaired or replaced. Required detection and alarm systems shall be replaced or repaired where defective.

Section 342. A new subsection 2703.2.9 is adopted to read as follows:

2703.2.9 Testing. The following systems shall be tested not less than annually or in accordance with an approved schedule. Written records of the tests conducted shall be maintained in accordance with the provisions of Section 107.2.1

1. Gas detection and shutoff. See Section 3704.2.2.10.
2. Limit controls. See Sections 2703.2.7, 2704.8 and 2705.1.4.
3. Emergency alarm and supervision. See Sections 2704.9, 2704.10, 2705.1.6, and 2705.4.4.
4. Monitoring devices and alarm. See Section 2704.2.2.5.

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5. Remotely located manually-activated fail-safe emergency shutoff valves. See Section 4103.1.1.

Exception: Where written documentation is provided by the system manufacturer documenting that testing will damage the device or system. All such systems and devices shall be maintained as specified by the manufacturer.

Section 343. Subsection 2703.3.1 of the 2003 International Fire Code is amended as follows:

2703.3.1 Unauthorized discharges. The fire code official shall be immediately notified and the requirements set forth in sections 2703.3.1.1 through 2703.3.1.4 shall be complied with ((~~W~~))when hazardous materials are released in quantities reportable under state, federal or local regulations, or when any spill or accidental release, inside or outside of a building, could present a fire or life safety hazard. ((~~the fire code official shall be notified and the following procedures required in accordance with Sections 2703.3.1.1 through 2703.3.1.4.~~))

* * *

Section 344. Subsection 2703.7.3 of the 2003 International Fire Code is amended as follows:

2703.7.3 Industrial trucks. Powered industrial trucks used in areas designated as hazardous (classified) locations in accordance with the ((~~ICC~~)) *Electrical Code* shall be listed and labeled for use in the environment intended in accordance with NFPA 505.

Section 345. Subsection 2703.8.7.1 of the 2003 International Fire Code is amended as follows:

2703.8.7.1 Construction. The interior of cabinets shall be treated, coated or constructed of materials that are nonreactive with the hazardous material stored. Such treatment, coating or

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construction shall include the entire interior of the cabinet. Cabinets shall either be listed in accordance with UL 1275 as suitable for the intended storage or constructed in accordance with the following:

1. Cabinets shall be of steel having a thickness of not less than 0.0478 inch (1.2 mm) (No. 18 gage). The cabinet, including the door, shall be double walled with a 1.5-inch (38 mm) airspace between the walls. Joints shall be riveted or welded and shall be tight fitting. Doors shall be well fitted, self-closing and equipped with a self-latching device.
2. The bottoms of cabinets utilized for the storage of liquids shall be liquid tight to a minimum height of 2 inches (51 mm).

Electrical equipment and devices within cabinets used for the storage of hazardous gases or liquids shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 346. Subsection 2703.9.4 of the 2003 International Fire Code is amended as follows:

2703.9.4 Electrical wiring and equipment. Electrical wiring and equipment shall be installed and maintained in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 347. Subsection 2704.3.1 of the 2003 International Fire Code is amended as follows:

2704.3.1 System requirements. Exhaust ventilation systems shall comply with all of the following:

1. Installation shall be in accordance with the *International Mechanical Code*.
2. Mechanical ventilation shall be at a rate of not less than 1 cubic foot per minute per square foot [0.00508 m 3 /(s ·m 2)] of floor area over the storage area.
3. Systems shall operate continuously unless alternative designs are approved.

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4. A manual shutoff control shall be provided outside of the room in a position adjacent to the access door to the room or in an approved location. The switch shall be ((~~of the~~)) a break-glass or other approved type and shall be labeled: VENTILATION SYSTEM EMERGENCY SHUTOFF.
5. Exhaust ventilation shall be designed to consider the density of the potential fumes or vapors released. For fumes or vapors that are heavier than air, exhaust shall be taken from a point within 12 inches (305 mm) of the floor. For fumes or vapors that are lighter than air, exhaust shall be taken from a point within 12 inches (305 mm) of the highest point of the room.
6. The location of both the exhaust and inlet air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.
7. Exhaust ((~~ventilation~~)) air shall not be recirculated within the room or building if the materials stored are capable of emitting hazardous vapors.

Section 348. Subsection 2704.7 of the 2003 International Fire Code is amended as follows:

2704.7 Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with the ((~~ICC~~)) *Electrical Code* and Section 604.

Exceptions:

1. Storage areas for Class 1 and 2 oxidizers.
2. Storage areas for Class III, IV and V organic peroxides.
3. For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
4. Standby power for mechanical ventilation, treatment systems and temperature control

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systems shall not be required where an approved fail-safe engineered system is installed.

Section 349. Subsection 2704.13 of the 2003 International Fire Code is amended as follows:

2704.13 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material storage areas, such storage shall not be considered indoor storage when the area is constructed in accordance with the requirements for weather protection as required by Section 414.6 of the *International Building Code.*

Exception: Storage of explosive materials shall be considered as indoor storage.

Point of Information

When this code allows for the reduction of the set back distance required from outdoor storage areas to adjacent buildings by the construction of a fire-resistive wall in specific chapters elsewhere in this code, that reduction allowance is not considered to meet the intent of the requirement for distance in Item 2 of Section 414.6 in the SBC. The fire-resistive wall and the reduction in distance combined with a weather protection canopy is considered to be indoor storage.

Section 350. Subsection 2705.1.5 of the 2003 International Fire Code is amended as follows:

2705.1.5 Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, manual alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with the ((~~ICC~~)) *Electrical Code* and Section 604.

Exceptions:

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1. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.
2. Systems for highly toxic or toxic gases shall be provided with emergency power in accordance with Sections 3704.2.2.8 and 3704.3.2.6.

Section 351. Subsection 2705.3.9 of the 2003 International Fire Code is amended as follows:

2705.3.9 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material use areas, such use shall not be considered indoor use when the area is constructed in accordance with the requirements for weather protection as required in Section 414.6 of the *International Building Code.*

Exception: Use of explosive materials shall be considered as indoor use.

Point of Information

When this code allows for the reduction of the set back distance required from outdoor storage areas to adjacent buildings by the construction of a fire-resistive wall in specific chapters elsewhere in this code, that reduction allowance is not considered to meet the intent of the requirement for distance in Item 2 of Section 414.6 in the SBC. The fire-resistive wall and the reduction in distance combined with a weather protection canopy is considered to be indoor storage.

Section 352. Subsection 2801.1 of the 2003 International Fire Code is amended as follows:

2801.1 Scope. The provisions of this chapter, the *International Building Code* and where specifically indicated, NFPA 30B, shall apply to the manufacturing, storage and display of aerosol products in addition to the requirements of Chapter 27.

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Section 353. Subsection 2802.1 of the 2003 International Fire Code is amended as follows:

2802.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AEROSOL. A product that is dispensed from an aerosol container by a propellant. Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat of combustion that is greater than 13,000 Btu/lb (30 kJ/g).

AEROSOL CONTAINER. A metal can, or a glass or plastic bottle designed to dispense an aerosol. ((~~Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).~~))

AEROSOL WAREHOUSE. A building used for warehousing aerosol products.

PROPELLANT. The liquefied or compressed gas in an aerosol container that expels the contents from an aerosol container when the valve is actuated. A propellant is considered flammable if it forms a flammable mixture with air, or if a flame is self-propagating in a mixture with air.

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RETAIL DISPLAY AREA. The area of a Group M occupancy open for the purpose of viewing or purchasing merchandise offered for sale. Individuals in such establishments are free to circulate among the items offered for sale which are typically displayed on shelves, racks or the floor.

Section 354. Subsection 2803.1 of the 2003 International Fire Code is amended as follows:

2803.1 Classification levels. Aerosol products shall be classified as Level 1, 2 or 3 in accordance with Table 2803.1 ((~~and NFPA 30B~~)). Aerosol products in cartons which are not identified in accordance with this section shall be classified as Level 3.

Section 355. Subsection 2804.1 of the 2003 International Fire Code is amended as follows:

2804.1 General. The inside storage of Level 2 and 3 aerosol products shall comply with Sections 2804.2 through 2804.7 ((~~and NFPA 30B~~)). Level I aerosol products shall be considered equivalent to a Class III commodity and shall comply with the requirements for palletized or rack storage in NFPA 13.

2804.1.1 Aerosol container size limits. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

Section 356. Subsection 3001.1 of the 2003 International Fire Code is amended as follows:

3001.1 Scope. Storage, use and handling of compressed gases in compressed gas containers, cylinders, tanks and systems shall comply with this chapter, including those gases regulated

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elsewhere in this code. ((~~Partially full compressed gas containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.~~))

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Compressed natural gas (CNG) for use as a vehicular fuel shall comply with Chapter 22, NFPA 52 and the *International Fuel Gas Code*.

Partially full compressed gas containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.

((~~Cutting and welding~~)) Hot work gases shall also comply with Chapters 26 and 27.

Cryogenic fluids shall also comply with Chapter 32. Liquefied natural gas for use as a vehicular fuel shall also comply with NFPA 57 and NFPA 59A.

Compressed gases classified as hazardous materials shall also comply with Chapter 27 for general requirements and chapters addressing specific hazards, including Chapters 35 (Flammable Gases), 37 (Highly Toxic and Toxic Materials), 40 (Oxidizers) and 41 (Pyrophoric).

LP-gas shall also comply with Chapter 38 and the *International Fuel Gas Code*.

Section 357. Subsection 3003.5.6 of the 2003 International Fire Code is amended as follows:

3003.5.6 Heating. Compressed gas containers, cylinders and tanks, whether full or partially full, shall not be heated by devices which could raise the surface temperature of the container,

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cylinder or tank to above 125 ° F (52 ° C). Heating devices shall comply with the *International Mechanical Code* and the ((~~ICC~~)) *Electrical Code* Approved heating methods involving temperatures of less than 125 ° F (52 ° C) are allowed to be used by trained personnel. Devices designed to maintain individual compressed gas containers, cylinders or tanks at constant temperature shall be approved and shall be designed to be fail safe.

Section 358. Subsection 3003.6 of the 2003 International Fire Code is amended as follows:

3003.6 Wiring and equipment. Electrical wiring and equipment shall comply with the ((~~ICC~~)) *Electrical Code*. Compressed gas containers, cylinders, tanks and systems shall not be located where they could become part of an electrical circuit. Compressed gas containers, cylinders, tanks and systems shall not be used for electrical grounding.

Section 359. Subsection 3006.4 of the 2003 International Fire Code is hereby repealed.

Section 360. Subsection 3201.1 of the 2003 International Fire Code is amended as follows:

3201.1 Scope. Storage, use and handling of cryogenic fluids shall comply with this chapter. Cryogenic fluids classified as hazardous materials shall also comply with Chapter 27 for general requirements. ((~~Partially full containers having residual cryogenic fluids shall be considered as full for the purposes of the controls required.~~))

Exceptions:

1. Fluids used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied natural gas (LNG). Liquefied natural gas shall comply with NFPA 59A, *Standard for Gaseous Hydrogen Systems at Consumer Sites*.

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Partially full containers having residual cryogenic fluids shall be considered as full for the purposes of the controls required.

Oxidizing cryogenic fluids, including oxygen, shall comply with NFPA 50, *Standard for Bulk Oxygen Systems at Consumer Sites*.

Flammable cryogenic fluids, including hydrogen, methane and carbon monoxide, shall comply with NFPA 50B, *Standard for Liquefied Hydrogen Systems at Consumer Sites*.

Inert cryogenic fluids, including argon, helium and nitrogen, shall comply with CGA P-18.

Section 361. Subsection 3203.7 of the 2003 International Fire Code is amended as follows:

3203.7 Electrical wiring and equipment. Electrical wiring and equipment shall comply with the ((~~ICC~~)) *Electrical Code* and Sections 3203.7.1 and 3203.7.2.

3203.7.1 Location. Containers and systems shall not be located where they could become part of an electrical circuit.

3203.7.2 Electrical grounding and bonding. Containers and systems shall not be used for electrical grounding. When electrical grounding and bonding is required, the system shall comply with the ((~~ICC~~)) *Electrical Code*. The grounding system shall be protected against corrosion, including corrosion caused by stray electric currents.

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Section 362. Subsection 3301.1 of the 2003 International Fire Code is amended as follows:

3301.1 Scope. The provisions of this chapter shall govern the possession, manufacture, storage, handling, sale and use of explosives, explosive materials, fireworks and small arms ammunition. The manufacture, storage, handling, sale and use of fireworks shall be governed by chapter 70.77 RCW, and by chapter 212-12 WAC.

Exceptions:

1. The Armed Forces of the United States, Coast Guard or National Guard.
2. Explosives in forms prescribed by the official United States Pharmacopoeia.
3. The possession, storage and use of small arms ammunition when packaged in accordance with DOTn packaging requirements.
4. The possession, storage, and use of not more than 1 pound (0.454 kg) of commercially manufactured sporting black powder, 20 pounds (9 kg) of smokeless powder and 10,000 small arms primers for hand loading of small arms ammunition for personal consumption.

Point of Information

The term "for personal consumption" means for use by private individuals and not for resale.

5. The use of explosive materials by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
6. Special industrial explosive devices which in the aggregate contain less than 50 pounds (23 kg) of explosive materials.
7. The possession, storage and use of blank industrial-power load cartridges when packaged in accordance with DOTn packaging regulations.
8. Transportation in accordance with DOTn 49 CFR Parts 100-178.
9. Items preempted by federal regulations.

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10. Explosive material, fireworks, pyrotechnic special-effect material, and small arms ammunition located at permitted marine terminals in accordance with Administrative Rule 27.01.04 *Marine Terminals*.

3301.1.1 Explosive material standard. In addition to the requirements of this chapter, NFPA 495 shall govern the manufacture, transportation, storage, sale, handling and use of explosive materials. See also chapter 70.74 RCW and chapter 296-52 WAC.

~~((3301.1.2 Explosive material terminals. In addition to the requirements of this chapter, the operation of explosive material terminals shall conform to the provisions of NFPA 498.))~~

3301.1.2~~((3))~~ Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Storage and handling of fireworks as permitted in Section 3304.

~~((2. Manufacture, assembly and testing of fireworks as permitted in Section 3305.~~

~~3))~~2. The use of fireworks for display as permitted in Section 3308.

~~((4. The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable local or state laws, ordinances and regulations provided such fireworks comply with CPSC 16 CFR, Parts 1500 and 1507, and DOTn 49 CFR, Parts 100-178, for consumer fireworks.))~~

3301.1.3~~((4))~~ Rocketry. The storage~~,~~ and handling ~~and use~~ of model and high-power rockets shall comply with the requirements of NFPA 1122, ~~NFPA 1125~~, and NFPA 1127.

Manufacturing and firing of model rockets is prohibited.

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Display of model rocket motors shall be in accordance with Section 3306.5.

3301.1.4((5)) Ammonium nitrate. The storage and handling of ammonium nitrate shall comply with the requirements of NFPA 490 and Chapter 40.

Exception: Storage of ammonium nitrate in magazines with blasting agents shall comply with the requirements of NFPA 495.

Section 363. Subsection 3301.2.4 of the 2003 International Fire Code is amended as follows:

3301.2.4 Financial responsibility. Before a permit is issued, as required by Section 3301.2, ((~~the applicant shall file with the jurisdiction a corporate surety bond in the principal sum of $100,000 or a public liability insurance policy for the same amount, for the purpose of the payment of all damages to persons or property which arise from, or are caused by, the conduct of any act authorized by the permit upon which any judicial judgment results. The fire code official is authorized to specify a greater or lesser amount when, in his or her opinion, conditions at the location of use indicate a greater or lesser amount is required. Government entities shall be exempt from this bond requirement~~)) liability insurance in accordance with Section 105.3.5 of this code shall be obtained.

3301.2.4.1 Blasting. Before approval to do blasting is issued, the applicant for approval shall ((~~file a bond or~~)) submit a certificate of insurance in such form, amount and coverage as determined by the legal department of the jurisdiction to be adequate in each case to indemnify the jurisdiction against any and all damages arising from permitted blasting.

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((~~**3301.2.4.2 Fireworks display.** The permit holder shall furnish a bond or certificate of insurance in an amount deemed adequate by the fire code official for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors.~~))

Section 364. Subsection 3301.3 of the 2003 International Fire Code is amended as follows:

3301.3 Prohibited explosives <u>and activities</u>.

<u>3301.3.1 Prohibited explosives.</u> Permits shall not be issued or renewed for possession, manufacture, storage, handling, sale or use of the following materials and such materials currently in storage or use shall be disposed of in an approved manner.

1. Liquid nitroglycerin.
2. Dynamite containing more than 60-percent liquid explosive ingredient.
3. Dynamite having an unsatisfactory absorbent or one that permits leakage of a liquid explosive ingredient under any conditions liable to exist during storage.
4. Nitrocellulose in a dry and uncompressed condition in a quantity greater than 10 pounds (4.54 kg) of net weight in one package.
5. Fulminate of mercury in a dry condition and fulminate of all other metals in any condition except as a component of manufactured articles not hereinafter forbidden.
6. Explosive compositions that ignite spontaneously or undergo marked decomposition, rendering the products of their use more hazardous, when subjected for 48 consecutive hours or less to a temperature of 167 _ F (75 _ C).
7. New explosive materials until approved by DOTn, except that permits are allowed to be issued to educational, governmental or industrial laboratories for instructional or research purposes.

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8. Explosive materials condemned by DOTn.

9. Explosive materials containing an ammonium salt and a chlorate.

10. Explosives not packed or marked as required by DOTn 49 CFR, Parts 100-178.

Exception: Gelatin dynamite.

3301.3.2 Prohibited activities. The following activities are prohibited.

1. The manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks.

   Exceptions:

   1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.
   2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.
   3. The use of binary explosives or plosophoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or NFPA 1126.

2. The storage of explosive materials for more than 24 hours unless under permit from the Seattle Fire Department.
3. The construction of Class 1 magazines.

Section 365. Subsection 3305.1 of the 2003 International Fire Code is amended as follows:

3305.1 General. The manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks ((~~shall comply with the requirements of this section and NFPA 495 or NFPA 1124~~)) are prohibited.

Exceptions:

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1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.
2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.
3. The use of binary explosives or plosophoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or NFPA 1126.

Section 366. Subsections 3305.3, 3305.4 and 3305.5 of the 2003 International Fire Code are amended as follows:

3305.3 Intraplant separation of operating buildings. Explosives and fireworks manufacturing buildings, including those where explosive charges are assembled, manufactured, prepared or loaded utilizing Division 1.1, 1.2, 1.3, 1.4 or 1.5 explosives, shall be separated from all other buildings, including magazines, within the confines of the manufacturing plant at a distance not less than those shown in Table 3305.3, 3304.5.2 (3), or Table 3304.5.2 (4), as appropriate.

The quantity of explosives in an operating building shall be the net weight of all explosives contained therein. Distances shall be based on the hazard division requiring the greatest separation, unless the aggregate explosive weight is divided by approved walls or shields designed for that purpose. When dividing a quantity of explosives into smaller stacks, a suitable barrier or adequate separation distance shall be provided to prevent propagation from one stack to another.

When distance is used as the sole means of separation within a building, such distance shall be established by testing. Testing shall demonstrate that propagation between stacks will not result. Barriers provided to protect against explosive effects shall be designed and installed in accordance with approved standards.

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((~~**Exception:** Fireworks manufacturing buildings separated in accordance with NFPA 1124.~~))

3305.4 Separation of manufacturing buildings from inhabited buildings, rights-of-way, and magazines. When a manufacturing building on an explosive materials plant site is designed to contain explosive materials, such building shall be located away from inhabited buildings, public highways, and passenger railways in accordance with Table 3304.5.2(2), 3304.5.2(3) or 3304.5.2(4) as appropriate, based on the maximum quantity of explosive materials permitted to be in the building at one time.

((~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~))

3305.5 Buildings and equipment. Buildings or rooms that exceed the maximum allowable quantity per control area of explosive materials shall be operated in accordance with this section and constructed in accordance with the requirements of the *International Building Code* for Group H occupancies.

((~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~))

* * *

Section 367. Section 3306, title only, of the 2003 International Fire Code is amended as follows:

SECTION 3306

SMALL ARMS AMMUNITION, <u>MODEL ROCKET MOTORS AND MARINE FLARES</u>

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Section 368. Subsection 3306.1 of the 2003 International Fire Code is amended as follows:

3306.1 General. Indoor storage and display of black powder, smokeless propellants and small arms ammunition shall comply with this section and NFPA 495. Indoor display of model rocket motors and marine flares shall comply with this section.

Section 369. Subsection 3306.5 of the 2003 International Fire Code is amended as follows:

3306.5 Display and storage in Group M occupancies. The display and storage of small arms ammunition in Group M occupancies shall comply with this section.

3306.5.1 Display. Display of small arms ammunition in Group M occupancies shall comply with Sections 3306.5.1.1 through 3306.5.1.3.

3306.5.1.1 Smokeless propellant. No more than 20 pounds (9 kg) of smokeless propellants, each in containers of 1 pound (0.454 kg) or less capacity, shall be displayed in Group M occupancies.

3306.5.1.2 Black powder. No ((~~more than 1 pound (0.454 kg) of~~)) black powder shall be displayed in Group M occupancies.

3306.5.1.3 Small arms primers. No more than 10,000 small arms primers shall be displayed in Group M occupancies.

3306.5.1.4 Model rocket motors. Model rocket motors on display in Group M Occupancies shall not exceed an individual motor weight of 1 pound (.45 kg). The

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maximum aggregate motor weight on display shall not exceed 20 pounds (9.1 kg). Model rocket motors shall be located a minimum of 15 feet from exits.

3306.5.1.5 Marine flares. U.S. Coast Guard approved marine flares on display in Group M Occupancies shall not exceed an individual device weight of 2 pounds (.90 kg). The maximum aggregate device weight on display shall not exceed 40 pounds (18.2 kg). Marine flares shall be located a minimum of 15 feet from exits.

Point of Information

Device weight of U.S. Coast Guard approved marine flares shall mean the gross weight of the smokeless propellant, other chemical components and the primary casing of the flare. The device weight is not to include carrying cases, manufacturer's packaging, detachable handles or unattached activating devices that may also be present and sold with the flare as a unit.

3306.5.2 Storage. Storage of small arms ammunition shall comply with Sections 3306.5.2.1 through 3306.5.2.3.

3306.5.2.1 Smokeless propellant. Commercial stocks of smokeless propellants shall be stored as follows:

1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least 1 inch (25 mm) nominal thickness.
2. Quantities exceeding 100 pounds (45 kg), but not exceeding ((~~800~~)) 400 pounds (((~~363~~)) 181.5 kg), shall be stored in nonportable storage cabinets having walls at least 1 inch (25 mm) nominal thickness. Not more than ((~~400~~)) 200 pounds (((~~182~~)) 91 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at

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least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least 1 hour.

3. Storage of quantities exceeding ((~~800~~)) 400 pounds (((~~363~~)) 181.5 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

3.1. The warehouse or storage room is unaccessible to unauthorized personnel.

3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1 inch (25 mm) nominal thickness and having shelves with no more than 3 feet (914 mm)of separation between shelves.

3.3. No more than ((~~400~~)) 200 pounds (((~~182~~)) 91 kg) is stored in any one cabinet.

3.4. Cabinets shall be located against walls of the storage room or warehouse with at least 40 feet (12 192 mm) between cabinets.

3.5. The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall, and be constructed of steel not less than 0.25 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick, or concrete block..

3.6. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.

3.7. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

4. Smokeless propellants not stored according to Item 1, 2, or 3 above shall be stored in a Type 2 or 4 magazine in accordance with Section 3304 and NFPA 495.

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3306.5.2.2 Black powder. Commercial stocks of black powder in quantities less than 5((θ)) pounds (2.3 kg) shall be allowed to be stored in Type 2 or 4 indoor or outdoor magazines. Quantities greater than 5((θ)) pounds (2.3 kg) shall be stored in outdoor Type 2 or 4 magazines. When black powder and smokeless propellants are stored together in the same magazine, the total quantity shall not exceed that permitted for black powder.

3306.5.2.3 Small arms primers. Commercial stocks of small arms primers shall be stored as follows.

1. Quantities not to exceed ((~~750,000~~)) 20,000 small arms primers stored in a building shall be arranged such that not more than ((~~100,000~~)) 20,000 small arms primers are stored in any one pile and piles are at least 15 feet (4572 mm) apart.
2. Quantities exceeding ((~~750,000~~)) 20,000 small arms primers stored in a building shall comply with all of the following:
   - 2.1. The warehouse or storage building shall not be accessible to unauthorized personnel.
   - 2.2. Small arms primers shall be stored in cabinets. No more than ((~~200,000~~))20,000 small arms primers shall be stored in any one cabinet.
   - 2.3. Shelves in cabinets shall have vertical separation of at least 2 feet (610 mm).
   - 2.4. Cabinets shall be located against walls of the warehouse or storage room with at least 40 feet (12 192 mm) between cabinets.
   - 2.5. The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall be firmly attached to the wall, and shall be constructed of steel not less than 0.25 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick, or concrete block.

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2.6. Small arms primers shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.

2.7. The building shall be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

3. Small arms primers not stored in accordance with Item 1 or 2 of this section shall be stored in a magazine meeting the requirements of Section 3304 and NFPA 495.

Section 370. Subsections 3801.1 and 3802.2 of the 2003 International Fire Code are amended as follows:

3308.1 General. The sale, possession, use or discharge of any fireworks and pyrotechnic special effects in the City of Seattle is prohibited except where authorized by fire department permit or exempted under this section.

Exceptions:

1. The use of fireworks by railroads or other transportation agencies for signaling or illumination.
2. The sale or use of blank cartridges or fireworks when approved by the fire code official for theatrics, signaling or ceremonial purposes.
3. The use of fireworks by the United States Armed Forces.

The display of fireworks, including proximate audience displays and pyrotechnic special effects in motion picture, television, theatrical, and group entertainment productions, shall comply with this chapter and NFPA 1123 or NFPA 1126.

3308.2 Permit application. ((~~Prior to issuing permits for fireworks display, plans for the display, inspections of the display site, and demonstrations of the display operations shall be~~

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~~approved.~~)) No person under eighteen years of age may apply for or receive a permit under this Section.

An application for a permit shall be made in writing to the fire code official at least 30 days in advance. At the time of permit application, the fire code official shall be consulted regarding requirements for standby fire apparatus.

* * *

Section 371. Subsection 3308.4 of the 2003 International Fire Code is amended as follows:

3308.4 Clearance. Spectators, spectator parking areas, and dwellings, buildings or structures shall not be located within the display site.

Exception((s)):

((~~1.~~)) This provision shall not apply to pyrotechnic special effects and displays using Division 1.4G materials before a proximate audience in accordance with NFPA 1126.

((~~2. This provision shall not apply to unoccupied dwellings, buildings and structures with the approval of the building owner and the fire code official.~~))

The site for outdoor water or land display shall have at least a 100-foot per inch radius of internal mortar diameter of the largest aerial shell to be fired.

The designated landing areas shall be an approved large, clear, open area. Spectators, vehicles and combustible materials shall not be allowed within the designated landing area. The designated landing area shall not be within 100 feet of tents, canopies and membrane structures.

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When the display is fired from a barge, such barge shall be of non-combustible construction or have a non-combustible surface.

The firing and storage site shall be located not less than 200 feet from any building, tent, canopy or membrane structure.

When the display is fired from a barge or vessel, a security area shall be established around the barge to prevent boats from entering the area. No boats shall be allowed within 200 feet of the firing or storage site. A boat shall be on standby to remove personnel from the barge or water in an emergency. All personnel aboard the barge shall have approved flotation devices. Additional water-filled fire extinguishers, rated 2-A minimum, shall be on the barge and so spaced that an extinguisher shall be available within 30 feet at all times.

Section 372. A new subsection 3808.8.1 is adopted to read as follows:

3308.8.1 Pyrotechnic operator. Fireworks display operations shall be under the direct supervision of a State of Washington Pyrotechnics Licensed operator. The pyrotechnic operator shall ensure that only fireworks listed in the permit are used and shall be responsible for all aspects of the display related to pyrotechnics.

Display operators and assistants shall be 18 years of age or older. The operator shall ensure that no person under the age of 18 years is allowed within 200 feet of the fire and storage site.

Section 373. A new subsection 3808.8.2 is adopted to read as follows:

3808.8.2 Monitors. The pyrotechnic operator shall employ monitors whose sole duty shall be the enforcement of crowd control around the display area and ensure that no unauthorized

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persons are allowed within 200 feet of the firing and storage site. This requirement shall be in effect from one-half hour prior to the arrival of the fireworks until all fireworks, debris, equipment and fireworks have been removed from the site. Unauthorized persons shall not be allowed to enter the discharge site until the site has been inspected after the display by the pyrotechnic operator.

Section 374. Subsection 3308.11 of the 2003 International Fire Code is amended as follows:

3308.11 Retail display and sale <u>prohibited</u>. <u>Retail display and sale of fireworks is prohibited in the City of Seattle.</u> ((~~Fireworks displayed for retail sale shall not be made readily accessible to the public. A minimum of one pressurized water portable fire extinguisher complying with Section 906 shall be located not more than 15 feet (4572 mm) and not less than10 feet (3048 mm) from the hazard. "No Smoking" signs complying with Section 310 shall be conspicuously posted in areas where fireworks are stored or displayed for retail sale.~~))

Section 375. Subsections 3401.1 and 3401.2 of the 2003 International Fire Code are amended as follows:

3401.1 Scope and application. Prevention, control and mitigation of dangerous conditions related to storage, use, dispensing, mixing and handling of flammable and combustible liquids shall be in accordance with Chapter 27 and this chapter.

<u>Storage and use of fuel oil tanks and containers connected to oil-burning equipment shall be in accordance with Section 603. For abandonment of fuel oil tanks, this chapter applies.</u>

3401.2 Nonapplicability. This chapter shall not apply to liquids as otherwise provided in other laws or regulations or chapters of this code, including:

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1. Specific provisions for flammable liquids in motor fuel-dispensing facilities, repair garages, airports and marinas in Chapter 22.

2. Medicines, foodstuffs, cosmetics, and commercial, institutional and industrial products in the same concentration and packaging containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solution not being flammable, and alcoholic beverages in retail or wholesale sales or storage uses when packaged in individual containers not exceeding 1.3 gallons (5 L).

((~~3. Storage and use of fuel oil tanks and containers connected to oil-burning equipment. Such storage and use shall be in accordance with Section 603. For abandonment of fuel oil tanks, this chapter applies.~~))

3((~~4~~)). Refrigerant liquids and oils in refrigeration systems (see Section 606).

4((~~5~~)). Storage and display of aerosol products complying with Chapter 28.

5((~~6~~)). Storage and use of liquids that have no fire point when tested in accordance with ASTM D 92.

6((~~7~~)). Liquids with a flash point greater than 95 ° F (35 ° C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight, which do not sustain combustion.

7((~~8~~)). Liquids without flash points that can be flammable under some conditions, such as certain halogenated hydrocarbons and mixtures containing halogenated hydrocarbons.

8((~~9~~)). The storage of distilled spirits and wines in wooden barrels and casks.

9. When the fire code official has determined that, as a matter of fire and life safety, other satisfactory regulatory safeguards or satisfactory industry standards are in place. A request for such a determination by the fire code official shall be made in writing to the fire code official. The fire code official shall provide a written response, stating the fire code official's determination and giving the reason for the determination, within a reasonable period of time. A record of such determinations shall be kept by the fire marshal's office

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and made available to the public upon request.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology.

Section 376. Subsection 3403.1 of the 2003 International Fire Code is amended as follows:

3403.1 Electrical. Electrical wiring and equipment shall be installed and maintained in accordance with the ((~~ICC~~)) *Electrical Code*.

* * *

Section 377. Subsection 3403.1.3 of the 2003 International Fire Code is amended as follows:

3403.1.3 Other applications. The fire code official is authorized to determine the extent of the Class I electrical equipment and wiring location when a condition is not specifically covered by these requirements or the ((~~ICC~~)) *Electrical Code*.

Section 378. Subsection 3403.6.5 of the 2003 International Fire Code is amended as follows:

3403.6.5 Protection from corrosion and galvanic action. Where subject to external corrosion, piping, related fluid-handling components and supports for both under-ground and above-ground applications shall be fabricated from noncorrosive materials, ((~~and~~))or coated ((~~or~~))and provided with corrosion protection. Dissimilar metallic parts that promote galvanic action shall not be joined.

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Section 379. Subsection 3404.2 of the 2003 International Fire Code is amended as follows:

3404.2 Tank storage. The provisions of this section shall apply to:

1. The storage of flammable and combustible liquids in fixed above-ground and underground tanks outside of buildings.
2. The storage of flammable and combustible liquids in fixed above-ground tanks inside of buildings or within vaults.
3. The storage of flammable and combustible liquids in portable tanks whose capacity exceeds 660 gallons (2498 L).
4. The design, construction and installation of such tanks and portable tanks.

* * *

Section 380. Subsection 3404.2.7.4 of the 2003 International Fire Code is amended as follows:

3404.2.7.4 Emergency venting.

3404.2.7.4.1 General. Stationary, above-ground tanks shall be equipped with additional venting that will relieve excessive internal pressure caused by exposure to fires. Emergency vents shall be listed and approved. ((~~Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings.~~)) This requirement shall also apply to each compartment of a compartmentalized tank, the interstitial space (annulus) of a secondary containment-type tank, and the enclosed space of tanks of closed-top dike construction. Additionally, this requirement shall apply to spaces or enclosed volumes, such as those intended for insulation, membranes, or weather shields, that can contain liquid because of a leak from the primary vessel and can inhibit venting during fire exposure. The insulation, membrane, or weather

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shield shall not interfere with emergency venting. ((~~The venting shall be installed and maintained in accordance with Section 2.2.5.2 of NFPA 30.~~))

Exception: Tanks larger than 12,000 gallons (45 420 L) in capacity storing Class IIIB liquids which are not within the diked area or the drainage path of Class I or II liquids do not require emergency relief venting.

The venting shall be installed and maintained in accordance with Section 2.2.5.2 of NFPA 30.

3404.2.7.4.2 Emergency vent pipe outlets. Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings and outlets shall be in accordance with Section 3404.2.7.3.3.

Exception: Protected aboveground tanks located inside buildings containing Class II or Class III-A liquids for emergency or standby generators installed in accordance with Administrative Rule 34.01.04 *Use of Protected Aboveground Tanks for Fuel Storage Inside Buildings* are allowed to vent inside buildings.

3404.2.7.4.3 Extension of Emergency Vent Piping. Piping to or from approved emergency vent devices for atmospheric and low-pressure tanks shall be sized to provide emergency vent flows that limit the back pressure to less than the maximum pressure permitted by the design of the tank. Piping to or from approved emergency vent devices for pressure vessels shall be sized in accordance with the ASME Boiler and Pressure Vessel Code.

Section 381. Subsection 3404.2.7.11 of the 2003 International Fire Code is amended as follows:

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3404.2.7.11 Tank lining. Steel tanks are allowed to be lined only for the purpose of protecting the interior from corrosion or providing compatibility with a material to be stored. Only those liquids tested for compatibility with the lining material are allowed to be stored in lined tanks.

Tank lining shall be conducted in accordance with the applicable provisions of NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning and Repair.*

Section 382. Subsection 3404.2.8 of the 2003 International Fire Code is amended as follows:

3404.2.8 Vaults. Vaults shall be located outside of buildings, shall be allowed to be either above or below grade and shall comply with Sections 3404.2.8.1 through 3404.2.8.18.

* * *

Section 383. Subsection 3404.2.8.12 of the 2003 International Fire Code is amended as follows:

3404.2.8.12 Liquid removal. Means shall be provided to recover liquid from the vault. Where a pump is used to meet this requirement, the pump shall not be permanently installed in the vault. Electric-powered portable pumps shall be suitable for use in Class I, Division 1 locations, as defined in the ((~~ICC~~)) *Electrical Code*.

Section 384. Subsection 3404.2.8.17 of the 2003 International Fire Code is amended as follows:

3404.2.8.17 Classified area. The interior of a vault containing a tank that stores a Class I liquid shall be designated a Class I, Division 1 location, as defined in the ((~~ICC~~)) *Electrical Code*.

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Section 385. Subsections 3404.2.9.1 of the 2003 International Fire Code amended as follows:

3404.2.9.1 Fire protection. Fire protection for above-ground tanks shall comply with this section and Sections 3404.2.9.1.1 through 3404.2.9.1.4.

Aboveground tanks located outside buildings and used for the storage of Class I flammable liquids shall be protected with an approved foam fire protection system.

Exception: Protected aboveground tanks.

Aboveground tanks located outside buildings and used for the storage of Class II combustible liquids shall be protected by an approved water-spray-system.

Exception: Protected aboveground tanks of any size and portable and stationary tanks up to 660 gallons individual capacity provided with approved portable fire extinguishers and an adequate available water supply.

Aboveground tanks located outside and used for the storage of Class III combustible liquids shall be protected in accordance with Table 2.3.2.1.1(a) of NFPA 30.

Exception: Protected aboveground tanks.

* * *

Section 386. Subsection 3404.2.9.1.1 of the 2003 International Fire Code is amended as follows:

3404.2.9.1.1 Required foam fire protection systems. When required by the fire code official, foam fire protection shall be provided for aboveground tanks, other than pressure tanks operating at or above 1 pound per square inch gauge (psig) (6.89 kPa) when such tank, or group

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of tanks spaced less than 50 feet (15 240 mm) apart measured shell to shell, has a liquid surface area in excess of 1,500 square feet (139 m 2), and is in accordance with one of the following:

1. Used for the storage of Class ((~~I or~~)) II liquids.
2. Used for the storage of crude oil.
3. Used for in-process products and is located within 100 feet (30 480 mm) of a fired still, heater, related fractioning or processing apparatus or similar device at a processing plant or petroleum refinery as herein defined.
4. Considered by the fire code official as posing an unusual exposure hazard because of topographical conditions; nature of occupancy, proximity on the same or adjoining property, and height and character of liquids to be stored; degree of private fire protection to be provided; and facilities of the fire department to cope with flammable liquid fires.

Section 387. Subsection 3404.2.9.4 of the 2003 International Fire Code is amended as follows:

3404.2.9.4 Above-ground tanks inside of buildings.

3404.2.9.4.1 Overflow prevention. Tanks storing Class I, II and IIIA liquids inside buildings shall be equipped with a device or other means to prevent overflow into the building including, but not limited to: a float valve; a preset meter on the fill line; a valve actuated by the weight of the tanks contents; a low head pump which is incapable of producing overflow; or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to the out-side source of liquid or to an approved location.

3404.2.9.4.2 Maximum quantity allowed outside of a liquid storage room. Aboveground storage tanks storing Class I, II and III-A liquids inside buildings in quantities exceeding the maximum allowable quantity per control area set forth in Table 2703.1.1(1) shall be confined

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to a liquid storage room constructed and separated as required by the Seattle Building Code and complying with Section 3404.3.7.

3404.2.9.4.3 Maximum quantity allowed within a liquid storage room. The maximum aggregate quantity of flammable and combustible liquids in aboveground storage tanks allowed inside a building within a liquid storage room constructed and separated as required by the Seattle Building Code and complying with Section 3404.3.7 shall be limited to 20,000 gallons.

Section 388. Subsection 3404.2.9.5.1 of the 2003 International Fire Code is amended as follows:

3404.2.9.5.1 Locations where above-ground tanks are prohibited or quantity limits are established. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited within the limits established ((~~by law in the adopting ordinance as the limits of districts in which such storage is prohibited (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~))in Table 3404.2.9.5.1-A.

TABLE 3404.2.9.5.1-A

QUANTITY RESTRICTIONS FOR ABOVEGROUND

STORAGE TANKS USED FOR DISPENSING INTO EQUIPMENT

TYPE OF LIQUID	LOCATION OF TANK

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	Within Fire District	Within I-zone[1,2]	Outside I-zone[1,2]
Class I	Prohibited	Maximum primary tank capacity = 1,000 gallons	Maximum primary tank Capacity = 500 gallons
Class II for open use	660 gallons	Maximum primary tank capacity = 2,000 gallons	Maximum primary tank Capacity = 660 gallons
Combination Class I and Class II liquids in compartmentalized tanks for open use	Prohibited	3,000 gallons [3]	1,000 gallons [3]
Class II outside for closed use (e.g. emergency generators)	2,000 gallons	Maximum primary tank capacity = 4,000 gallons	Maximum primary tank Capacity = 2,000 gallons

[1]I-zone means Industrial zones identified in accordance with the City Land Use Code.

[2]Additional tanks are allowed on the same site when separated from one another by a minimum of 100 feet.

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[3]Maximum individual compartment capacities shall not exceed the maximum allowable primary tank capacity for the class of liquid.

Section 389. Subsection 3404.2.13.1 of the 2003 International Fire Code is amended as follows:

3404.2.13.1 Underground tanks. Underground tanks taken out of service shall comply with Sections 3404.2.13.1.1 through 3404.2.13.1.5. Residential heating oil tanks required by this section to be removed or decommissioned shall also comply with Administrative Rule 34.02.04 *Decommissioning Residential Heating Oil Tanks.*

* * *

Section 390. A new subsection 3404.2.15 is adopted to read as follows:

3404.2.15 Maintenance. Aboveground tanks and connected piping shall be maintained in a safe operating condition. Tanks shall be maintained in accordance with their listings.

Damage to aboveground tanks shall be repaired using materials having equal or greater strength and fire resistance or the tank shall be replaced or taken out of service.

Section 391. Subsection 3404.3.1.1 of the 2003 International Fire Code is amended as follows:

3404.3.1.1 Approved containers. Only approved containers and portable tanks shall be used.

It shall be unlawful to sell, offer for sale, or distribute any container for the storage and/or use of flammable liquids, unless such container has been approved for such purpose under applicable provisions of this code.

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Section 392. Subsection 3404.3.2.3 of the 2003 International Fire Code is hereby repealed.

Section 393. Subsection 3404.3.4.4 of the 2003 International Fire Code is amended as follows:

3404.3.4.4 Liquids for maintenance and operation of equipment. In all occupancies, quantities of flammable and combustible liquids in excess of 10 gallons (38 L) used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons (38 L) are allowed to be stored outside of a cabinet when in approved containers located in private garages or other approved locations.

In Groups A, B, E, F, I, M, R and S occupancies, quantities of flammable and combustible liquids used for demonstration, treatment and laboratory work exceeding 10 gallons (37.85 L) shall be stored in liquid storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons shall be in approved containers in approved locations.

Section 394. Subsection 3404.3.5.1 of the 2003 International Fire Code is amended as follows:

3404.3.5.1 Basement storage. Class I liquids shall not be permitted in basement areas. Class II and IIIA liquids shall be allowed to be stored in basements provided that automatic suppression and other fire protection is provided in accordance with Chapter 9.

Exception: Class I liquids stored and used in basement areas of research laboratories in accordance with Administrative Rule 34.03.04 *Flammable Liquid Storage and Use in Basement Level Laboratories.*

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Section 395. Subsection 3404.3.6.1 of the 2003 International Fire Code is amended as follows:

3404.3.6.1 Container type. Containers for Class I liquids shall be metal.

Exception: In sprinklered buildings, an aggregate quantity of 120 gallons (454 L) of water-miscible Class IB and Class IC liquids is allowed in nonmetallic containers, each having a capacity of 16 ounces (0.473 L) or less.

Plastic containers may be used for Class II and III liquids only when individual containers are:

1. stored less than 5 feet high; or
2. confined to box bins protected by automatic sprinklers within racks.

Section 396. Subsection 3404.3.7.3 of the 2003 International Fire Code is amended as follows:

3404.3.7.3 Spill control and secondary containment. Liquid storage rooms shall be provided with spill control and secondary containment in accordance with Section 2704.2.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

Section 397. Subsection 3404.3.7.5.1 of the 2003 International Fire Code is amended as follows:

3404.3.7.5.1 Fire-extinguishing systems. Liquid storage rooms shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1. In-rack sprinklers shall also comply with NFPA 13 and

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NFPA 231C. Automatic foam-water systems and automatic aqueous film-forming foam (AFFF) water sprinkler systems shall not be used except when approved. Protection criteria developed from fire modeling or full-scale fire testing conducted at an approved testing laboratory are allowed in lieu of the protection as shown in Tables 3404.3.6.3(2) through 3404.3.6.3(7) and Table 3404.3.7.5.1 when approved.

If secondary containment of nonwater-miscible flammable or combustible liquids is achieved through the use of recessed floors or liquid-tight sills as allowed for in Section 2704.2 an automatic-foam system shall be provided and must be approved by the fire code official.

Point of Information

Nonwater-miscible flammable and combustible liquids are those flammable and combustible liquids that are unable to dissolve uniformly with water. Whether a flammable or combustible liquid is soluble with water is dependent on the chemical nature of the liquid. A source of information regarding the water solubility of common flammable and combustible liquids can be found in NFPA Standard 325M.

Section 398. Subsection 3404.3.8.2 of the 2003 International Fire Code is amended as follows:

3404.3.8.2 Spill control and secondary containment. Liquid storage warehouses shall be provided with spill control and secondary containment as set forth in Section 2704.2.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

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Section 399. Subsection 3404.3.8.4 of the 2003 International Fire Code is amended as follows:

3404.3.8.4 Fire-extinguishing systems. Liquid storage warehouses shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1, or Section 4.8.2 and Tables 4.8.2(a) through (f) of NFPA 30. In-rack sprinklers shall also comply with NFPA 13 and NFPA 231C. Automatic foam water systems and automatic aqueous film-forming foam water sprinkler systems shall not be used except when approved. Protection criteria developed from fire modeling or full-scale fire testing conducted at an approved testing laboratory are allowed in lieu of the protection as shown in Tables 3404.3.6.3(2) through 3404.3.6.3(7) and Table 3404.3.7.5.1 when approved.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

Section 400. Subsection 3405.4.1 of the 2003 International Fire Code is amended as follows:

3405.4.1 Unit with a capacity of 60 gallons or less. Solvent distillation units used to ((~~recycle~~)) process Class I, II or IIIA liquids having a distillation chamber capacity of 60 gallons (227 L) or less shall be listed, labeled and installed in accordance with Section 3405.4 and UL 2208.

Exceptions:

1. Solvent distillation units installed in dry cleaning plants in accordance with Chapter 12.
2. Solvent distillation units used in continuous throughput industrial processes where the source of heat is remotely supplied using steam, hot water, oil or other heat

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transfer fluids, the temperature of which is below the auto-ignition point of the solvent.

((~~3. Solvent distillation units listed for and used in laboratories.~~

~~4.~~))3. Custom and non-commercial solvent distillation units which are((~~A~~))approved by the fire code official for research, testing and experimental processes.

4. Solvent distillation units installed or in service prior to September 27, 1998 when in accordance with Sections 3405.4.7 through 3405.4.10.

Section 401. Subsection 3405.4.2 of the 2003 International Fire Code is amended as follows:

3405.4.2 Units with a capacity exceeding 60 gallons. Solvent distillation units used to ((~~recycle~~)) process Class I, II or IIIA liquids, having a distillation chamber capacity exceeding 60 gallons (227 L) shall be used in locations that comply with the use and mixing requirements of Section 3405 and other applicable provisions in this chapter.

Section 402. New subsections 3405.4.10 and 3405.4.11 are adopted to read as follows:

3405.4.10 Existing units.

Point of Information

Solvent distillation units installed or placed in service after September 27, 1998 shall be in accordance with Sections 3405.4.1 through 3405.4.9.

3405.4.10.1 General. Solvent distillation units installed or placed in service prior to September 27, 1998 shall be in accordance with Section 3405.4.10.

Exceptions:

1. Existing commercially produced high purity column stills with a chamber capacity of 60 gallons or less which are constructed of UL or CSA approved components and

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provided with an enclosed cabinet, mechanical ventilation and microprocessor control. Such units shall be located in a laboratory or similar controlled environment as approved by the chief, maintained at least three feet from ignition sources, and separated from exit ways by one-hour fire resistant construction.

2. Existing commercially produced solvent distillation units, including glass apparatus and electric heating mantels, with a chamber capacity of 1.5 liters or less which are used for research, testing, and experimental purpose in a laboratory setting or similar controlled environment.

3405.4.10.2. Listing. Solvent distillation units used to process Class I, II or III-A liquids shall be listed in accordance with the Electrical Code for Class 1, Division 1 or 2 hazardous locations.

Exception: When approved by the chief, existing commercially produced units having a chamber capacity of 60 gallons or less when separated from exits and exit ways by one hour fire resistant construction and located at least three feet away from ignition sources.

3405.4.10.3 Location. Solvent distillation unit shall not be used in basements. Units processing Class I, II, or III-A liquids, having a distillation capacity exceeding 60 gallons (227.1 L) shall be used in locations that comply with the use and mixing requirement of Section 3405 and other applicable provisions in Chapter 34.

3405.4.10.4 Overfill protection. A means to automatically interrupt distillation and prevent collection containers and portable tanks from overfilling, or an overfill containment pan sized to contain the entire capacity of the distillation chamber shall be provided.

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3405.4.10.5 Safety limit controls. Safety limit controls which shut off the unit in the event of a malfunction that increases the risk of fire or explosion shall be provided.

3405.4.10.6 Maximum temperature. The maximum temperature of the unit distillation chamber shall not exceed the auto-ignition temperature of the liquid being distilled.

3405.4.11 Units installed outdoors. Solvent distillation units installed outdoors shall be in accordance with Sections 3405.4.7 through 3405.4.10 and the following:

Units shall be located a minimum of 15 feet from public ways, property lines, combustible construction and openings to buildings.

Spill control is required around the unit in accordance with Section 2704.2

An attendant is required while the unit is in operation.

The unit shall be empty when unattended or shut down and the area secured in an approved manner.

Section 403. Subsection 3406.5.4 of the 2003 International Fire Code is amended as follows:

3406.5.4 Dispensing from tank vehicles and tank cars. Dispensing from tank vehicles and tank cars into the fuel tanks of motor vehicles shall be prohibited unless allowed by and conducted in accordance with Sections 3406.5.4.1 through 3406.5.4.((~~4.~~))5.

* * *

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Section 404. Subsection 3606.5.4.5 of the 2003 International Fire Code is amended as follows:

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with the following:

1. Dispensing shall occur only at sites that have been permitted to conduct mobile fueling.
2. The owner of a mobile fueling operation shall provide to the jurisdiction a written response plan which demonstrates readiness to respond to a fuel spill and carry out appropriate mitigation measures, and describes the process to dispose properly of contaminated materials.
3. A detailed site plan shall be submitted with each application for a permit. The site plan shall indicate: all buildings, structures and appurtenances on site and their use or function; all uses adjacent to the property lines of the site; the locations of all storm drain openings, adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the site property; and the scale of the site plan.

   Provisions shall be made to prevent liquids spilled during dispensing operations from flowing into buildings or off-site. Acceptable methods include, but shall not be limited to, grading driveways, raising doorsills or other approved means.
4. The fire code official is allowed to impose limits on the times and/or days during which mobile fueling operations may take place, and specific locations on a site where fueling is permitted.
5. Mobile fueling operations shall be conducted in areas not accessible to the public or shall be limited to times when the public is not present.

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6. Mobile fueling shall not take place within 15 feet (4572 mm) of buildings, property lines, ((~~or~~))combustible storage((~~,~~)) or storm drains.

Exceptions:

1. The distance to storm drains can be eliminated if an approved storm drain cover or an approved equivalent that will prevent any fuel from reaching the drain is in place prior to fueling or hose being placed within 15 feet of the drain. When placement of a storm drain cover will cause the accumulation of excessive water or difficulty in safely conducting the fueling, it shall not be used and fueling shall not take place within 15 feet of a drain.

2. The distance to storm drains can be eliminated for drains that direct intake to approved oil-water separators.

7. The tank vehicle shall comply with the requirements of NFPA 385 and local, state and federal requirements. The tank vehicle's specific functions shall include that of supplying fuel to motor vehicle fuel tanks. The vehicle and all its equipment shall be maintained in good repair.

8. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the tank vehicle or the point of fueling shall be prominently posted on three sides of the vehicle including the back and both sides.

9. A portable fire extinguisher with a minimum rating of 40:BC shall be provided on the vehicle with signage clearly indicating its location.

10. The dispensing nozzles and hoses shall be of an approved and listed type and the inside diameter of the hose shall not exceed 1-1/4 inches.

11. The dispensing hose shall not be extended from the reel more than 100 feet (30 480 mm) in length.

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All pressure hoses and couplings shall be inspected at intervals appropriate to the service. Any hose showing materials deterioration, signs of leakage or weakness in its carcass or at the couplings shall be withdrawn from service or repaired or discarded.

12. Absorbent materials, nonwater-absorbent pads capable of absorbing a minimum of 16 gallons, a 10-foot-long (3048 mm) containment boom, an approved container with lid, ((~~and~~))a nonmetallic shovel shall be provided to mitigate a minimum 5-gallon (19 L) fuel spill and a storm drain spill kit.

13. Tank vehicles shall be equipped with a "fuel limit" switch such as a count-back switch, to limit the amount of a single fueling operation to a maximum of 500 gallons (1893 L) before resetting the limit switch.

Exception: Tank vehicles where the operator carries and can utilize a remote emergency shut-off device which, when activated, immediately causes flow of fuel from the tank vehicle to cease.

14. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak or spill. Training records shall be maintained by the dispensing company and shall be made available to the fire code official upon request.

15. Operators of tank vehicles used for mobile fueling operations shall have in their possession at all times an emergency communications device to notify the proper authorities in the event of an emergency.

16. The tank vehicle dispensing equipment shall be constantly attended and operated only by designated personnel who are trained to handle and dispense motor fuels.

17. ((~~Prior to beginning dispensing operations, precautions shall be taken to ensure ignition sources are not present.~~))Fuel dispensing is prohibited within 15 feet (4572 mm) of any source of ignition.

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18. The engines of vehicles being fueled shall be shut off during dispensing operations.

19. Nighttime fueling operations shall only take place in adequately lighted areas.

20. The tank vehicle shall be positioned with respect to vehicles being fueled to prevent traffic from driving over the delivery hose.

21. During fueling operations, tank vehicle brakes shall be set, chock blocks shall be in place and warning lights shall be in operation.

22. Motor vehicle fuel tanks shall not be topped off.

23. The dispensing hose shall be properly placed on an approved reel or in an approved compartment prior to moving the tank vehicle.

24. The fire code official and other appropriate authorities shall be notified without delay by the fuel delivery vehicle operator when a reportable spill or unauthorized discharge occurs or when any spill or accidental release, inside or outside of a building, could present a fire or life safety hazard.

25. Operators shall place a drip pan or absorbent, in good condition, under each fuel fill opening prior to and during all dispensing operations. Drip pans shall be liquid tight. The pan or absorbent shall have a capacity of at least 5 gallons. Spills retained in the drip pan or absorbent pillow need not be reported. Operators, when fueling, shall have on their persons an absorbent pad capable of capturing diesel foam overfills. Except during fueling, the nozzle shall face upwards and an absorbent pad shall be kept under the nozzle to prevent drips. Contaminated absorbent pads shall be disposed of regularly in accordance with local, state and federal requirements.

26. It shall be the responsibility of the permit applicant to ensure that all persons and parties with an interest in the property (i.e., property owner, lessor, real-estate company, property manager as well as operators of the property) have given explicit consent to allow mobile fueling to occur on the property. Managers, lessees, renters

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and other persons can not solely give permission for mobile fueling to occur on the property.

27. Fueling locations shall have a surface that will be protected by continuous pavement (cement or asphalt) which is in good repair. Good repair means that a surface has no cracks, holes or means through which a spill could reach soil.

Exception: Demonstration by the vehicle operator that the flow of fuel can be stopped from the furthest fueling location within 15 seconds.

Section 405. Subsection 3505.1.1 of the 2003 International Fire Code is amended as follows:

3501.1 Scope. The storage and use of flammable gases shall be in accordance with this chapter. Compressed gases shall also comply with Chapter 30. Gaseous hydrogen systems at consumer sites shall also comply with NFPA 50A.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied petroleum gases and natural gases regulated by Chapter 26 or Chapter 38.

Section 406. Subsection 3801.1 of the 2003 International Fire Code is amended as follows:

3801.1 Scope. Storage, handling and transportation of LP-gas and the installation of LP-gas equipment pertinent to systems for such uses shall comply with this chapter, NFPA 54, *National Fuel Gas Code* and NFPA 58, *Liquefied Petroleum Gas Code* as amended.

Exception: LP-gas used with oxygen for hot work operations shall be in accordance with Chapter 26.

Properties of LP-gases shall be determined in accordance with Appendix B of NFPA 58

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as amended.

Section 407. Subsection 3801.3 of the 2003 International Fire Code is amended as follows:

3801.3 Construction documents. Where a single container is more than ((~~2,000~~))500 gallons (((~~7570~~))1892.5 L) in water capacity or the aggregate capacity of containers is more than ((~~4,000~~))1,000 gallons (((~~15140~~)) 3785 L) in water capacity and for all mounded or underground LP-gas containers, the installer shall submit construction documents to the fire code official for approval of ((~~for~~)) such installation prior to beginning the installation. [NFPA 58 1.4.1]

Section 408. Section 3803 of the 2003 International Fire Code is amended as follows:

SECTION 3803

INSTALLATION OF EQUIPMENT

3803.1 General. Liquefied petroleum gas equipment shall be installed in accordance with ((~~the International~~)) NFPA 54, *National Fuel Gas Code* and NFPA 58 as amended, except as otherwise provided in this chapter.

SECTION 3803.2

USE OF LP-GAS INSIDE BUILDINGS

3803.2 Use of LP-gas containers in buildings. LP-gas containers shall not be used inside of buildings.

Exception: The use of LP-gas containers in buildings ((~~shall be~~)) in accordance with Sections 3803.2.1 and 3803.2.2.

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3803.2.1 Portable containers. Portable LP-gas containers, as defined in NFPA 58 as amended, shall not be used in buildings except as specified in ((~~NFPA 58 and~~)) Sections 3803.2.1.1 through 3803.2.1.7. [NFPA 58 3.4.1.1]

3803.2.1.1 Use in basement, pit or similar location. LP-gas containers shall not be used in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers shall not be used in an above-grade underfloor space or basement unless such location is provided with an approved means of ventilation.

Exception: Use with self-contained torch assemblies in accordance with Section 3803.2.1.6.

3803.2.1.2 Construction, renovation and temporary heating. Portable containers are allowed to be used in buildings or areas of buildings undergoing construction((,)) or renovation, or for temporary heating as set forth in this section and Sections 3.4.3, 3.4.4, and 3.4.7 of NFPA 58 as amended. [NFPA 58 3.4.3, 3.4.4, 3.4.7]

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed within buildings undergoing construction or renovation shall be in accordance with Table 3803.2.1.2-A.

TABLE 3803.2.1.2-A

USE OF LP-GAS INSIDE BUILDINGS UNDERGOING CONSTRUCTION or RENOVATION [1]

	Maximum	Maximum	Maximum Aggregate Quantity

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Location	**Individual Container Capacity**	**Aggregate Quantity per Floor**	**inside the Building**
Within Occupied A Occupancies	Limits established by permit issued by Special Events Section		
Within Occupied Buildings other than A Occupancies	50 lbs. water capacity (nominal 20 lb LP-gas capacity)	Number of cylinders shall not exceed the number of workers assigned to use the LP-gas.	Number of cylinders shall not exceed the number of workers assigned to use the LP-gas.
Unoccupied Buildings	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)	4410 lbs. water capacity (nominal 1800 lb LP-gas capacity)

[1] Weight of LP-gas per gallon = 4.20 lbs. See Point of Information.

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed

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within buildings for temporary heating shall be in accordance with Table 3803.2.1.2-B.

TABLE 3803.2.1.2-B

USE OF LP-GAS INSIDE BUILDINGS FOR TEMPORARY HEATING[1,2]

Location	Maximum Individual Container Capacity	Maximum Aggregate Quantity Inside the Building
Group F Occupancies	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)
All Occupancies[3] except Group F Occupancies	Established by temporary permit	Established by temporary permit

[1] Temporary heating refers to seasonal space heating that may supplement the buildings primary heat source.

[2] Weight of LP-gas per gallon = 4.20 lbs.

[3] Allowed in these occupancies only for emergency heating to prevent damage to the building or contents when the permanent heating system is temporarily out of service.

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3803.2.1.3 Group F occupancies. In Group F occupancies, portable LP-gas containers are allowed to be used to supply quantities necessary for processing, research or experimentation. ((~~Where manifolded, the aggregate water capacity of such containers shall not exceed 735 pounds (334 kg) per manifold.~~))

Temporary heating using LP-gas is also allowed inside Group F Occupancies in accordance with Section 3803.2.1.2.

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed within Group F Occupancies shall be limited in accordance with Table 3803.2.1.3.

TABLE 3803.2.1.3

USE OF LP-GAS INSIDE GROUP F OCCUPANCIES[1]

Location	Maximum Individual Container Capacity	Maximum Aggregate Container Capacity per Manifold[2]
Fire District	100 lbs. water capacity (nominal 40 lb LP-gas)	287 lbs. water capacity (nominal 120 lb LP-gas capacity)
Elsewhere	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)

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[1] Weight of LP-gas per gallon = 4.20 lbs.

[2] Where multiple manifolds of such containers are present in the same room, each manifold shall be separated from other manifolds by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.5]

3803.2.1.4 Group B, E and I occupancies. In Group B, E and I laboratory occupancies portable LP-gas containers are allowed to be used for research and experimentation. Such containers shall not be used in classrooms. Such containers shall not exceed a 50-pound (23 kg) water capacity in occupancies used for educational or research purposes and shall not exceed a 12-pound (5 kg) water capacity in occupancies used for institutional purposes. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.6]

3803.2.1.5 Demonstration uses. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds (5 kg). Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.8]

3803.2.1.6 Use with self-contained torch assemblies. Portable LP-gas containers are allowed to be used to supply approved self-contained torch assemblies or similar appliances. Such containers shall not exceed a water capacity of 2.57 pounds (1.2 kg). [NFPA 58 3.4.8.3]

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3803.2.1.7 Use for food preparation. Where approved, listed LP-gas commercial food service appliances are allowed to be used for food-preparation within restaurants and in attended commercial food-catering operations in accordance with ((~~the *International*~~)) NFPA 54, *National Fuel Gas Code,* the *International Mechanical Code* and NFPA 58 as amended. [NFPA 58 3.4.8.4]

3803.2.2 Industrial vehicles and floor maintenance machines. Containers on industrial vehicles and floor maintenance machines shall comply with ((~~NFPA 58,~~)) Sections 8.3 and 8.4 of NFPA 58 as amended. [NFPA 58 8.3, 8.4]

((~~**3803.3 Location of equipment and piping.** Equipment and piping shall not be installed in locations where such equipment and piping is prohibited by the *International Fuel Gas Code*~~.))

3803.3 Use of LP-gas containers on roofs or exterior balconies. LP-gas containers on roofs or exterior balconies shall be in accordance with Sections 3803.3.1 through 3803.3.2.

3803.3.1 LP-gas containers on roofs of buildings. LP-gas containers are prohibited on the roofs of buildings and parking garages. [NFPA 58 3.2.10.1, 3.4.1.1, 3.4.9]

Exceptions:

1. Temporary installations at construction sites in accordance with Section 3803.4.
2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill.

3803.3.2 Containers on exterior balconies. LP-gas containers with a water capacity greater than 2.7 pounds (1.2-kg) shall not be located on balconies above the first floor that are attached to a Group R-1, R-2, R-4 or LC Occupancy.

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Exception: LP-gas containers not exceeding a water capacity of 48 pounds (nominal 20 pounds LP-gas) may be used on noncombustible balconies served by outside stairways where only such stairways are used to transport the container. [NFPA 58 3.4.9.2]

A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill is allowed to be located on each noncombustible, or sprinklered combustible exterior balcony of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

3803.4 Special uses of LP-gas outside of buildings. Individual container capacities and maximum aggregate quantities of LP-gas used for outdoor cooking, fueling equipment at construction sites, fueling tar kettles, fueling hot tar tank trucks and used in conjunction with torch applied roofing operations shall be limited in accordance with Table 3803.4.

LP-gas-fired heating appliances located outdoors at permanent Group A drinking and dining establishments are allowed in accordance with Section 603.4.2.

TABLE 3803.4

SPECIAL USES OF LP-GAS OUTSIDE OF BUILDINGS

Use/Activity	Location	Maximum Individual Container Capacity	Maximum Aggregate Quantity

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Outdoor Cooking (except R-2 and R-3 where allowed)	Fire District	50 lbs. water capacity[1] (nominal 20 lbs. LP-gas capacity)	100 lbs.water capacity (nominal 40 lbs. LP-gas capacity)
	Elsewhere	50 lbs. water capacity (nominal 20 lbs. LP-gas capacity)	357 lbs. water capacity (nominal 150 lbs. LP-gas capacity)
Fueling Temporary Heating Equipment at Construction Sites	Fire District	Prohibited	Prohibited
	Elsewhere	500 gallons	500 gallons
Fueling Tar Kettles	Fire District	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)

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	Elsewhere	3024 lbs. water capacity (nominal 1260 lbs. LP-gas capacity)	3024 lbs. water capacity (nominal 1260 lbs. LP-gas capacity)
	On Roofs of Buildings	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)
Use/Activity	**Location**	**Maximum Individual Container Capacity**	**Maximum Aggregate Quantity**
Fueling Hot Tar Tank Trucks	Fire District	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)

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	Elsewhere	500 gallons	500 gallons
Fueling Roofing Torches	Occupied Buildings	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	300 lbs. water capacity (nominal 126 lbs. LP-gas capacity)
	Unoccupied Buildings	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	605 lbs. water capacity (nominal 252 lbs. LP-gas capacity)

[1] When the LP-gas is separated from the public by minimum of 30 feet, or by a noncombustible partition, the maximum allowable individual container size may be increased to 239 lbs. water capacity (nominal 100 lbs. LP-gas capacity) and the maximum allowable aggregate quantity may be increased to 1,000 lbs. water capacity (nominal 420 lbs. LP-gas capacity).

Section 409. Section 3804 of the 2003 International Fire Code is amended as follows:

SECTION 3804

LOCATION OF CONTAINERS

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3804.1 General. The storage and handling of LP-gas and the installation and maintenance of related equipment shall comply with this chapter, NFPA58 as amended and be subject to the approval of the fire code official((~~, except as provided in this chapter~~)).

3804.2 Maximum capacity within established limits. ((~~Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L) (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~

~~Exception:~~))In particular installations, ((~~this~~))the location and capacity limit of LP-gas installations ((~~shall~~))may be determined by the fire code official, after consideration of special features such as topographical conditions, nature of occupancy, and proximity to buildings, capacity of proposed containers, degree of fire protection to be provided, proximity to residential, educational and institutional occupancies and other high-risk areas and capabilities of the local fire department.

3804.3 Container location. Containers shall be located with respect to buildings, public ways, and lot lines of adjoining property that can be built upon, in accordance with Table 3804.3. [NFPA 58 3.2.2.2]

3804.3.1 Special hazards. Containers shall also be located with respect to special hazards such as above-ground flammable or combustible liquid tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as specified in ((~~NFPA 58,~~)) Section 3.2.2.6 of NFPA 58 as amended. [NFPA 58 3.2.2.6]

* * *

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Section 410. Section 3805 of the 2003 International Fire Code is amended as follows:

SECTION 3805

PROHIBITED STORAGE AND USE OF LP-GAS

3805.1 Nonapproved equipment. Liquefied petroleum 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.

3805.2 Release to the atmosphere. Liquefied petroleum gas shall not be released to the atmosphere, except through an approved liquid-level gauge or other approved device.

3805.3 Fire District restrictions. Storage and use of LP-gas containers having an individual capacity in excess of 239 pounds water capacity (nominal 100 pounds LP-gas) and all stationary installations are prohibited in the Fire District.

Exception: Containers and stationary installations up to 500 gallons LP-gas capacity west of Alaskan Way.

3805.4 Rooftop installations. LP-gas containers are prohibited on the roofs of buildings and parking garages. [NFPA 58 3.2.10.1, 3.4.1.1, 3.4.9]

Exceptions:

1. Temporary installations at construction sites in accordance with Section 3803.4.
2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.
3. A single LP-gas container having an individual water capacity not exceeding 2.7 lbs.

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(nominal 1.2 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of Group R-1, R-2, R-4 or LC Occupancies.

3805.5 Stationary installations inside buildings. Stationary installations of LP-gas containers inside buildings are prohibited. [NFPA 58 3.2.2.1]

Section 411. Subsection 3806.3 of the 2003 International Fire Code is amended as follows:

3806.3 Dispensing locations. The point of transfer of LP-gas from one container to another shall be separated from exposures as specified in NFPA 58 as amended. [NFPA 58 3.2.3]

Section 412. Sections 3807, 3808 and 3809 respectively of the 2003 International Fire Code are amended as follows:

SECTION 3807

SAFETY PRECAUTIONS AND DEVICES

3807.1 Safety devices. Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made in effective. [NFPA 58 3.3.6]

3807.2 Smoking and other sources of ignition. "No Smoking" signs complying with Section 310 shall be posted when required by the fire code official. Smoking within 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at containers or vehicles, shall be prohibited. Control of other sources of ignition shall comply with Chapter 3 and ((~~NFPA 58,~~)) Section 3.7 of NFPA 58 as amended. [NFPA 58 3.7]

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3807.3 Clearance to combustibles. Weeds, grass, brush, trash and other combustible materials shall be kept a minimum of 10 feet (3048 mm) from LP-gas tanks or containers. [NFPA 58 3.2.8.2]

3807.4 Protecting containers from vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with Section 312.

SECTION 3808

FIRE PROTECTION

3808.1 General. Fire protection shall be provided for installations having storage containers with a water capacity of more than 4,000 gallons (15 140 L), as required by Section 3-10 of NFPA 58 as amended. [NFPA 58 3.10]

3808.2 Fire extinguishers. Fire extinguishers complying with Section 906 shall be provided as specified in NFPA 58 as amended. [NFPA 58 5.5]

SECTION 3809

STORAGE OF PORTABLE LP-GAS CONTAINERS AWAITING USE OR RESALE

3809.1 General. Storage of portable containers of 1,000 pounds (454 kg) or less, whether filled, partially filled or empty, at consumer sites or distributing points, and for resale by dealers or resellers shall comply with Sections 3809.2 through 3809.15.

Exceptions:

1. Containers that have not previously been in LP-gas service.
2. Containers at distributing plants.

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3. Containers at consumer sites or distributing points, which are connected for use. [NFPA 58 5.1.1]

3809.2 Exposure hazards. Containers in storage shall be located in a manner which minimizes exposure to excessive temperature rise, physical damage or tampering. [NFPA 58 5.2.1.1]

3809.3 Position. Containers in storage having individual water capacity greater than 2.((~~5~~))7 pounds (1.2 kg) [nominal 1-pound (0.454 kg) LP-gas capacity] shall be positioned with the pressure relief valve in direct communication with the vapor space of the container. [NFPA 58 3.2.4.1, 5.2.1.2]

3809.4 Separation from means of egress. Containers stored in buildings in accordance with Sections 3809.9 and 3809.11 shall not be located near exit access doors, exits, stairways, or in areas normally used, or intended to be used, as a means of egress. [NFPA 58 5.2.1.3]

3809.5 Quantity. Empty containers that have been in LP-gas service shall be considered as full containers for the purpose of determining the maximum quantities of LP-gas allowed in Sections 3809.9 and 3809.11. [NFPA 58 5.2.1.4]

3809.6 Storage on roofs. Containers which are not connected for use shall not be stored on roofs. [NFPA 58 5.2.1.5]

3809.7 Storage in basement, pit or similar location. Liquefied petroleum gas containers shall not be stored in a basement, pit or similar location where heavier-than-air gas might collect. Liquefied petroleum gas containers shall not be stored in above-grade under floor spaces or basements unless such location is provided with an approved means of ventilation.

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Exception: Department of Transportation (DOTn) specification cylinders with a maximum water capacity of 2.((~~5~~))7 pounds (1 kg) for use in completely self-contained hand torches and similar applications. The quantity of LP-gas shall not exceed 20 pounds (9 kg).

3809.8 Protection of valves on containers in storage. Container valves shall be protected by screw-on-type caps or collars which shall be securely in place on all containers stored regardless of whether they are full, partially full or empty. Container outlet valves shall be closed or plugged. [NFPA 58 5.2.2]

3809.9 Storage within buildings accessible to the public and in residential occupancies. Storage of LP-gas within buildings accessible to the public and in residential occupancies shall be in accordance with this section.

3809.9.1 Storage within buildings accessible to the public. Department of Transportation (DOTn) specification cylinders with maximum water capacity of 2.((~~5~~))7pounds (1 kg) ((~~used in completely self-contained hand torches and similar applications~~)) are allowed to be stored or displayed in a building accessible to the public. The quantity of LP-gas shall not exceed ((~~200~~)) 25 pounds in the Fire District and 100 pounds outside the Fire District ((~~pounds (91 kg)~~)) except as provided in Section 3809.11.

Exception: Storage in restaurants and at food service locations of 10-oz (238-g) butane nonrefillable containers shall be limited to no more than 24 containers, and an additional twenty four 10-oz (238-g) butane nonrefillable containers stored in another location within the building, where constructed with at least a 2-hour fire wall construction. [NFPA 58 5.3.1.2]

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3809.9.2 Storage within residential occupancies. Storage of containers within residential occupancies, including the basement or any storage area in a common basement storage area in multi-family occupancies and attached garages, shall be limited to containers having a maximum individual water capacity of 2.7 lbs. (1.2 kg) and shall not exceed 5.4-lb (2.4-kg) aggregate water capacity per living space unit. Each container shall meet DOT specifications. [NFPA 58 5.3.4]

3809.10 Storage within buildings not accessible to the public. The maximum quantity allowed in one storage location in buildings not accessible to the public, such as industrial buildings, shall not exceed a water capacity of 735 pounds (334 kg) [nominal 300 pounds (136 kg) of LP-gas]. Where additional storage locations are required on the same floor within the same building, they shall be separated by a minimum of 300 feet (91 440 mm). Storage beyond these limitations shall comply with Section 3809.11. [NFPA 58 5.3.2.]

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed to be stored within buildings not accessible to the public shall be limited in accordance with Table 3809.10.

TABLE 3809.10

STORAGE WITHIN BUILDINGS

NOT ACCESSIBLE TO THE PUBLIC[1]

Location	Max Individual Container	Maximum Aggregate

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	Capacity	Quantity
Fire District	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	144 lbs. water capacity (nominal 60 lbs. LP-gas)
Elsewhere	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	735 lbs. water capacity (nominal 300 lbs. LP-gas capacity)

[1] Weight of LP-gas per gallon = 4.20 lbs.

3809.10.1 Quantities on equipment and vehicles. Containers carried as part of service equipment on highway mobile vehicles need not be considered in the total storage capacity in Section 3809.10, provided such vehicles are stored in private garages and do not carry more than three LP-gas containers with a total aggregate LP-gas capacity not exceeding 100 pounds (45.4 kg) per vehicle. Container valves shall be closed. [NFPA 58 5.3.2.2]

3809.11 Storage within rooms used for gas manufacturing.

Storage within buildings or rooms used for gas manufacturing, gas storage, gas-air mixing and vaporization, and compressors not associated with liquid transfer shall comply with Sections 3809.11.1 and 3809.11.2. [NFPA 58 5.3.3]

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3809.11.1 Quantity limits. The maximum quantity of LP-gas shall be 10,000 pounds (4540 kg).

3809.11.2 Construction. The construction of such buildings and rooms shall comply with requirements for Group H occupancies in the *International Building Code*; NFPA 58 as amended, Chapter 7; and both of the following:

1. Adequate vents shall be provided to the outside at both top and bottom, located at least 5 feet (1524 mm) from building openings.
2. The entire area shall be classified for the purposes of ignition source control in accordance with NFPA 58 as amended, Section 3.7.

3809.12 Location of storage outside of buildings. Storage outside of buildings, for containers awaiting use, resale or part of a cylinder exchange program shall be located not less than ((~~20~~))10 feet (6096 mm) from openings into buildings, 20 feet (6096 mm) from any motor vehicle fuel dispenser and 10 feet (3048 mm)from any combustible material and in accordance with Table 3809.12-A. [NFPA 58 5.4]

TABLE 3809.12-A

LOCATION OF CONTAINERS AWAITING USE OR RESALE

STORED OUTSIDE OF BUILDINGS

QUANTITY OF LP-GAS STORED	DISTANCES TO A BUILDING OR GROUP OF BUILDINGS, PUBLIC WAY OR LOT LINE OF PROPERTY THAT CAN BE BUILT UP (feet)
500 pounds or less	0
501 to 2,500 pounds	10[a]

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2,501 to 6000 pounds	15
6,001 to 10,000 pounds	20
Pver 10.000 pounds	25

For SI: 1 foot=304.8 mm, 1 pound=0.0454 kg.

[a.] Containers are allowed to be located a lesser distance.

Maximum aggregate quantities located outside of buildings accessible to the public shall be in accordance with Table 3809.12-B.

TABLE 3809.12-B

STORAGE OUTSIDE OF BUILDINGS

ACCESSIBLE

TO THE PUBLIC[1]

Location	Max Individual Container Capacity	Maximum Aggregate Quantity
Fire District	72 lbs. water capacity (nominal 30 lbs. LP-gas)	357 lbs. Water capacity (nominal 150 lbs. LP-gas)

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Elsewhere	72 pounds water capacity (nominal 30 lbs. LP-gas)	2592 lbs. water capacity (nominal 1080 lbs. LP-gas)[2]

[1] Weight of LP-gas per gallon = 4.20 lbs.

[2] Actual maximum quantity shall be determined on a case by case basis but shall not exceed the maximum quantity set forth here.

3809.13 Protection of containers. Containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicular protection shall be provided in accordance with Section 312 ((~~as~~)) when required by the fire code official. [NFPA 58 3.2.4.2]

3809.14 Separation from means of egress for containers located outside of buildings. Containers located outside of buildings shall not be located within 20 feet (6096 mm) of any exit access doors, exits, stairways or in areas normally used, or intended to be used, as a means of egress.

3809.15 Alternative location and protection of storage. Where the provisions of Sections 3809.12 and 3809.13 are impractical at construction sites, or at buildings or structures

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undergoing major renovation or repairs, the storage of containers shall be as required by the fire code official.

Section 413. Subsection 3811.3 of the 2003 International Fire Code is amended as follows:

3811.3 Garaging. Garaging of LP-gas tank vehicles shall be as specified in NFPA58 as amended. Vehicles with LP-gas fuel systems are allowed to be stored or serviced in garages as specified in NFPA 58 as amended, Section 8.6.

Point of Information

The following Tables may be used to approximate container capacity conversions.

FOR PORTABLE DOT/ICC/CTC CYLINDER APPLICATIONS:

Propane Capacity		**Water Capacity**	
(lb)	**(gal)**	**(lb)**	**(gal)**
5	1.2	12	1.4
10	2.4	23.8	2.8
14	3.3	34	4.1
20	4.7	48	5.7
25	5.9	59.5	7.1
30	7.1	72	8.6

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40	9.5	95	11
60	14	144	17
100	24	239	29
150	35	357	43
200	47	477	57
300	71	715	86
420	99	1,000	119

FOR STATIONARY ASTM CONTAINER APPLICATIONS:

Water Capacity (gallons)	LP-gas Capacity (gallons)*	LP-gas Capacity (pounds)
100	80	338
125	100	423
150	120	508
250	200	848
325	260	
500	400	
1,000	800	

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Based on propane specific gravity of .508 at 60 degrees Fahrenheit

Section 414. Chapter 45 of the 2003 International Fire Code is amended as follows:

CHAPTER 45

REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.6.

* * *

NFPA

National Fire Protection Association

Batterymarch Park

Quincy, MA 02269 **NFPA**

Standard reference number	Title	Referenced in code section number

* * *

58—01 Liquefied Petroleum Gas Code as amended. . . . . ((~~3801.1, 3803.1, 3803.2.1, 3803.2.1.2 ,3803.2.1.7, 3803.2.2, 3804.1, 3804.3.1, 3804.4, 3806.3, 3807.2, 3808.1, 3808.2, 3809.11.2, 3811.3~~)) Chapter 38

* * *

120-99 Coal Preparation Plants . . . . . Table 1304.1

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130—03 Fixed Guideway Transit and Passenger Rail Systems as amended 316

* * *

498-96 Safe Havens and Interchange Lots for Vehicles Transporting Explosives 3301.1.2

502—01 Road Tunnels, Bridges, and other Limited Access Highways as amended 317

* * *

UL

Underwriters Laboratories, Inc.

333 Pfingsten Road

Northbrook, IL 60062

Standard reference number	Title	Referenced in code section number

* * *

2245-99	Below-Grade Vaults for Flammable Liquid Storage Tanks	3404.2.8.1
UUFX-03	Central Station (Fire Alarms).....	.903.4.1

Section 415. A new Chapter 46 is adopted to read as follows:

CHAPTER 46

WATERFRONT STRUCTURES FIRE PROTECTION

SECTION 4601

GENERAL

4601.1 Scope. Piers, wharves, floats and marinas shall be in accordance with this chapter and other requirements of this code.

Exception: Approved designated facilities and shipyards in accordance with Administrative Rule 26.02.04 *Designated Hot Work Facilities and Shipyards.*

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4601.1.1 Conflicts. Where there is a conflict between this code and an ordinance or rule, this chapter shall govern unless the ordinance or rule establishes more stringent fire and life safety requirements.

4601.2 Signage. At the shore end of piers, wharves and floats conspicuous signage shall be located indicating the address and, for those structures that are designed to support vehicles, the weight limit. Numbers and letters shall be easily legible and have high contrast with the color of the sign background. Numbers and letters shall not be less than 5 inches (127 mm) in height.

4601.2.1 Labeling electrical disconnects. Electrical transformers, control panels, and breaker panels shall be readily accessible, clearly labeled and indicate the areas they service. See also Section 605.

4601.3 Fire extinguishers. One portable fire extinguisher having a minimum rating of 2A 20-BC, shall be provided within 75 feet of all portions of piers, wharves, and floats, or at each required hose station. Additional fire extinguishers, suitable for the hazards involved, shall be provided and maintained in accordance with Section 906 and NFPA Standard 10.

4601.4 Emergency Plan. Owners of piers, wharves, floats and marinas shall prepare an emergency plan for the facility. The plan shall include procedures for fire department notification, fire evacuation, and include location of portable fire extinguishers and hose cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.

Point of Information

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For examples of emergency plans, see information bulletins located at www.seattle.gov/fire titled Emergency Procedures for Public Occupancies and Fire Evacuation Planning.

SECTION 4602

DEFINITIONS

4602.1 Limited application. For the purposes of this Chapter, certain terms are defined as follows:

COVERED BOAT MOORAGE is a pier or system of floating or fixed accessways to which vessels on water may be secured, 50 percent or more of which is covered by a roof.

DESIGNATED HOT WORK FACILITY Those piers, designated by the fire code official, and by virtue of their construction, location, fire protection, emergency vehicle access and fire hydrant availability, that are suitable to permit certain repairs to vessels.

FLOAT is a floating structure normally used as a point of transfer for passengers and goods, or both, for mooring purposes.

MARINA is any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels and shall include artificially protected works, the public or private lands ashore, and structures or facilities provided within the enclosed body of water and ashore for the mooring or servicing of vessels or the servicing of their crews or passengers.

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PIER is a structure, usually of greater length than width, of timber, stone, concrete or other material, having a deck and projecting from the shore into waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SHIPYARD is a pier, wharf, or series of piers and related onshore facilities, designated by the fire code official, which by virtue of the pier construction, location, emergency vehicle access, fire protection, hydrant availability and onsite safety personnel in accordance with Seattle Fire Department Administrative Rule 26.02.02, *Designated Hot Work Facilities and Shipyards* is suitable to permit repairs, including major conversions, on marine vessels of any length.

SUBSTRUCTURE is that portion of the construction below and including the deck immediately above the water.

SUPERSTRUCTURE is that portion of construction above the deck.

Exception: Covered boat moorage.

VESSEL is watercraft of any type, other than seaplanes on the water, used or capable of being used as a means of transportation.

WHARF OR QUAY is a structure of timber, stone, concrete or other material having a platform built along and parallel to waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SECTION 4603

PLANS AND APPROVALS

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4603.1 Plans. Plans for pier, wharf, float and marina fire-protection shall be approved prior to installation. The work shall be subject to final inspection and approval after installation.

SECTION 4604
ACCESS AND WATER SUPPLY

4604.1 Fire department access. Fire department apparatus access lanes, not less than 20 feet wide and capable of supporting a 50,000-pound vehicle or 24,000 pounds per axle (HS20 loading), shall be provided and so located as to provide fire department apparatus access to within 50 feet travel distance to the shore end of all piers, wharves and floats.

4604.2 Fire hydrants. At least two fire hydrants shall be provided. One hydrant shall be located within 500 feet of the closest point of fire department apparatus access to the shore end of the marina piers, wharves or floats, or to the fire department connection (FDC) for those piers, wharves or floats that are equipped with standpipes. The second fire hydrant shall be located within 1000 feet of the closest point of fire department apparatus access to the shore end of the marina piers, wharves, or floats, or to the FDC for those piers, wharves or floats that are equipped with standpipes.

All required hydrants shall be capable of delivering not less that 1,000 gpm at a minimum residual pressure of 20 psi each.

Exception: The requirements for fire hydrants may be modified when alternate arrangements are approved by the fire code official.

SECTION 4605
FIRE PROTECTION EQUIPMENT

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4605.1 Standpipe systems. Class III standpipe systems in accordance with NFPA 14 shall be provided for piers, wharves, and floats where the hose lay distance from the fire apparatus to the most remote accessible portion of the pier, wharf or float exceeds 150 feet. Piping shall be 6-inch minimum, with 4-inch minimum piping acceptable for the last 100 feet. Approved plastic pipe may be used when installed underwater, or other approved method of protection from fire is provided. Note: Separate Class I and Class II standpipes may be installed in lieu of the combined Class III type standpipe system.

4605.1.1 Hose stations. Hose stations on required standpipes shall be provided at spacing not to exceed 100 feet with the first hose station located as close as practicable to the land end of the pier. Each hose station shall have 100 feet of 1½-inch hose mounted on a reel or rack and enclosed within an approved cabinet. A valved 2½-inch fire department hose outlet shall be provided at each hose station. Outlet caps shall have a 1/8-inch predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal. Listed equipment shall be used. Hose stations shall be labeled FIRE HOSE-EMERGENCY USE ONLY.

4605.1.2 Freeze protection. Standpipe systems shall be maintained dry when subject to freezing temperatures, and always from November 1 through March 31. The 1½-inch hose stations shall be tagged out-of service when the system is drained. The main water supply control valve shall be readily accessible and clearly labeled so that the system may be quickly restored to full service during periods when the system is drained down.

Exception: Other methods of freeze protection may be provided when approved by the fire code official, such as listed freeze valves.

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4605.2 Automatic sprinkler systems.

4605.2.1 Covered boat moorage. Automatic sprinklers shall be provided for covered boat moorage exceeding 500 square feet in projected roof area per pier, wharf or float. Ref: NFPA 303

The sprinkler system shall be designed and installed in accordance with NFPA 13 for Extra Hazard Group 2 occupancy.

If sprinklers are required by this chapter, they shall be extended to any structure on the pier, wharf or float exceeding 500 square feet in projected roof area.

4605.2.2 Substructure. Automatic sprinklers shall be installed under the substructure of every new waterfront structure in accordance with NFPA 307 and as specified in Chapter 9.

Exceptions:

1. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m 2) supporting no superstructures.
2. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m 2) supporting superstructures not required to be provided with an approved automatic sprinkler system as specified in Section 421.6.9.
3. Noncombustible substructures with or without superstructures.
4. Substructures, over other than tidal water, where sprinkler heads cannot be installed with a minimum clearance of 4 feet (1219 mm) above mean high water.
5. Substructures resulting from walkways or finger piers which do not exceed l0 feet (3048 mm) in width.

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4605.2.3 Superstructure. Automatic sprinklers shall be provided in superstructures as specified in Chapter 9.

Exceptions:

1. Outside of the fire district, an automatic sprinkler system shall not be required in superstructures which are less than 8,000 square feet (743.2 m 2) in floor area or in individual superstructures less than 8,000 square feet (743.2 m 2) in floor area when separated by a substructure of a width not less than 16 feet (4877 mm) and a substructure draft stop constructed as specified in Section 421.5.2.
2. An automatic sprinkler system shall not be required in one story superstructures which do not exceed 1,000 square feet (93 m 2) in floor area or 20 feet (6096 mm) in height.
3. An automatic sprinkler system shall not be required in Group R, Division 1 and 2 Occupancies or Group B office buildings of Type IA construction, provided no one assembly room exceeds 1,000 square feet (93 m 2) in floor area and the entire substructure is of Type IA construction, unless otherwise required by Section 403.

4605.2.4 Monitoring. Sprinkler systems shall be monitored by an approved Central Station Service.

4605.3 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than a two-way 2½-inch fire department connection (FDC), which shall be readily visible and located at the fire department apparatus access. See also 4604.2 Fire hydrants.

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4605.4 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested at least annually. Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated, and are separate from fire department inspections. The person, firm or corporation performing such work shall have a certificate from the fire department. See Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

Section 416. A new Chapter 90 is adopted to read as follows:

CHAPTER 90

RESIDENTIAL OCCUPANCIES

FOUR STORIES AND OVER

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 98868, effective June 6, 1970. Ordinance 98868, also known as the Ozark ordinance, applied to all existing apartment houses, apartment hotels, and hotels four stories or more in height.

SECTION 9001

GENERAL

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9001.1 Definitions. For the purpose of this chapter, the following words and terms shall have the meaning specified in section 9001.1:

APARTMENT HOUSE: Any building or portion thereof, containing three (3) or more dwelling units.

APARTMENT HOTEL: A building containing both dwelling units and guest rooms.

GUEST ROOM: Any room or rooms used or intended to be used for sleeping purposes by a person hiring such room or rooms.

HOTEL: A building in which is conducted the business of lodging the public and which contains six (6) or more guest rooms.

9001.2 Exit Enclosure Required. All existing apartment houses, apartment hotels and hotels four (4) stories or more in height, shall have at least two (2) fully enclosed stairways which have a one-hour fire-resistive rating throughout. The interior corridors and egressways thereof, including all doors, transoms and other openings into corridors, shall be constructed or improved to substantially have a one-hour fire-resistive rating throughout. In buildings constructed as apartment houses in accordance with the Building Code and being operated as apartment houses, walls and ceilings of plaster on wood lath or 1/2-inch plasterboard construction, and 1-3/8-inch solid core doors or equivalent shall be sufficient to meet the requirements of this section.

9001.3 Sprinkler Alternative. In lieu of compliance with the requirements of Section 9001.2, approved automatic fire sprinkler systems may be installed in all stairways, interior corridors

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and egressways of existing apartment houses, apartment hotels, and hotels four (4) stories or more in height. Automatic sprinkler systems, if so installed, shall also be installed in all janitor rooms, storage closets, utility rooms, and other usable spaces in which combustible materials are or may be sorted or kept, unless such rooms or spaces are equipped with self-closing fire doors having a one-hour fire-resistive rating.

SECTION 9002

CONFLICTS WITH LATER ADOPTED CODES

Section 9002.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after June 6, 1970. Where conflicts exist between the requirements of this chapter and Seattle Building Codes and Seattle Fire Codes adopted after June 6, 1970, the provisions of the later adopted codes shall apply.

Section 417. A new Chapter 91 is adopted to read as follows:

CHAPTER 91

AUTOMATIC SPRINKLER SYSTEMS IN NURSING HOMES

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 94931, effective August 5, 1966.

SECTION 9101

SCOPE

9101.1 Nursing Home Defined. For the purpose of this chapter, the term "nursing home" means any home, place, or institution which operates or maintains facilities providing

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convalescent or chronic care, or both, for a period in excess of 24 consecutive hours for three (3) or more patients not related by blood or marriage to the operator, who by reason of illness or infirmity, are unable properly to care for themselves. Convalescent and chronic care may include, but is not limited to any or all procedures commonly employed in waiting on the sick such as administration of medicines, preparation of dressings and bandages, and carrying out of treatment prescribed by a duly licensed practitioner of the healing arts. It may also include care of mentally incompetent persons if they do not require psychiatric treatment by or under the supervision of a physician specialized in the field of medicine. Nothing in this definition shall be construed to include general hospitals or other places which provide care and treatment for the acutely ill and maintain and operate facilities for major surgery or obstetrics, or both. Nothing in this definition shall be construed to include any boarding home, guest home, hotel or related institution which is held forth to the public as providing, and which is operated to give only board, room and laundry to persons not in need of medical or nursing treatment or supervision, except in the case of temporary acute illness. The mere designation by the operator of any place or institution, which does not provide care for the acutely ill or maintain and operate facilities for major surgery or obstetrics, as a hospital, sanitarium, or similar name shall not exclude such place or institution from the provisions of Section 9102.

SECTION 9102

INSTALLATION OF EQUIPMENT

9102.1 Installation Exceptions. Approved automatic fire sprinkler systems shall be installed in all usable rooms, corridors, and stairways of existing nursing homes with the following exceptions:

1. Nursing homes which are of Type I or II construction throughout, as defined in the Building Code.

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2. Nursing homes not more than one story in height which have interiors with a one-hour fire resistance rating throughout.

SECTION 9103

CONFLICTS WITH LATER ADOPTED CODES

Section 9103.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after August 5, 1966. Where conflicts exist between the requirements of this chapter and Seattle Building Codes and Seattle Fire Codes adopted after August 5, 1966, the provisions of the later adopted code shall apply providing they are not less stringent.

Section 418. A new Chapter 92 is adopted to read as follows:

CHAPTER 92

AUTOMATIC SPRINKLER SYSTEMS IN SCHOOLS

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 94931, effective August 5, 1966.

SECTION 9201

GENERAL

9201.1 School Buildings Defined. For the purpose of this chapter, the term "school building," means:

1. A public place of instruction operated by public authorities, including elementary and secondary schools.

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2. A place of instruction operated by private persons or private or religious organizations in which the course of study is similar to that in a public school, and which has been authorized by the State as an educational institution.

SECTION 9202

INSTALLATION OF EQUIPMENT

9202.1 Installation Exceptions. An approved automatic fire sprinkler system shall be installed in all usable rooms, corridors and stairways of existing school buildings, two (2) stories or more in height, with the following exceptions:

1. School buildings which are of Type I or II construction as defined in the Building Code.
2. School buildings not over three (3) stories in height which have interiors with one-hour fire resistance rating throughout, and which have egress enclosures with a one-hour fire resistance rating.
3. School buildings, not over three (3) stories in height, with interiors which substantially have a one-hour fire resistance rating, need only have egress corridors, stairways, janitor rooms, storage rooms and similar spaces equipped with approved automatic sprinkler systems. Classrooms and assembly rooms in such buildings need not be so equipped.

SECTION 9203

CONFLICTS WITH LATER ADOPTED CODES

Section 9203.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after August 5, 1966. Where conflicts exist between the requirements of this chapter and Seattle

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Building Codes and Seattle Fire Codes adopted after August 5, 1966, the provisions of the later adopted code shall apply.

Section 419. A new Chapter 93 is adopted to read as follows:

CHAPTER 93

MINIMUM STANDARDS FOR HIGH-RISE BUILDINGS

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 110299, effective January 23, 1982.

Where used in this Chapter, the term "Building Code" shall mean the 1982 Seattle Building Code. Where used in this Chapter, the terms "this Code" and "the fire code" shall mean the 1982 Seattle Fire Code.

SECTION 9301

GENERAL

9301.1 Purpose. The main purpose of this article is to improve the fire and life safety of existing high-rise buildings that do not conform to current City codes so that the health, safety and welfare of the general public is provided for and promoted. It is recognized that the application of present day fire protection techniques to some existing high-rise buildings is difficult. For this reason, this article may permit the use of alternative methods and innovative approaches and techniques to achieve its purpose, when approved by the chief and the Building Official.

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9301.2 Scope. This article shall apply to all high-rise buildings in existence at the time of its adoption, as well as to all high-rise buildings coming into existence after the adoption thereof.

9301.2.1 Hazards and design features. Whenever the chief shall find a condition in a high-rise building not specifically addressed in this chapter, which in his opinion makes fire escape or fire fighting unusually difficult, he shall declare it to be a hazard, notify the owner of such condition and order its correction in a manner consistent with these minimum safeguards.

9301.2.2 Exempt Buildings. The chief and the Director of the Department Planning and Design may exempt high-rise buildings that meet the requirements of Section 403 of the 1982 Seattle Building Code from complying with provisions of this chapter.

9301.2.3 Conflicts. Where there is a conflict between the provisions of this chapter and the provisions of an ordinance or code adopted after January 23, 1982, the provisions of the later adopted ordinance or code shall apply.

9301.3 Definitions. For the purpose of this chapter, certain words shall be construed as specified in this section.

CENTRAL STATION: A fire alarm reporting service listed by the Underwriters Laboratories or authorized by the chief to report alarms to the Seattle Fire Department Alarm Center. In lieu of connection to a central station listed by Underwriters Laboratories, the chief may approve building staff monitoring of a fire alarm annunciator panel where:

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1. Such staff are properly trained to monitor the annunciator panel and report alarm signals to the fire department alarm center via the 9-1-1 system.
2. One or more building staff is on duty 24 hours a day and, remains in the direct vicinity of the annunciator panel, e.g., a hotel desk clerk where the panel is behind the registration desk.
3. Staff persons in low income high-rise buildings whose primary duty requires them to be at the front desk are available.

DEAD-END CORRIDOR: A corridor which permits only one direction of travel from a unit or normally occupied room door to an exit, or which intersects an exit corridor on one end and does not provide an exit path on the other end. A corridor which has fire escapes directly accessible from it is not a dead-end corridor.

FLOOR USED FOR HUMAN OCCUPANCY: A floor designed and intended for occupancy by one or more persons for any part of a day, including a roof garden and an active storage area. An area that is permanently unoccupied or is occupied for the service of building equipment only is not included in this definition.

HIGH-RISE BUILDING: Buildings having floors used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access.

LOW INCOME RESIDENTIAL BUILDINGS: Are defined for this chapter as those buildings that meet the following requirements:

1. At least fifty percent (50%) of the dwelling or housing units as defined in the Housing Code (Seattle Municipal Code Ch. 22.204) are rented to non-transient persons at a rent at or

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below .9% of the current median income for all families in the Seattle area as determined by the United States Department of Housing and Urban Development; and

2. The average monthly rent for all dwelling or housing units in the building does not exceed 1.4% of the Median Income Limit.

For purposes of calculating the average monthly rent, a room which is rented on a hostel-style basis to three (3) or more non-related persons shall be considered as one room rented for $200 per month.

Monthly rent shall include all charges for shelter and provision of items normally associated with such use, but shall not include board, health care, telephone charges and other such items.

SECTION 9302

EXITS

9302.1 General. All exits in high-rise buildings shall be illuminated as required in Section 1211 of this Code and enclosed with a minimum of one-hour fire resistive construction. Every high-rise building shall have at least one such exit. Where existing exterior fire escapes are used for additional exits, they shall be tested and identified as required in Section 9302.3.

9302.2 Smokeproof enclosure. Where a high-rise building has a single, enclosed exit, the enclosure shall be continued to the exterior of the building and the exit shall be smoke-proof by mechanical ventilation in accordance with Section 3310 of the 1982 Seattle Building Code, or shall be mechanically pressurized with fresh air to 0.15 inches water column and shall have a concurrent 2500 cubic feet per minute (CFM) exhaust to atmosphere in an emergency, in accordance with the provisions of the Building Code.

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Exceptions:

1. Pressurization may be omitted when the building has an approved automatic sprinkler system, all corridor openings are self-closing, all occupied areas have access to a second means of egress or a fire escape and the omission is approved by the chief.
2. A single stair may exit through a building lobby, where the lobby is of non-combustible construction, does not contain combustible furnishings, and is separated from the rest of the building by one-hour construction. Wire-glass protected by sprinklers on both sides may be accepted as one-hour construction. Where the lobby contains no combustible materials, wire-glass need only be protected by sprinklers on the side opposite the lobby.

9302.3 Fire Escapes. Exterior fire escapes shall be accessible and structurally safe at all times. Owners of high-rise buildings shall load test fire escapes at least once every five (5) years with a weight of not less than 100 lb/sq. foot. The results of such a load test shall be submitted in writing to the chief. In lieu of such a test, the chief may accept the opinion of a structural engineer licensed by the State of Washington describing his inspection and/or tests and stating that the fire escape is structurally safe and will support a load of 100 lb/sq. foot. There shall be signs approved by the chief clearly identifying the route of access to the fire escape from every public corridor. Fire escapes which are not maintained structurally safe and not otherwise required by provisions of the Fire Code shall be removed.

Locked doors or windows are prohibited between public corridors and fire escapes.

Exceptions: Where all of the following criteria are met and approved by the chief:

1. An identified tool or device for opening the locked door or window is permanently affixed in close proximity to the locked point.
2. The area around the locked door or window is served by emergency illumination.

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3. Clearly understandable directions indicating the use of the tool and the route to the fire escape are posted at the locked door or window.

9302.4 Doors. All exit doors in the path of exit travel shall be self-closing or automatic closing in accordance with Section 713.6 of the 1982 Building Code. Doors held open by fusible links, and sliding or vertical doors are prohibited in exit-ways. Stairway doors shall be self-latching.

9302.5 Unlocking of doors. Stairway doors, including the doors between any stairway and the roof, shall not have locks or shall unlock automatically whenever a fire alarm is activated in the high-rise building. Such locks shall unlock automatically when power is off (fail safe). Where the only locked door in a stair shaft is the one that leads to the roof, it may be locked by panic hardware or approved alarm lock paddle bars.

9302.6 Egress from stairways. Enclosed stairways serving more than six (6) floors shall have two (2) means of egress from the stairway. Enclosed stairways serving ten (10) or more floors shall have re-entry into the building at approximately 5-story intervals. Re-entry signs shall be posted in the stair.

Exceptions:

1. Jails.
2. Where telephones connected to a 24-hour manned location are provided in the stairway in each 5-floor increment that does not have a means of egress.
3. Where any door serving as an entrance to the stair does not automatically lock behind a person entering the stair.
4. Where alternate means of alerting building management to persons trapped in a stairwell are approved by the Building Official.

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SECTION 9303

DEAD-END CORRIDORS

9303.1 Dead-end corridors. Dead-end corridors are limited to 75 feet in length in office occupancies and 30 feet in length in all other occupancies. Where such limits are exceeded, automatic sprinkler protection meeting the requirements of the Fire Code and the Building Code shall be provided for the entire dead-end corridor, with one head on the room side of each door opening onto the corridor. Domestic water systems may be used to supply such sprinklers when approved by the chief.

Exceptions:

1. In high-rise buildings, inactive doors leading from the dead-end corridor into spaces which are not in normal use may be covered with 5/8" type "x" gypsum board or its equivalent, in lieu of installing a sprinkler head over the door or smoke detector in the room.
2. In office occupancies, sprinkler heads on the room side of each door opening onto the corridor need not be installed.
3. In residential buildings, where corridors and each guest room are equipped with electrically supervised smoke detectors connected to the building fire alarm system, sprinkler heads, or any combination thereof. Where smoke detectors are used in rooms in lieu of sprinklers, doors must be rated at 20 minutes and must be self-closing.
4. In office occupancies, sprinkler systems are not required in a dead-end corridor where the corridor is equipped with smoke detectors and each room opening onto the corridor is equipped with at least one smoke detector. Such detector shall be electrically supervised and connected to the building fire alarm system.
5. Where there is a fire escape not directly accessible from the corridor and the exit route is protected by electrically supervised smoke detection.

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6. Corridors within residential units are exempt.

7. Corridors within private offices may have corridor only smoke detection connected to the building alarm systems.

SECTION 9304

FIRE RESISTIVE CONSTRUCTION

9304.1 Fire separation. Any space larger than 1,500 square feet shall be separated from building stair shafts, elevator shafts and air handling shafts by non-combustible smoke resistive separation (glass walls with wood stops are acceptable) and equipped with smoke detectors connected to the building fire alarm system.

Exceptions:

1. Spaces that have approved automatic sprinkler systems.

2. Building lobbies or corridors which are equipped with an approved smoke control system that includes shaft pressurization and automatic smoke removal.

3. Building lobbies or corridors of any size that do not contain combustible furnishings (other than carpet) or commercial spaces and have non-combustible interior finish throughout.

NOTE: To qualify for exception 3, all spaces adjacent to the building lobby must be separated and equipped with smoke detectors as outlined in this section, and all doors leading into the lobby must be self-closing or automatically closing upon activation of the building fire alarm system.

4. Office areas above the main lobby, including open space design areas.

NOTE: This exception does not apply to retail or wholesale stores, display rooms, restaurants, cocktail lounges and bars, banquet rooms, meeting rooms, storage rooms

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and spaces which, because of unusual fuel load or other conditions, pose an unusual hazard in the opinion of the chief.

5. Smoke detectors shall not be required in spaces which are separated by one-hour construction, with openings protected by one-hour self-closing doors.

Domestic water systems may be used to supply the sprinkler system referred to in this section when approved by the chief.

9304.2 Shaft enclosures. All openings which connect three (3) or more floors shall be enclosed with a minimum of one-hour fire resistive construction.

Exception: Openings complying with Sections 304.6 or 402 of the 1982 Seattle Building Code.

SECTION 9305
HEATING, VENTILATION AND AIR CONDITIONING SYSTEM (HVAC) SHUTDOWN

9305.1 Air moving systems. Air moving systems that serve more than the floor on which they are located shall automatically shut down on any high-rise building fire alarm, or shall be provided with a manual shutdown switch located at the fire alarm panel in the main building lobby.

Exception: Air moving systems of:

1. Less than 2,000 CFM.
2. Exhaust only systems of less than 15,000 CFM, such as toilet, range hood, kitchen, fume hood, etc.

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3. HVAC systems of less than 15,000 CFM with automatic shut-down on smoke detectors in the area served, which are connected to the building fire alarm system.

4. Life safety pressurization systems as provided in the Building Code.

5. Buildings with approved automatic smoke control pursuant to Section 1807 of the 1982 edition of the Seattle Building Code.

SECTION 9306

FIRE ALARM AND DETECTION SYSTEMS

9306.1 General. Every high-rise building, except a residential occupancy with a system installed under Ordinance 106107 as now or hereafter amended, shall have an electrically supervised fire alarm and detection system approved by the chief, as follows:

A manual pull station shall be located at every floor exit door, except in office occupancies.

The alarm system for the high-rise building shall be monitored by a central station, or other such means approved by the chief.

The alarm systems shall be electrically supervised and have battery emergency power sufficient to operate for a period of 24 hours and sound the alarm for 10 minutes at the end of that period.

9306.2 Automatic smoke detection. There shall be electrically supervised automatic smoke detection in elevator landings, public corridors, and on the corridor or floor side of each exit stairway.

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Exception: Where a corridor has an approved automatic sprinkler system, smoke detectors may be omitted from the corridor.

There shall be electrically supervised automatic smoke detectors within 50 feet of building perimeter walls and at standard spacing (approximately 30 feet) to the center of the floor.

Exceptions:

1. Interior of residential units.
2. Floors which have an approved automatic sprinkler system.
3. Parking garages.
4. Building Mechanical Spaces.
5. Any space above the top occupied floor.

9306.3 Rooms without sprinklers. There shall be electrically supervised automatic heat or smoke detection in rooms used for storage, shops, handicraft, janitor, trash and similar purposes where the fuel load may be significantly higher than the average floor fuel load and no automatic sprinkler system exists.

Exceptions:

1. Rooms with an approved automatic sprinkler system.
2. Rooms under 10 square feet opening onto exit corridors.
3. Rooms under 100 square feet not opening onto exit corridors.
4. Rooms within residential units.
5. Rooms where the storage is in closed metal containers.
6. Rooms other than those opening onto a corridor and within 30 ft. of an electrically supervised automatic smoke detector.

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9306.4 Audibility. Alarm systems shall have audible devices producing a slow "whoop" sound audible at 15 dBA above ambient sound levels with a minimum of 60 dBA throughout residential occupancies, and 10 dBA above ambient sound levels with a minimum of 55 dBA throughout other occupancies, and shall have a microphone capable of making voice announcements simultaneously to all floors.

The alarm shall sound at a minimum on the floor where the fire is occurring and the floor above, and the alarm system shall be capable of sounding a general alarm throughout the high rise building. The alarm system shall be designed so that a general alarm may be activated from two separate locations.

9306.4.1 Zones. Fire alarm systems shall be zoned per floor.

9306.4.2 Panels. There shall be an annunciator panel in the main lobby of a high rise building or in such other areas approved by the chief as an emergency control center.

9306.5 Automatic sprinklers. Where an automatic sprinkler system has been installed for fire protection, the water flow alarm shall be connected to the building fire alarm.

Exception: Where automatic smoke detectors are installed in the area and zoned, a single water flow alarm may be used

9306.6 Elevator shafts. For purposes of Section 9306, wiring for fire alarm and fire detection systems may be installed in elevator shafts, provided that:

1. Such wiring shall not interfere with the safe operation of the elevator.
2. Such wiring shall be enclosed within metal conduit and all junction boxes shall be located outside the shaft.

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3. All wiring work shall be done under applicable permit obtained from the Department of Construction and Land Use.

9306.7 Elevator recall. A fire alarm originating on a floor other than the main lobby floor shall cause all elevators to be returned to the main floor in accordance with Chapter 30 of the 1982 Seattle Building Code. Whenever new elevator controllers are installed, they shall meet provisions of the current Building and Elevator Codes. Newly installed controllers shall have the capability of selecting alternate recall floors.

Exception: Freight elevators with manually operated doors.

SECTION 9307

EMERGENCY POWER

9307.1 General. High-rise buildings not meeting the Building Code in effect at the time of the original adoption of this article shall have, as a minimum, emergency power as follows:

1. Stairway pressurization emergency power shall be provided by an on-site diesel engine generator set. Such power shall start automatically on fire alarm and the generator set shall have a two-hour fuel supply.
2. Exit signs and pathway illumination shall have emergency power by trickle charged storage batteries. Such batteries shall have a capacity to provide required illumination for 90 minutes.
3. Fire alarm emergency power shall be provided as required in Section 9306.

SECTION 9308

SIGN REQUIREMENTS

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9308.1 General. All signs in this section shall be approved by the chief and have graphic symbols where possible. In hotels, signs must have graphic symbols. Sign lettering shall follow Appendix I-C of the 1982 Seattle Fire Code.

A sign shall be posted on the room side of every hotel guest room indicating the relationship of that room to the exits and fire extinguishers, and giving basic information on what to do in the event of fire in the building.

9308.2 Stairs. Signs shall be provided on the stairway side of every stair door indicating the number of the stair, the floor that the door serves, the high-rise building re-entry points, and stair termination.

9308.3 Elevators. A sign shall be posted in every elevator lobby above each call switch noting that the elevators will be recalled to the building lobby on fire alarm. This sign shall warn persons not to use the elevator in the event of fire and direct them to use the stairway.

Where exit signs are not clearly visible from the elevator lobby, signs shall be installed to indicate the direction to stair and fire escape exits.

9308.4 Emergency illumination. Emergency illumination shall be provided at the elevator lobby sign location.

9308.5 Exit identification. "NOT AN EXIT" signs shall be installed at all doorways, passageways, or stairways which are not exits, exit accesses or exit discharges, and which may be mistaken for an exit. A sign indicating the use of the doorway, passageway, or stairway, such

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as "to basement," "storeroom," or "linen closet," is permitted in lieu of the "NOT AN EXIT" sign.

SECTION 9309

EMERGENCY PREPAREDNESS

9309.1 Emergency plan. Owners of high-rise buildings shall prepare an emergency operations plan in accordance with Section 403 of the 1982 Seattle Building Code. In addition to the requirements of Section 403 of the 1982 Seattle Building Code, the emergency operations plan shall specify the duties during a fire emergency of the building management and staff, the building fire safety directors and floor wardens as identified in Section 9309.2.

9309.2 Building staff training. Owners of high-rise buildings shall designate from existing staff a building fire safety director who shall be responsible for the operation of the building fire protection equipment. Owners of high-rise buildings and/or tenants employing over 100 persons shall designate a floor warden for each floor to be responsible for evacuating the people on their respective floor in emergencies. The names and work locations of the director and the floor wardens shall be maintained on a roster contained in the building emergency operations plan.

Exceptions:

1. Residential condominiums and apartment occupancies not employing staff.
2. Office and retail occupancies after normal business hours.

NOTE: In residential buildings employing staff, where there are not enough staff to appoint a floor warden for each floor, wardens shall be appointed to the fire floor, the floor above and as many additional floors as possible. In buildings where only one staff person is available, that person will be the Fire Safety Director.

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9309.3 Fire drills. The staff of high-rise buildings shall conduct, and the occupants thereof shall participate in, fire drills on a regular basis as established in Chapter 4 of this code.

Section 420. Subsection B103.1 of the 2003 International Fire Code is amended as follows:

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

Section 421. Subsection B103.2 of the 2003 International Fire Code is amended as follows:

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

Section 422. Subsection B105.1 of the 2003 International Fire Code is amended as follows:

B105.1 One- and two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m 2) shall be 1,000 gallons per minute (3785.4 L/min). Fire flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5 m 2) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow ((~~of 50 percent, as approved,~~)) is allowed when the building is provided with an approved automatic sprinkler system when approved by the fire code official.

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Section 423. Subsection B105.2 of the 2003 International Fire Code is amended as follows:

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,~~)) is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 ((~~or 903.3.1.2~~)) of the *International Fire Code* when approved by the fire code official. ((~~Where buildings are also of Type I or II construction and are a light-hazard occupancy as defined by NFPA 13, the reduction may be up to 75 percent.~~)) The resulting fire flow shall not be less than 1,500 gallons per minute (5678 l/min) for the prescribed duration as specified in Table B 105.1.

Section 424. Subsection D101.1 of the 2003 International Fire Code is amended as follows:

D101.1 Scope. Fire apparatus access roads other than public streets shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

Section 425. Subsection D102.1 of the 2003 International Fire Code is amended as follows:

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed, substantially altered, or moved into or within the jurisdiction shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus ((~~weighing at least 75,000 pounds (34 050 kg)~~)). See AASHTO Highway Standard 20.

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Section 426. Section D103.1 of the 2003 International Fire Code is amended as follows:

SECTION D103

MINIMUM SPECIFICATIONS

((~~**D103.1 Access road width with a hydrant.** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). See Figure D103.1.~~))

D103.1((2)) Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire code official((~~chief~~)).

D103.2((3)) Turning radius. The minimum turning radius shall be determined by the fire code official.

D103.3((4)) Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

D103.4((5)) Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).

   Exception: Access roads serving not more than two Group R3 or Group U occupancies shall have an unobstructed gate width of not less than 12 feet (3658 mm).

2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.

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4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools.
7. Locking device specifications shall be submitted for approval by the fire code official.

Exception: Bollards are an approved alternate provided they can be readily removed by one person, and they shall not be locked with a padlock or chain unless they are capable of being opened by means of a forcible entry tool, or, approved locking device.

D103.5((6)) Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.5((6)).1 or D103.5((6)).2.

D103.5((6)).1 Roads 12((θ)) to 26 feet in width. Fire apparatus access roads 12((θ)) to 26 feet wide (((~~6096~~))3658 to 7925 mm) shall be posted on both sides as a fire lane.

D103.5((6)).2 Roads more than 26 feet in width. Fire apparatus access roads more than 26 feet wide (7925 mm) to 32 feet wide (9754 mm) shall be posted on one side of the road as a fire lane.

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Section 427. Figure D103.1 "MINIMUM CLEARANCE AROUND A FIRE HYDRANT" of the 2003 International Fire Code is hereby repealed.

Section 428. Section D104 of the 2003 International Fire Code is amended as follows:

SECTION D104

COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

((~~**D104.1 Buildings exceeding three stories or 30 feet in height.** Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have at least three means of fire apparatus access for each structure.~~))

D104.1((~~2~~)) Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m 2) shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m 2) that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

D104.2((~~3~~)) Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Section 429. Subsection D105.1 of the 2003 International Fire Code is amended as follows:

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D105.1 Where required. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

Exception: Projects that are equipped throughout with approved automatic sprinkler systems.

Section 430. Subsection 1.4.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

1.4.1 Stationary Installations.

Plans for stationary installations utilizing storage containers of over ((~~2000~~)) 500-gal (((~~7.6~~))1.9 -m^3) individual water capacity, or with aggregate water capacity exceeding ((~~4000~~)) 1000 gal (((~~15.1~~)) 3.78 m^3), and all ((~~rooftop installations of ASME containers~~)) mounded or underground containers shall be submitted to the authority having jurisdiction by the person or company that either installs or contracts to have the containers installed before the installation is started. [See also 3.4.9.1(e).]

Section 431. Subsection 1.4.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

1.4.2 Temporary Installations. The authority having jurisdiction shall be notified of temporary (not to exceed six months) installations ((~~of the container sizes covered in 1.4.1~~)) before the installation is started.

Section 432. Subsection 2.2.5.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

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2.2.5.2 Vertical ASME containers of over 125-gal (0.5-m^3) water capacity and designed for permanent installation in stationary service shall be designed with steel supports that are designed to allow the container to be mounted on and fastened to concrete foundations or supports. Such steel supports shall be designed to make the container self-supporting without guy wires and to withstand the wind and seismic (earthquake) forces anticipated at the site. The provisions of 2.2.2.3 shall apply.

The steel supports shall be protected against fire exposure with a material having a fire resistance rating of at least 2 hours. See Seattle Fire Code Chapter 45, ASTM Standard E1529 for the performance requirements for fire-resistive assemblies.

((~~Exception: Continuous steel skirts having only one opening of 18 in. (457 m) or less in diameter shall have 2-hour fire protection applied to the outside of the skirt.~~))

Section 433. Subsection 3.2.3.1* of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.3.1* Liquid shall be transferred into containers, including containers mounted on vehicles, only outdoors or in structures specially designed for the purpose.

(a) The transfer of liquid into containers mounted on vehicles shall not take place within a building but shall be permitted to take place under a weather shelter or canopy (see 3.9.3.2)

(b) Structures housing transfer operations or converted for such use after December 31, 1972, shall comply with Chapter 7

(c) The transfer of liquid into containers on the roofs of structures shall be ((~~permitted,~~)) prohibited.((~~provided that the installation conforms to the requirements contained in 3.2.10 and 3.4.9~~))

(d) The transfer hose shall not be routed in or through any building except those specified in 3.2.3.1(b)

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Section 434. Subsection 3.2.6.3 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.6.3 Where single containers complying with Table 2.2.5.1 are installed ((~~in isolated locations~~)) with ~~nonfireproofed~~)) steel supports resting on concrete pads or footings and the outside bottom of the container shell is ((~~not~~)) more than ((~~5 ft (1.5 m)~~)) 24 inches above the ((~~ground level~~))-foundation, the ((~~approval of the authority having jurisdiction shall be obtained.~~))steel supports shall be protected against fire exposure with a material having a fire resistance rating of at least 2 hours. See Seattle Fire Code Chapter 45, ASTM Standard E1529 for the performance requirements for fire-resistive assemblies.

Section 435. Subsection 3.2.7.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.7.2 Steel supports shall be protected against fire exposure with a material that has a fire resistance rating of at least 2 hours.

((~~**Exception:** Continuous steel skirts that have only one opening that is 18 in. (457 mm) or less in diameter shall have fire protection applied to the outside of the skirts.~~))

Section 436. Subsection 3.2.10 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.10 Installation of Containers on Roofs of Buildings.

3.2.10.1 Installation of containers on roofs of buildings including parking garages shall be prohibited.((~~, unless approved by the authority having jurisdiction and the fire department.~~))

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((~~**3.2.10.2** Where the authority having jurisdiction and the fire department have approved an installation of a container, it shall comply with the following:~~))

(((~~(a) The building shall be of Type I, 443 or 332, or Type II, 222 construction as specified in NFPA 220, Standard on Types of Building Construction.~~

~~(b) LP-Gas containers installed on roofs shall be 2000 gal water capacity or less. The aggregate water capacity of LP-Gas containers installed on the roof or terrace of one building shall not exceed 4000 gal.~~

~~Exception: Additional installations shall be located at least 50 ft (15.2 m) apart.~~

~~(c) An ASME container installed on the roof of a building shall always be filled by two operators, one at the controls of the vehicle supplying LP-Gas and another at the controls of the container.~~

~~(d) Containers shall be installed in external locations only. Where a fill line to the container is required, it shall be located entirely outside the building. The fill connection shall be located entirely outside the building. The fill connection shall be located at least 8 ft (2.4 m) above ground level.~~

~~(e) Containers shall be installed on a level location.~~

~~(f) The container shall be secured to the building structure. The support of the container shall be designed to the same seismic criteria as the building.~~

~~(g) The roof on which the container is located shall be able to support the weight of the container filled with water, with the safety margins required by local codes.~~

~~(h) Containers shall be located in areas where there is free air circulation, at least 10 ft (3.0 m) from building openings (such as windows and doors), and at least 20 ft (6.1 m) from air intakes of air-conditioning and ventilating systems.~~

~~(i) Location shall permit access to all valves and controls and shall have enough area to permit the required maintenance.~~

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~~(j) If the installation requires the use of more than one container, the distances between containers of Table 3.2.2.2 shall apply.~~

~~(k) If the container location is higher than 23 ft (7 m) from the ground, or the filling hose cannot be observed by the operators in its entire length, the container shall have a filling line constructed to withstand liquid transfer, and it shall have the following appurtenances: filling valve with back check valve, cap, two control valves, hydrostatic relief, venting line. The liquid and vapor fill connections shall be conspicuously marked or labeled.~~

~~(l) A fire safety analysis shall be conducted in accordance with 3.10.2.2.~~))

Section 437. Subsection 3.4.1.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.1.1 This section shall apply to the installation of LP-Gas systems in buildings or structures. These systems include those utilizing cylinders inside of or on the roofs or exterior balconies of buildings and those in which the liquid is piped from outside containers into buildings or onto the roof. Cylinders in use shall mean connected for use. These systems shall be permitted in accordance with 3.4.1 and 3.4.2.

(a) The use of cylinders indoors shall be only for the purposes specified in 3.4.3 through 3.4.8. Such use shall be limited to those conditions where operational requirements make use of cylinders necessary and location outside is impractical.

(((~~(b) Installations using cylinders on roofs shall be as specified in 3.4.9.1. Such use shall be limited to those conditions where operational requirements make use of cylinders necessary and location other than on roofs of buildings or structures is impractical.~~)))

(((~~(c)~~)))(b) Installations using cylinders on exterior balconies shall be as specified in 3.4.9.2.

(((~~(d)~~)))(c) Liquid LP-Gas shall be piped into buildings or structures only for the purposes specified in 3.2.13(c).

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Section 438. Subsection 3.4.2.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.2.6 Where cylinders are located on a floor((~~, roof,~~)) or balcony, cylinders shall be secured to prevent falling over the edge.

Section 439. Subsection 3.4.3.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.3.6 If heaters are connected to cylinders manifolded together for use in an unpartitioned area on the same floor, the total water capacity of cylinders manifolded together serving any one heater shall not be greater than 735 lb (333 kg) [nominal 300 lb (136 kg) LP-Gas capacity], and, if there is more than one such manifold, it shall be separated from any other by at least 20 ft (6.1 m).

Maximum individual LP-gas cylinder capacities and aggregate quantities of LP-gas allowed within buildings undergoing construction or renovation or used for temporary heating shall be in accordance with the Seattle Fire Code Section 3803.2.1.2.

Section 440. Subsection 3.4.5.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.5.1 Cylinders used in buildings housing industrial occupancies for processing, research, or experimental purposes shall comply with the following:

(a) Cylinders, equipment, and piping used shall comply with 3.4.2.

(b) If cylinders are manifolded together, the total water capacity of the connected cylinders shall be not more than 735 lb (333 kg) [nominal 300 lb (136 kg) LP-Gas capacity]. If there is more than one such manifold in a room, it shall be separated from any other by at least 20 ft (6.1 m).

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(c) The amount of LP-Gas in cylinders for research and experimental use in the building shall be limited to the smallest practical quantity and shall not exceed the quantity limits set forth in Seattle Fire Code Section 3803.2.1.3.

Section 441. Subsection 3.4.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.6 Buildings Housing Educational and Institutional Occupancies.

The use of cylinders in classrooms shall be prohibited. Where cylinders are used in ((~~buildings housing educational and institutional~~)) Group B, E and I laboratory occupancies for research and experimental purposes, the following shall apply:

3.4.6.1 The maximum water capacity of individual cylinders used shall be 50 lb (23 kg) [nominal 20 lb (9.1 kg) LP-Gas capacity] if used in ~~educational~~ Group B and E occupancies and 12 lb (5.4 kg) [nominal 5 lb (2 kg) LP-Gas capacity] if used in Group I ((~~institutional~~)) occupancies.

* * *

Section 442. Subsection 3.4.9.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.9.1 ((~~Cylinders installed permanently on roofs of buildings of fire-resistant construction or noncombustible construction having essentially noncombustible contents, or of other construction or contents that are protected with automatic sprinklers (see NFPA 220, Standard on Types of Building Construction) shall be in accordance with the following:~~

~~(a) The total water capacity of cylinders connected to any one manifold shall be not greater than 980 lb (445 kg) [nominal 400 lb (181 kg) LP-Gas capacity]. If more than one manifold is located on the roof, it shall be separated from any other by at least 50 ft (15 m).~~

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~~(b) Cylinders shall be located in areas where there is free air circulation, at least 10 ft (3.0 m) from building openings (such as windows and doors), and at least 20 ft (6.1 m) from air intakes of air conditioning and ventilating systems.~~

~~(c) Cylinders shall not be located on roofs that are entirely enclosed by parapets more than 18 in. (457 mm) high unless the parapets are breached with low-level ventilation openings no more than 20 ft (6.1 m) apart or all openings communicating with the interior of the building are at or above the top of the parapets.~~

~~(d) Piping shall be in accordance with 3.4.2.3. Hose shall not be used for connection to cylinders.~~

~~(e) The fire department shall be advised of each such installation.~~))

LP-gas containers are prohibited on the roofs of buildings including parking garages.

Exceptions: 1. Temporary installations allowed in accordance with Section 3.4.

2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

3. A single LP-gas container having an individual water capacity not exceeding 2.7 lbs. (nominal 1.2 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of Group R-1, R-2, R-4 or LC Occupancies.

Section 443. Subsection 3.10.2.2* of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.10.2.2* Fire protection shall be provided for installations of ASME containers with an aggregate water capacity of more than 4000 gal (15.1 m3) ((~~and of ASME containers on roofs in accordance with 3.2.10~~)). The mode of such protection shall be determined through a written

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fire safety analysis for new installations and, for existing installations, by 3 years from the effective date of this code.

Section 444. Subsection 5.4.1.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

5.4.1.1 Cylinders shall be located ((~~A~~))at least ((~~5 ft (1.5 m)~~)) 20 feet (6 m) from any doorway or building opening ((~~in~~)) outside of a building frequented by the public, 20 feet (6 m) from any motor vehicle fuel dispenser and 10 feet (3 m) from any combustible material. ((~~where occupants have at least two means of egress as defined by NFPA 101, Life Safety Code. For buildings, or sections of buildings, having only one means of egress, at least 10 ft (3 m) from the doorway or opening.~~))

Section 445. Subsection 4.2.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

4.2.1 The goal of this standard is to provide an environment for occupants of fixed guideway and passenger rail system elements that is safe from fire and similar to a practical extent based on the following measures:

(1) Protection of occupants not intimate with the initial fire development

(2) Maximize the survivability of occupants intimate with the initial fire development

(3) To provide safety to fire fighters and emergency responders during emergency operations.

Section 446. A new subsection 5.1.2.1.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

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5.1.2.1.1 Fixed guideway transit and passenger rail stations shall be classified as Group A, Division 3 occupancies in accordance with the 2003 Seattle Building Code and 2003 Seattle Fire Code.

Section 447. Subsection 5.2.2 of NFPA130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.2.2 Safeguards During Construction. During the course of construction or major modification of any structure, provisions of ((~~NFPA 241,*Standard for Safeguarding Construction, Alteration, and Demolition Operations*~~)) Chapter 14 of the 2003 Seattle Fire Code and Chapter 33 of the Seattle Building Code shall apply.

Section 448. A new subsection 5.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.3.1 Smoke control system. A smoke control system shall be provided in underground fixed guideway transit and passenger rail stations in accordance with Section 909 of the 2003 Seattle Building Code. Smoke control shall restrict movement of smoke to the general area of fire origin and non occupied exhaust areas and maintain means of egress in a usable condition.

Section 449. Subsection 5.4.9 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.4.9((~~Power Supply for Emergency Ventilation Fans. See Chapter 7.~~))Emergency Power.

5.4.9.1 Underground fixed guideway transit and passenger rail stations shall be provided with an emergency power system complying with Section 2702 of the 2003 Seattle Building Code for emergency power loads specified in 5.4.9.2.

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5.4.9.2 The following loads are classified as emergency power loads:

1. Emergency voice/alarm communications systems.
2. Fire alarm systems.
3. Automatic fire detection systems.
4. Elevator car lighting.
5. Means of egress and exit sign illumination as required by Chapter 10 of the 2003 Seattle Building Code.
6. Smoke control systems.
7. Ventilation and automatic fire detection equipment for smokeproof enclosures.
8. Fire pumps.
9. Emergency power shall be provided for a selected elevator in each bank in accordance with Section 3016.7. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system—all elevators that respond to a single call button constitute a bank of elevators. All elevators shall be transferable to emergency power.

   Note: There is no limit on the number of cars that may be in a bank, but there may not be more than four cars within a common hoistway. See Section 3016.8 of the 2003 Seattle Building Code.

10. Emergency Ventilation Fans as required by Chapter 7.
11. Escalators where included in emergency egress capacity calculations
12. Lighting in Fire Command Center and associated mechanical equipment rooms.

Section 450. Subsection 5.5.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.1 General. The provisions for means of egress for a station shall comply with ((~~Chapter 7 and Chapter 12 of NFPA 101~~)) Chapter 10 of the 2003 Seattle Building Code, except as herein modified.

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Section 451. Subsection 5.5.2.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.2.2 The occupant load shall be based on whichever is greater:

(1) T((t))he calculated train load of trains simultaneously entering the station on all tracks in normal traffic direction during the peak 15 -minute period plus the simultaneous entraining load awaiting a train or;

(2) The number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2 of the 2003 Seattle Building Code.

Section 452. Subsection 5.5.2.4 of NFPA130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.2.4 The required egress capacity in stations shall be based on evacuation of the occupant load calculated in accordance with 5.5.2.7 and 5.5.2.8 or the number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2 of the 2003 Seattle Building Code, whichever is greater.

Section 453. Subsection 5.5.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.1 Platform Evacuation Time. There shall be sufficient egress capacity to evacuate the platform occupant load as defined in 5.5.2.8 from the station platform in 4 minutes or less, but in no case shall the required egress width be less than prescribed by Section 1005 of the 2003 Seattle Building Code.

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Section 454. Subsection 5.5.3.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.3.1 Platforms, Corridors, and Ramps of 4 Percent Slope or Less.

5.5.3.3.1.1 Exit corridors and ramps shall be a minimum of 1.73 m (5 ft 8 in.) wide.

5.5.3.3.1.2 In computing the capacity available, 304.8 mm (1 ft) shall be deducted at each side wall and 457.2 mm (1 ft 6 in.) at platform edges.

(a) Capacity shall be ((~~2.27 pim~~)). 2.08 pim

(b) Travel speed shall 61 m/min (200 fpm).

Section 455. Subsection 5.5.3.3.2.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.3.2.4 Capacities and travel speeds for stairs, stopped escalators, and ramps of over 4 percent slope shall be as follows:

(1) Up direction

(a) Capacity — ((~~0.0626 p/mm-min (1.59 pim)~~))1.31 pim (0.05 p/mm-min)

(b) Travel speed — ((~~15.24 m/min (50 fpm) (indicates vertical component of travel speed)~~)) 40 fpm (15.24 m/min)

(2) Down direction

(a) Capacity — ((~~0.0716 p/mm-min (1.82 pim)~~)) 1.41 pim (0.06 p/mm-min)

(b) Travel speed — ((~~18.3 m/min (60 fpm) (indicates vertical component of travel speed)~~)) 48 fpm (14.6 m/min)

Section 456. A new subsection 5.5.3.3.2.8 of NFPA 130 Standard for Fixed Guideway

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Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.3.2.8 Escalators in underground fixed guideway transit and passenger rail stations shall have a clear width of 32 inches (815 mm) minimum in accordance with the 2003 Seattle Building Code.

Exception: The clear width is not required in existing facilities undergoing alterations.

Section 457. A new subsection 5.5.3.5.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.5.3 Access to three or more exits shall be provided from a floor area where required by Section 1018.1 of the 2003 Seattle Building Code.

Section 458. A new subsection 5.5.3.5.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.5.4 Every required stairway serving floor levels more than 30 feet (9144 mm) below its level of exit discharge except those regularly used by passengers shall comply with the requirements for a smokeproof enclosure as provided in Section 1019.1.8 of the 2003 Seattle Building Code.

Section 459. Subsection 5.5.3.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.6 A common path of travel from the platform ends <u>to a point where a person has a choice of two paths of egress travel to two exits</u> shall not exceed 22.8m (75 ft) or one car length, whichever is greater.

Section 460. Subsection 5.6.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

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5.6.1 Stations shall be provided with a system of emergency lighting in accordance with ((~~NFPA 10,~~)) Section 1006 of the 2003 Seattle Building Code, except as otherwise noted herein.

Section 461. Subsection 5.7.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.7.3.1 An automatic sprinkler protection system shall be provided in all areas of enclosed fixed guideway transit and passenger rail stations ((~~used for concessions, in storage areas, in trash rooms, and in the steel truss area of all escalators and other similar areas with combustible loadings~~)), except trainways((~~.~~)), in accordance with the following:

1. The fire area exceeds 5,000 square feet (1115 m 2); or

2. The fire area has an occupant load of 100 or more.

* * *

Section 462. A new subsection 5.7.3.1.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.7.3.1.2 The highest level of exit discharge serving the underground portions of fixed guideway transit and passenger rail stations more than 30 feet (9144 mm) below the lowest level of exit discharge and all levels below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the 2003 Seattle Fire Code.

Section 463. Subsections 5.7.4.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are amended as follows:

5.7.4.1 Each underground transit station shall be equipped throughout with a Class I automatic wet or manual wet standpipe system.((~~with a standpipe system of either Class I or Class III type, as defined in NFPA 14.~~))

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5.7.4.1.1 ((~~Class of service shall be determined by the authority having jurisdiction. (SeeA.5.7.4.30)~~)) Each elevated transit station shall be equipped throughout with a Class I standpipe system where the highest platform or floor level is more than 20 feet above the lowest level of fire department access.

Section 464. Subsections 5.7.4.2 and 5.7.4.3 respectively of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are amended as follows:

5.7.4.2 ((~~The authority having jurisdiction shall be consulted as to location, spacing, and number of standpipe hose outlets and valves and shall determine the need for provision and type of hose~~)). Class I standpipe hose connections shall be provided in accordance with Section 905.4 of the 2003 Seattle Fire Code.

5.7.4.3* Fire department connections for fire department use in supplying the standpipe system shall be located ((~~as follows:~~)) in accordance with Seattle Fire Department Administrative Rule 9.03.04 *Automatic Sprinkler and Standpipe Systems.*

((~~1. within 30.5 m (100 ft)of vehicular access and~~

~~2. within operating distance of fire hydrants as determined by the local authority having jurisdiction~~)).

* * *

Section 465. Subsection 5.7.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.7.6* Fire Command Center. Underground transit stations shall be provided with a fire command center in accordance with NFPA 72 and Section 509 of the 2003 Seattle Fire Code.

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Section 466. Subsections 6.2.4.5, 6.2.4.5.1, 6.2.4.5.2, and 6.2.4.5.3 respectively of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are hereby repealed.

Section 467. Subsection 6.2.7.2.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

6.2.7.2.4 Standpipe lines shall be ((~~a minimum~~)) sized in accordance with the following: ((~~of 101.6 mm (4 in) or sized by hydraulic calculations.~~))

(1) Standpipe lines shall be a minimum size of 152.4mm (6 in.).

(2) Standpipe lines exceeding 2,500 ft. in length between fire department connections shall be a minimum size of 203.2 mm (8 in.).

(3) Standpipe lines exceeding 15,000 ft. in length between fire department connections shall be a minimum size of 254.0 mm (10 in.).

* * *

Section 468. A new subsection 6.2.7.2.4.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.2.7.2.4.2 Four-way 2½ in. fire department connections shall be provided at all emergency access points.

Section 469. A new subsection 6.2.7.2.4.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.2.7.2.4.3 Standpipes shall be interconnected at all tunnel cross passageways and within the stations, with isolation valves provided for each interconnection.

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Section 470. Subsection 6.4.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

6.4.6 Egress for Passengers

6.4.6.1 The system shall incorporate a walk surface or other approved means for passengers to evacuate a train at any point along the trainway so that they can proceed to the nearest station or other point of safety.

6.4.6.2 System egress ((~~points~~)) walk surfaces shall be illuminated at a level of not less than 2.69 lx (0.25 ft-candles).

Section 471. A new subsection 6.4.7 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.4.7 Standpipe and Hose Systems. When the length of a fixed guideway transit or passenger rail system elevated trainway exceeds 122m (400 feet) a Class I fire standpipe system shall be provided in accordance with NFPA 14, *Standard for the Installation of Standpipe Hose Systems.*

6.4.7.1 Standpipes shall be permitted to be of the dry types with the approval of the authority having jurisdiction.

6.4.7.2 Standpipe systems shall be connected to an approved water supply capable of supplying the system demand for a minimum of 1 hour.

6.4.7.3 Acceptable water supplies shall include the following:

(a) Municipal or privately owned waterworks systems that have adequate pressure and flow rate and a level of integrity acceptable to the authority having jurisdiction.

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(b) Automatic or manually controlled fire pumps that are connected to an approved water source.

(c) Pressure-type or gravity-type storage tanks that are installed in accordance with NFPA 22, *Standard for Water Tanks for Private Fire Protection.*

Section 472. Subsection 8.2.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 473. Subsection 8.11 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 474. Subsection 9.21 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

9.2.1 Water Supply. An adequate, reliable water supply shall be available for fire protection, including a sufficient number of properly located hydrants, in accordance with ((~~NFPA 24,*Standard for the Installation of Private Fire Service Mains and Their Appurtenances.*~~)) Section 508 of the 2003 Seattle Fire Code.

Section 475. A new subsection 10.12.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

10.12.6 Emergency shutoff of traction power shall be achieved by activation of remote manual-control devices, which, in turn, cause the operation of substation circuit breakers and associated trackway disconnect devices.

Section 476. A new subsection 10.12.7 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

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10.12.7 Traction power disconnect devices shall allow immediate removal of power from power zones.

Section 477. Subsection A.6.2.4.5.3 of Annex A of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 478. Subsection 9.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.1 Standpipe Systems.

9.1.1 Standpipe systems for road tunnels, bridges, depressed highways, elevated highways, roadways beneath air-right structures, and limited access highways shall be designed and installed ((~~as Class I systems~~)) in accordance with NFPA 14, *Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems* and Chapter 9 of this standard.

9.1.2 Standpipe lines shall be a minimum size of 203-mm (8-in.) and hydraulically designed to provide a minimum of 5760 L/min (1500 gpm) to any two outlets flowing simultaneously. The required flow rate for the standpipe system shall not be required to exceed 5760 L/min (1500 gpm). ((~~1920L/min (500 gpm).~~))

((~~**9.1.3** Standpipe systems shall be either wet or dry, depending on the climatic conditions, the fill times, the requirements of the authority having jurisdiction, or any combination thereof.~~))

9.1.4 Areas Subject to Freezing

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9.1.4.1 ((~~Where wet standpipes are required in areas subject to freezing conditions, the water shall be heated and circulated.~~)) Water shall be supplied to the standpipe system by the use of electrically actuated deluge valves installed in locations not subject to freezing, such as in underground vaults.

9.1.4.1.1 Access to the deluge valve vaults and manual actuation capability at the vaults shall be provided.

9.1.4.2 ((~~All piping and fittings that are exposed to freezing conditions shall be heat-traced and insulated.~~)) A deluge valve actuation switch shall be installed at each hose connection outlet location and protected from damage and weather in a box that can be opened without the use of tools or special knowledge, or with a standard hydrant wrench.

9.1.4.3 A means to indicate that the system is in a tripped condition such as a light beacon shall be provided.

9.1.5 ((~~Wet s~~)) Standpipe systems shall be provided with suitable interconnection and bypass valve arrangements to allow the isolation and repair of any segment without impairing the operation of the remainder of the system.

9.1.6* ((~~Dry s~~)) Standpipe systems shall be installed in a manner so that the water is delivered to all hose connections on the system in 10 minutes or less.

9.1.7 ((~~Dry s~~)) Standpipe systems shall have provisions for complete draining after use.

9.1.8 Combination air/relief vacuum valves shall be installed at each high point on the system.

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9.1.9 ((~~Dry s~~)) Standpipes shall be installed in a manner that provides accessibility for inspection and repair.

9.1.10 Standpipe systems shall be protected from damage by moving vehicles.

Section 479. Subsection 9.2 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.2 Water Supply.

9.2.1 ((~~Wet~~ s))Standpipe systems (((~~automatic or semiautomatic~~))) shall be connected to an approved water supply this is capable of supplying the system demand for a minimum of 1 hour.

((~~9.2.2 Dry standpipe systems shall have an approved water supply that is capable of supplying the system demand for a minimum of 1 hour.~~))

9.2.2((~~3~~)) Acceptable water supplies shall include one or more of the following:

(1) Municipal or privately owned waterworks systems that have adequate pressure and flow rate and a level of integrity acceptable to the authority having jurisdiction

(2) Automatic or manually controlled fire pumps that are connected to an approved water source

(3) Pressure-type or gravity-type storage tanks that are installed in accordance with NFPA 22, *Standard for Water Tanks for Private Fire Protection*

Section 480. Subsection 9.3.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.3.1 Fire department connections shall be of the threaded ((~~two-way or three~~)) 65-mm (2½-in.)

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four-way type. ((~~or shall consist of one 100 mm (4 in.) quick-connect coupling that is accessible to a fire department pumper.~~))

Section 481. Subsection 9.3.2 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.3.2 ((~~Each independent~~)) The standpipe system shall have a ((~~minimum of two~~)) fire department connection((~~s that are remotely located from each other~~)) installed at each deluge valve vault or at other approved locations.

Section 482. A new subsection 9.3.2.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.3.2.1 Wherever possible, fire department connection locations shall be coordinated with emergency access and response locations.

Section 483. Subsection 9.3.4 of the National Fire Protection Association Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is hereby repealed.

Section 484. Subsection 9.4 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.4 Hose Connections

9.4.1 ((~~Hose connections shall be spaced so that no location on the protected roadway is more than 45 m (150 ft) from the hose connection.~~)) An approved valve shall be provided for each standpipe outlet, easily operable from the roadway.

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9.4.2 ((~~Hose connection spacing shall not exceed 85 m (275 ft).~~)) The spacing between hose connection outlets on elevated roadways shall not exceed 153 m (500 ft.).

9.4.2.1 Where roadways are provided with median dividers and/or four or more traffic lanes, hose connection outlets shall be provided on each side of the elevated roadway at the required spacing and be arranged on an alternating basis; or may be installed in the median dividers at the required spacing.

9.4.3 ((~~Hose connections shall be located so that they are conspicuous and convenient but still reasonably protected from damage by errant vehicles or vandals.~~)) Hose connection outlets shall be oriented parallel to the roadway and face in the direction of oncoming traffic where installed along the guardrail or edge barrier.

9.4.3.1 Where hose connection outlets are installed in median dividers, dual outlets shall be required, facing in both directions of travel.

9.4.3.2 Hose connection outlets shall be positioned such that the centerline of each outlet is installed not more than 406-mm (16-in.) horizontally from the inside edge of the top and not less than 203-mm (8-in.) above the top of the guardrail or edge barrier, and not more than 1371-mm (54-in.) above the roadway.

Exception: When outlets are installed in median dividers that are more than 812-mm (32-in.) wide, the 406-mm (16-in.) from the inside edge requirement may be exceeded, and the outlets centered in the median divider.

9.4.4 Hose connections shall have ((~~65 mm (2 ½ in.)~~))100-mm (4-in.) outlets with external

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threads in accordance with City of Seattle Standard Plan No. 310a. ((~~NFPA 1963, *Standard for Fire Hose Connections*, and the authority having jurisdiction.~~))

9.4.5 Hose connections shall be equipped with caps that are removable with a standard hydrant wrench to protect hose threads.

9.4.5.1 Hose connection caps shall have a 3.2-mm (1/8-in.) predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal.

Section 485. A new subsection 9.6.3.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.6.3.1 The location of the deluge valve actuation switch installed at each hose connection shall be readily visible and have appropriate signage.

Section 486. A new subsection 9.7 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.7 Maintenance and Confidence Testing

9.7.1 Standpipe systems shall be inspected and tested at least annually.

9.7.2 Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated, and are separate from fire department inspections.

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9.7.3 The person, firm or corporation performing such work shall have a Type STP-1 certificate from the fire department. See Administrative Rules 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*.

Section 487. Subsection 13.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

13.1* General. This chapter shall apply to the transportation of hazardous materials through road tunnels as follows:

(1)Where tunnel length equals or exceeds 240 m (800 ft) and where the maximum distance from any point within the tunnel to an area of safety exceeds 120 m (400 ft).

(2)Where tunnel length equals or exceeds 300 m (1000 ft).

This chapter shall not apply to:

(1) The existing Mount Baker Tunnel (Interstate-90) and the Washington State Convention and Trade Center lid (Interstate-5) during those periods when the foam-water fire protection system(s) are fully functional and in-service.

(2) Fuel contained in the fuel system of the transporting vehicle, or in the fuel systems of vehicles and equipment being towed or carried.

13.1.1 ((~~The facility operating agency shall adopt rules and regulations that apply to the transportation of hazardous materials.~~)) Flames used for heating vehicles or loads shall be extinguished before the vehicle enters the road tunnel or its approaches.

13.1.2 ((~~A program shall be maintained for enforcing such regulations.~~)) The following classes

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of hazardous materials as defined by the U.S. Department of Transportation, whether in tank vehicles or containers, are prohibited from being transported through road tunnels:

(1) Class 1 explosives, division 1.1, 1.2, and 1.3;

(2) Class 2, division 2.3 poisonous gas;

(3) Class 4, division 4.3 dangerous when wet materials((;))

(4) Class 6, division 6.1 poisonous materials marked PG I (Inhalation Hazard), or PG III (Stow Away From Foodstuffs),

13.1.3 ((~~In developing such regulations, the following shall be addressed:~~

~~(1) Availability of a suitable alternative route(s) that meets federal requirements as prescribed in Department of Transportation, Title 49, *Code of Federal Regulations*, Part 177.825, "Routing and Training Requirements for Class 7 (Radioactive) Materials," and Department of Transportation, Title 49, *Code of Federal Regulations*, Part 397, Subpart C, "Routing of Non-Radioactive Hazardous Materials"~~

~~(2) Department of Transportation, Title 49, *Code of Federal Regulations*, Subtitle B, Parts 100 to 199~~

~~(3) Fire and accident experience of facilities similar to the facility for which rules and regulations are being adopted~~

~~(4) Previous fire and accident experience on the facility in question and adjacent roads; or, in the case of a new facility, previous fire and accident experience on roads in the area~~

~~(5) Anticipated traffic volumes in peak and off-peak periods~~

~~(6) Need for inspection of vehicles and cargo and the availability of an approved place to conduct inspections with a minimum of traffic interference~~

~~(7) Need and desirability of escort service with due consideration of the extent to which it could disrupt the orderly flow of traffic and create additional hazards~~

~~(8) Plan developed by an operating agency in a dense urban area, as referenced in *Hazardous*~~

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~~*Material Transportation Regulations at Tunnel and Bridge Facilities.* The suitability of such a plan for a given facility shall also be considered.~~))

Tank vehicles which are empty, or which have a residue, or vehicles transporting empty containers are prohibited from entering road tunnels if they previously transported a prohibited hazardous material as set forth in 49 CFR, with the following exceptions:

(1) Tank vehicles or containers that have been sufficiently cleaned of residue and purged of vapor to remove any potential hazard;

(2) Tank vehicles or containers that have been reloaded with a material not classified as a hazardous material;

13.1.4 Tank vehicles used to transport the following hazardous materials, even if empty, are prohibited from entering road tunnels.

- Class 3 flammable or combustible liquids
- Oxygen (Class 2, division 2.2)
- LPG (Class 2, division 2.1)

13.1.5 Vehicles transporting hazardous materials are restricted in road tunnels in accordance with the following:

(1)Class 2, Division 2.1 flammable gas quantities shall not exceed an aggregate of 120 gallons per vehicle and individual container capacities shall not exceed 6 gallons except for LPG. LPG quantities shall not exceed an aggregate of 120 pounds LPG capacity per vehicle and individual LPG containers shall not exceed 60 pounds LPG capacity, (141 pounds water capacity);

(2)Class 3, flammable liquid, having a flash point below 100° F quantities shall not exceed an aggregate of 120 gallons per vehicle and individual container capacities shall not exceed 6 gallons;

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(3)Class 3, combustible liquid, formaldehyde solutions shall have individual container capacities not exceeding 100 gallons;

(4)Class 4, division 4.1 flammable solid aggregate quantities shall not exceed 900 pounds per vehicle;

(5)Class 4, division 4.2 spontaneously combustible material aggregate quantities shall not exceed 900 pounds per vehicle;

(6)Class 5, division 5.1 oxidizers, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 6 gallons;

(7)Class 5, division 5.2 organic peroxides, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 6 gallons;

(8)Class 7, radioactive materials, transported in containers shall not exceed an aggregate quantity of 300 curies and the gross weight shall not exceed 500 pounds per vehicle and permission shall be obtained from the AHJ prior to entering a road tunnel;

(9)Class 8, corrosive materials, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 60 gallons;

(10)Class 9, miscellaneous hazardous materials, except oils, N.O.S., with a flash-point not less than 93°C/200°F transported in containers shall not exceed an aggregate quantity of 250 gallons or 2000 pounds per vehicle and individual container capacities shall not exceed 60 gallons containers.

13.1.6 Alternative-fuel vehicles powered by liquefied petroleum gas (LPG), liquefied natural gas (LNG) or compressed natural gas (CNG) shall be permitted if the:

(1) Vehicle has a dedicated alternative-fuel system installed by the manufacturer of the

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vehicle

(2) Vehicle has a fuel system which has been properly converted to an alternative fuel system.

(3) Vehicle alternative-fuel system conforms to applicable industry standards, including:

(a) NFPA 52 - Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, which is incorporated by reference; or

(b) NFPA 58 - Standard for the Storage and Handling of Liquefied Petroleum Gases (LPG), which is incorporated by reference.

(4) Vehicle alternative-fuel system conforms to applicable federal regulations.

(5) Fuel capacity of the vehicle does not exceed 300 pounds water capacity.

13.1.6.1 Alternative-fuel vehicles shall display all markings and symbols required by law to identify the alternative-fuel system.

Section 488. A new subsection A.13.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A.13.1 Hazardous Material. A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation for the United States Department of Transportation (U.S.D.O.T.) to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

Section 489. A new TABLE A.13.1.2 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

TABLE A.13.1.2

The following classes of hazardous materials are defined in the United States Department of Transportation Regulations, 49 CFR 173, which is incorporated by reference:

Name of Class or Division	Class Number	Division Number (if any)	49 CFR Reference for Definitions
Explosives (with a mass explosion hazard)	1	1.1	173.50
Explosives (with a projection hazard)	1	1.2	173.50
Explosives (with predominantly a fire hazard)	1	1.3	173.50
Explosives (with no significant blast hazard)	1	1.4	173.50
Very insensitive explosives; blasting agents	1	1.5	173.50
Extremely insensitive detonating substances	1	1.6	173.50
Flammable gas	2	2.1	173.115
Nonflammable compressed gas	2	2.2	173.115
Poisonous gas	2	2.3	173.115
Flammable and combustible liquid	3	---	173.120

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Flammable solid	4	4.1	173.124
Spontaneously combustible materials	4	4.2	173.124
Dangerous when wet material	4	4.3	173.124
Oxidizers	5	5.1	173.127
Organic peroxides	5	5.2	173.128
Poisonous materials	6	6.1	173.132
Infectious substances (Etiological agents)	6	6.2	173.134
Radioactive materials	7	---	173.403
Corrosive materials	8	---	173.136
Miscellaneous hazardous materials	9	---	173.140
Other regulated materials: ORM-D	None	---	173.144

Section 490. A new subsection A.13.1.3 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A13.1.3 *See Table A.13.1.2*

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Section 491. A new subsection A.13.1.5 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A13.1.5 See Table A.13.1.2

Section 492. This ordinance shall take effect and be in force thirty (30) days from and after its approval by the Mayor, but if not approved and returned by the Mayor within ten (10) days after presentation, it shall take effect as provided by Municipal Code Section 1.04.020.

Passed by the City Council the 6th day of July, 2004, and signed by me in open session in authentication of its passage this 6th day of July, 2004.

Jean Godden

President pro tem of the City Council

Approved by me this 16 day of July, 2004.

Gregory J. Nickels, Mayor

Filed by me this 16 day of July, 2004.

City Clerk

(Seal)

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City of Seattle

Gregory J. Nickels, Mayor

Office of the Mayor

June 21, 2004

Honorable Jan Drago
President
Seattle City Council
City Hall, 2nd Floor

Dear Council President Drago:

I am pleased to transmit the attached proposed ordinance adopting the 2003 Seattle Fire Code. The proposed code establishes the regulations for safeguarding of life and property from fire and explosion hazards, and from conditions hazardous to life or property in the occupancy of buildings and premises. It includes requirements for general fire prevention, permits for hazardous materials and processes, fire sprinklers and fire alarms systems, and fire safety and evacuation planning. The 2003 Seattle Fire Code is comprised of the 2003 International Fire Code, adopted for use statewide by the 2003 State Legislature, along with local amendments addressing the unique characteristics and requirements of our community.

The use of the International Fire Code represents a change from the Uniform Fire Code that has served as the basis for Washington State's fire code since the early 1970's. This proposed legislation is generally comparable to the current Seattle Fire Code, but there are some notable changes due to the state-mandated switch to the International Code Council. These changes include requiring an on-site water tank to supply fire sprinklers in newly constructed high-rise buildings in the event of a severe seismic event; allowing more flexibility in design and construction practices while increasing the number of buildings with fire sprinklers and fire alarms; requiring visible alarm devices (strobes) throughout more common use areas of buildings; and increasing the number of fire alarms and sprinkler systems that are required to be monitored.

The 2003 Seattle Fire Code will help to protect the people who live, work and visit in the City of Seattle. The proposed code has been reviewed and approved following hundreds of hours of scrutiny by the Fire Code Advisory Board whose members represent the public, labor, business, industry, and technical and professional fields. Thank you for your consideration of this legislation. Should you have questions, please contact Assistant Chief John Nelsen, Fire Marshal, at 386-1064.

Sincerely,

GREG NICKELS
Mayor of Seattle

cc: Honorable Members of the Seattle City Council

600 Fourth Avenue, 7th Floor, P.O. Box 94749, Seattle, WA 98124-4749
Tel: (206) 684-4000, TDD: (206) 684-8811 Fax: (206) 684-5360, E:mail: mayors.office@seattle.gov
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Diane Hansen
June 21, 2004
2003 Seattle Fire Code
Version #7

Form revised August 4, 2003

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	DOF Analyst/Phone:
Seattle Fire Department	Diane Hansen/386-1451	Karl Stickel/684-8085

Legislation Title:
AN ORDINANCE relating to the Seattle Fire Code; adopting the 2003 International Fire Code; amending and adding various provisions to that Fire Code; repealing Section 22.600.040 and amending Section 22.600.020 of the Seattle Municipal Code in connection therewith; all as regulated and allowed by the State Building Code Act, Chapter 19.27 of the Revised Code of Washington.

- **Summary of the Legislation:**

This ordinance adopts the 2003 Seattle Fire Code which is comprised of the 2003 International Fire Code together with local amendments. The express purpose of this code is to promote the health, safety and welfare of the general public.

- **Background:**

Effective on July 1, 2004 a new series of technical codes will become effective throughout the state as the result of legislation enacted by the 2003 State Legislature. This ordinance locally adopts and amends the 2003 International Fire Code, which is one the technical codes named for adoption throughout the state. By adopting such codes locally and making amendments, we are able to address many unique characteristics of our community. The companion building code, residential code, mechanical code, and a fuel gas code and an energy code are being submitted simultaneously, each as a separate ordinance.

The amendments proposed in this ordinance have the approval of the Fire Code Advisory Board whose fourteen members represent the public, labor, business, industries, and technical professions. The members of this board have spent hundreds of hours since June of 2003 meeting to review and revise the technical provisions of this document.

- *Please check one of the following:*

__X__ This legislation does not have any financial implications.

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Diane Hansen/dh
2003 Seattle Fire Code
June 21, 2004
Version 7A

ORDINANCE _____

AN ORDINANCE relating to the Seattle Fire Code; adopting the 2003 International Fire Code with some exceptions; amending and adding various provisions to that Fire Code; repealing Section 22.600.040 and amending Section 22.600.020 of the Seattle Municipal Code in connection therewith; all as regulated and allowed by the State Building Code Act, Chapter 19.27 of the Revised Code of Washington.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.600.020 of the Seattle Municipal Code adopting the 1997 the Uniform Fire Code, 1997 Edition with Appendices I-C, II-A, II-B, II-C, II-D, II-E, II-F, II-I, II-J, III-A, III-B, III-C, IV-A, IV-B, V-A, VI-A, VI-B, VI-C, VI-E, VI-F, VI-G, VI-H and VI-I thereto, and the Uniform Fire Code Standards, 1997 Edition, (Ordinance 119124 as amended by Ordinances 119125 and 120066) is hereby repealed, and a new Section 22.600.020 is adopted as follows:

22.600.020 Adoption of the International Fire Code

The following is hereby adopted and by this reference made a part of this subtitle: 2003 International Fire Code with some exceptions, with Appendixes B, D, E, F and G, as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in C.F. 306783.

The Seattle Fire Code shall consist of the 2003 International Fire Code with some exceptions, together with the amendments and additions thereto adopted.

Wherever in this ordinance there is a conflict between metric units of measurement and English units, the English units shall govern.

Section 2. SMC 22.600.040 is hereby repealed.

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Section 3. Subsection 101.1 of the 2003 International Fire Code is amended as follows:

101.1 Title. These regulations shall be known as the *Seattle Fire Code*((~~of [NAME OF JURISDICTION]~~)), hereinafter referred to as "this code."

Section 4. Subsection 101.2 of the 2003 International Fire Code is amended as follows:

101.2 Scope. This code establishes regulations affecting or relating to structures, processes, premises, motor vehicles, marine vessels and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.

Text marked "Point of Information" or "Code Interpretation" in the Seattle Fire Code is for guidance only and shall not have the force of law.

* * *

Section 5. Subsection 101.3 of the 2003 International Fire Code is hereby repealed, and a new subsection 101.3 is adopted to read as follows:

101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, premises, motor vehicles and marine vessels.

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This Code is enacted as an exercise of the police power of the City of Seattle to protect the public peace, health, safety and welfare, and its provisions shall be liberally construed to accomplish these purposes. The express purpose of this Code is to promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this Code or ordinance.

The specific intent of this Code is to place the obligation of complying with its requirements upon the owners or occupiers of premises, buildings, motor vehicles or marine vessels, or structures within its scope. No provision or term used in this Code is intended to impose any duty whatsoever upon the City or any of its officers or employees, for whom the implementation or enforcement of this Code shall be discretionary, not mandatory.

Section 6. Subsection 102.1 of the 2003 International Fire Code is amended as follows:

102.1 Construction and design provisions. The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.
2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code. A condition is not "legally in existence at the time of adoption of this code" unless the condition is in compliance with the building code and fire code of the City of Seattle in effect when the condition first arose, and the practice, process, materials used, and storage configurations have not changed since the condition first arose.
3. Existing structures, facilities and conditions when identified in specific sections of this code.

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4. Existing structures, facilities and conditions which, in the opinion of the code official, constitute a distinct hazard to life or property.

Section 7. Subsection 102.3 of the 2003 International Fire Code is amended as follows:

((~~[EB]~~)) **102.3 Change of use or occupancy.** The provisions of the ((~~*International Existing*~~)) *Seattle Building Code* shall apply to all buildings undergoing a change of occupancy.

Section 8. Subsection 102.4 of the 2003 International Fire Code is amended as follows:

102.4 Application of building code. The design and construction of new structures shall comply with the *International Building Code.* Repairs, alterations and additions to existing structures shall comply with the ((~~*International Existing*~~)) *Seattle Building Code*.

Section 9. Subsection 102.5 of the 2003 International Fire Code is amended as follows:

((~~[EB]~~)) **102.5 Historic buildings.** The construction, alteration, repair, enlargement, restoration, relocation or movement of existing buildings or structures that are designated as historic buildings when such buildings or structures do not constitute a distinct hazard to life or property shall be in accordance with the provisions of the ((~~*International Existing*~~))*Seattle Building Code.*

Section 10. Subsection 103.2 of the 2003 International Fire Code is hereby repealed.

Section 11. Subsection 103.3 of the 2003 International Fire Code is amended as follows:

103.2((~~3~~)) Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the fire code official shall have the authority to appoint a deputy fire code official, other related technical officers, inspectors and other employees.

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Section 12. Section 103 of the 2003 International Fire Code is amended by adding thereto a new subsection 103.3 to read as follows:

103.3 Liability for damages. Nothing contained in this ordinance is intended to, nor shall be construed to, create or form the basis for any liability on the part of the City, or its officers, employees or agents, for any injury or damage resulting from the failure of the owner or occupier of premises, buildings or structures, or motor vehicles or marine vessels, to comply with this code, or for any injury or damage caused by any act or omission on the part of the City by its officers, employees or agents in the course of implementing or enforcing this code.

Any lawsuit brought against the City, or its officers or employees because of acts or omissions in the implementation or enforcement of this code, or other pertinent laws, ordinances or regulations implemented through the enforcement of this code or enforced by the code enforcement agency, shall be defended by the City until final termination of such lawsuit, and any judgment or settlement resulting therefrom shall be assumed by the City, provided that defense and assumption of judgment or settlement costs by the City shall be only to the extent provided by Chapter 4.64 and other relevant sections of the Seattle Municipal Code.

Limited public funds are available for the implementation and enforcement of this code. The issuance of permits, reviews of permit applications, and inspections conducted pursuant to this code are spot checks designed to encourage compliance, and are not in any way representations, guarantees or assurances that permits, or work undertaken pursuant to issuance of permits, comply with any applicable codes.

Section 13. Subsection 103.4 of the 2003 International Fire Code is hereby repealed.

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Section 14. Subsection 104.3 of the 2003 International Fire Code is hereby repealed, and a new subsection 104.3 is adopted to read as follows:

104.3 Right of entry. With the consent of the owner or occupier of a building, premises, motor vehicle, or marine vessel or pursuant to a lawfully issued warrant, the fire code official may enter any building, premises, motor vehicle, or marine vessel at any reasonable time to inspect or to perform the duties authorized by this code. If entry is refused, the fire code official has recourse to every remedy provided by law to secure entry.

Section 15. Subsection 104.6.2 of the 2003 International Fire Code is amended as follows:

104.6.2 Inspections. The fire code official shall keep a record of ((~~each inspection made, including notices~~)) violations, correction letters and orders issued, showing the findings and disposition of each. The responsible party shall receive a copy of violations, correction letters and orders issued.

Section 16. Subsection 104.11.2 of the 2003 International Fire Code is amended as follows:

104.11.2 Obstructing operations. No person shall knowingly obstruct the operations of the fire department in connection with extinguishment, ((~~or~~)) control, or investigation, of any fire, or actions relative to other emergencies, or knowingly 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.

Any person who knowingly obstructs the operation of the fire department in connection with extinguishing any fire or responding to any emergency, or in the performance of other duties authorized by this code, shall be subject to the penalties set forth in Section 109 of the Seattle Fire Code.

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Section 17. A new subsection 104.12 is adopted to read as follows:

104.12 Motor vehicle impoundment and removal. The fire code official may order the impoundment or removal of a motor vehicle under the following conditions:

1. The motor vehicle poses an immediate hazard to public safety; or
2. The motor vehicle is transporting hazardous materials, and is left unattended on a residential street or within 500 feet of any building containing a Group A, R, E or I occupancy, including, but not limited to, any dwelling apartment, hotel, day care, school, hospital or health care facility;
3. The motor vehicle contains or is carrying hazardous materials, or flammable or combustible liquids or gases, and is left unattended while transferring such materials, liquids or gases by means of hose line.

The Seattle Police Department shall carry out motor vehicle impoundment orders of the fire code official in accordance with the authority of this Section, Chapter 11.30 of the Seattle Municipal Code, and impoundment procedures of the Seattle Police Department.

Section 18. A new subsection 104.13 is adopted to read as follows:

104.13 Prohibition. The fire code official may prohibit the use, display, or sale of any device, material, or object which is designed to be used in such a manner as to violate any provisions of this code, or where the use or sale of such constitutes a distinct hazard to life or property.

Any materials shown by test to have a life hazard greater than that indicated and controlled by building code interior finish regulations or fire code decorative material regulations shall be prohibited or shall be installed or used with such additional fire safety features as are necessary to substantially reduce the life hazard.

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Section 19. Subsection 105.1.1 of the 2003 International Fire Code is amended as follows:

105.1.1 Permits required. Permits required by this code shall be obtained from the fire code official prior to engaging in the activities or operations for which they are required. Permit fees, if any, ((~~shall~~)) may be required to be paid prior to issuance of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

Section 20. Subsection 105.1.2 of the 2003 International Fire Code is amended as follows:

105.1.2 Types of permits. There shall be ((~~two~~)) three types of permits as follows:

1. Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:
   1.1. A prescribed period.
   1.2. Until renewed or revoked.
2. ((~~Construction~~)) Installation permit. An installation ((~~construction~~)) permit allows the applicant to install, ((~~or~~)) modify or remove systems and equipment for which a permit is required by Section 105.7.
3. Temporary permit. The chief may issue temporary permits establishing fire safety controls for:
   3.1. An activity not specifically regulated, but where regulatory safeguards are necessary because of unusual circumstances.
   3.2. Interim operation of a regulated activity at reduced scope and/or with temporary fire safeguards until permanent fire prevention features are provided.

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Section 21. Subsection 105.2.3 of the 2003 International Fire Code is hereby repealed.

Section 22. Subsection 105.2.4 of the 2003 International Fire Code is amended as follows:

105.2.3((4)) Action on application. The fire code official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the fire code official shall reject such application in writing, stating the reasons therefor. If the fire code official is satisfied that the proposed work or operation conforms to the requirements of this code and laws and ordinances applicable thereto, the fire code official shall issue a permit therefore as soon as practicable.

Section 23. Subsection 105.3 of the 2003 International Fire Code is amended as follows:

105.3 Conditions of a permit. The fire code official may condition any permit, increasing or decreasing the scope of activity, and/or specifying fire safety provisions in addition to those established by this code, where he or she deems such conditions are necessary to provide reasonable public safety. A permit shall constitute permission to maintain, store or handle materials; or to conduct processes which produce conditions hazardous to life or property; or to install equipment utilized in connection with such activities; or to install or modify any fire protection system or equipment or any other construction, equipment installation or modification in accordance with the provisions of this code where a permit is required by Section 105.6 or 105.7. Such permission shall not be construed as authority to violate, cancel or set aside any of the provisions of this code or other applicable regulations or laws of the jurisdiction.

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Section 24. Subsection 105.3.1 of the 2003 International Fire Code is amended 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 shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work, if any, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.~~)) Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

Point of Information

Approval to occupy a building or structure is granted by the Department of Planning and Development through issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy. A Fire Department recommendation to issue an occupancy certificate is conditional upon applicable provisions of this code being met.

Section 25. Subsections 105.3.2, 105.3.3 and 105.3.4 of the 2003 International Fire Code are hereby repealed.

Section 26. Subsection 105.3.5 of the 2003 International Fire Code is amended as follows:

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105.3.2((5)) Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

Section 27. Subsection 105.3.6 of the 2003 International Fire Code is amended as follows:

105.3.3((6)) Compliance with code. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the fire code official from requiring the correction of errors in the construction documents and other data. Any addition to or alteration of approved construction documents shall be approved in advance by the fire code official, as evidenced by the issuance of a new or amended permit.

Section 28. Subsection 105.3.7 of the 2003 International Fire Code is amended as follows:

105.3.4((7)) Information on the permit. The fire code official shall issue all permits required by this code on an approved form furnished for that purpose. The permit shall contain a general description of the operation or occupancy and its location and any other information required by the fire code official. Issued permits shall bear the signature of the fire code official or other approved legal authorization.

Section 29. A new subsection 105.3.5 is adopted to read as follows:

105.3.5 Liability insurance. Where liability insurance is required by any section of this code or as a permit condition for any controlled hazardous activity, the applicant shall file with the fire code official a "Certificate of Insurance". The applicant's policy shall evidence a

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"Comprehensive General Liability" (including automobile coverage) insurance limit of $2 million ($2,000,000), combined single limit per occurrence and annual aggregate, no deductible and naming the City of Seattle as an additional insured. The fire code official may increase or decrease these amounts.

In those instances where this code requires, as a condition of issuing a permit, that the applicant for the license shall provide insurance, the purpose of the requirement is to insure that members of the public and the City will be compensated for losses caused by personal injury or property damage resulting from the negligent acts of the licensees or their agents or employees.

Whenever the issuance of a permit is conditioned upon obtaining a policy or policies of public liability insurance by the applicant for such license, the policy:

1. Shall be issued by a company or companies authorized to do business as an insurer in Washington State pursuant to the provisions of RCW Title 48 as now or hereafter amended;
2. Shall contain, by endorsement or otherwise, the following recital:
   "This policy is issued pursuant to Section 108 of the Seattle Fire Code (Ordinance No. , as amended), of the City of Seattle for the purpose of complying with the conditions and requirements of the code. Any exception, limitation, provision or omission in this policy (including all other endorsements thereto) in conflict with such condition or requirement is void. This policy shall be continuous until canceled and terminable only on at least ten (10) days written notice to the fire code official."
3. May be approved as to sufficiency and form by the City Attorney and/or the City Risk Manager at the request of the fire code official.

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Section 30. Subsection 105.4.1 of the 2003 International Fire Code is amended as follows:

105.4.1 Submittals. Construction documents shall be submitted in one or more sets and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional where required by the fire code official ((~~statutes of the jurisdiction in which the project is to be constructed~~)).

Section 31. Subsection 105.4.6 of the 2003 International Fire Code is hereby repealed.

Section 32. Subsection 105.5 of the 2003 International Fire Code is hereby repealed, and a new subsection 105.5 is adopted to read as follows:

105.5 Revocation of Permits and Certificates

105.5.1 Non-emergency Revocations. The fire code official may revoke, suspend or refuse to renew any permit or certificate upon evidence submitted to him/her that conditions or circumstances have changed so that continued use of the permit or certificate would be unsafe. Such conditions or circumstances include, but are not limited to:

1. The permit has been used by a person other than the person to whom the permit was issued,
2. The permit has been used for a location other than that for which it was issued,
3. Any of the conditions or limitations set forth in the permit have been violated,
4. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein,
5. There has been a false statement or misrepresentation as to a material fact in the application or plans on which the permit or application was based, or
6. The permit was issued in error or in violation of any code, regulation or other law.

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The permit or certificate holder shall be notified in writing no later than five (5) business days prior to the revocation, suspension or refusal to renew such permit or certificate. The permit or certificate holder may request in writing a hearing before the fire code official for reconsideration of the decision to revoke, suspend or deny renewal. The request shall be filed with the fire code official by five o'clock (5:00 p.m.) of the second business day following service of the notice. The hearing shall be held no later than one (1) business day from receipt of a written request. The fire code official shall issue a final decision, in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or refuse to renew the permit or certificate no later than the next business day following such hearing. Further appeals shall be in accordance with Section 108 of this code.

105.5.2 Emergency Revocations. The fire code official may revoke, suspend or refuse to renew a permit or certificate in emergency situations, without providing prior notice to the permit or certificate holder, when an imminent fire, life-safety or other hazard regulated by this code exists, and failure to take immediate action may cause imminent harm to humans, domestic animals, livestock, wildlife, or to the immediate or neighboring property, lands, or premises.

Where such emergency is found to exist, all certificates and permits shall be surrendered to the fire code official or his/her authorized representative upon demand. Those activities sanctioned by the suspended or revoked certificates or permits will be suspended until the fire code official finds the emergency no longer exists.

Persons surrendering said certificates and/or permits may appeal the fire code official's action by filing a written notice of appeal to the fire code official by five o'clock (5:00 p.m.) of the next business day following such revocation, suspension or refusal to renew a permit or certificate. The hearing with the fire code official shall be no later than one (1) working day from the receipt of such written appeal.

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The fire code official shall issue a final decision in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or refuse to renew the certificate or permit no later than the next business day following such hearing. Further appeals shall be in accordance with Section 108 of this code.

Section 33. Subsection 105.6.5 of the 2003 International Fire Code is amended as follows:

105.6.5.1 Battery systems. An operational permit is required to ((~~install~~)) maintain and operate a stationary lead-acid battery system((~~s~~)) having ((~~a~~)) an electrolyte liquid capacity of more than 50 gallons (189 L).

Section 34. A new subsection 105.6.2 is adopted to read as follows:

105.6.5.2 Bonfires. An operational permit is required to ignite a bonfire.

Section 35. Subsection 105.6.8 of the 2003 International Fire Code is amended as follows:

105.6.8.1 Combustible fibers. An operational permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m^3).

Exception: A permit is not required for agricultural storage.

Section 36. A new subsection 105.6.8.2 is adopted to read as follows:

105.6.8.2 Combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m 3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

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Section 37. Subsection 105.6.10 of the 2003 International Fire Code is amended as follows:

105.6.10.1 Covered mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

Section 38. A new subsection 105.6.20.2 is adopted to read as follows:

105.6.10.2 Cruise ship hazardous operations. An operational permit is required to conduct hazardous operations on a cruise ship at a passenger terminal. Example: Hot work and fuel transfers.

Section 39. Subsection 105.6.12 of the 2003 International Fire Code is amended as follows:

105.6.12 Cutting and welding. ((~~An operational permit is required to conduct cutting or welding operations within the jurisdiction.~~))

Point of Information

Cutting and welding operations, see **Hot work operations. 105.6.24**

Section 40. Subsection 105.6.15 of the 2003 International Fire Code is amended as follows:

105.6.15 Explosives. An operational permit is required for the ((~~manufacture,~~)) storage, handling, sale or use of any quantity of explosive, explosive material, fireworks, or pyrotechnic special effects within the scope of Chapter 33.

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Section 41. Subsection 106.6.17 of the 2003 International Fire Code is amended as follows:

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

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

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5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.

6. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.

7. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.

8. To manufacture, process, blend or refine flammable or combustible liquids.

9. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

11. To store, handle or use Class III-B liquids in excess of 1,000 gallons.

12. To engage in the business of removing, abandoning or otherwise disposing of residential heating oil tanks.

Section 42. Subsection 106.6.20 of the 2003 International Fire Code is amended as follows:

105.6.20 Fumigation and thermal insecticidal fogging. An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault, freight container or chamber in which a toxic or flammable fumigant is used.

Section 43. Subsection 105.6.21 of the 2003 International Fire Code is amended as follows:

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105.6.21.1 Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.21.

Section 44. A new subsection 105.6.21.2 is adopted to read as follows:

105.6.21.2 Hazardous materials stabilization. An operational permit is required to stabilize potentially unstable (reactive) hazardous materials.

Section 45. Subsection 105.6.22 of the 2003 International Fire Code is amended as follows:

105.6.22.1 HPM facilities. An operational permit is required to store, handle or use hazardous production materials.

Section 46. A new subsection 105.6.22.2 is adopted to read as follows:

105.6.22.2 Helicopter lifts. An operational permit is required to move suspended loads via helicopter over populated areas.

Section 47. Subsection 105.6.24 of the 2003 International Fire Code is amended as follows:

105.6.24 Hot work operations. An operational permit is required for hot work including, but not limited to:

1. Public exhibitions and demonstrations where hot work is conducted.

2. Use of portable hot work equipment. ((~~inside a structure.~~))

Exceptions: ((~~Work that is conducted under a construction permit.~~))

1. Within Group R, Division 3 and Group U Occupancies.

2. Torch assemblies connected for use to an acetylene gas cylinder having a maximum individual capacity of 40 cubic feet.

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3. Approved self-contained torch assemblies or similar appliances using LP-gas in accordance with the following:

(a.)LP-gas cylinders shall comply with UL 147A, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies.

(b.)LP-gas cylinders shall have a maximum water capacity of 2.7 lb (1.2 kg).

(c.)The maximum aggregate water capacity of LP-gas cylinders in storage (e.g. not connected for use) and use shall not exceed 2.7 lb (1.2 kg) per control area.

3. Fixed-site hot work equipment such as welding booths.

((~~4. Hot work conducted within a hazardous fire area.~~))

((~~5~~))4. Application of roof coverings with the use of an open-flame device.

5. Hot work on storage tanks, piping and associated systems containing or previously containing flammable or combustible liquids, or other hazardous materials that could present a fire or explosion hazard.

6. Hot work on marine vessels.

((~~6.~~)) When approved, the fire code official ((~~shall~~)) is authorized to issue a permit to carry out a Hot Work Program. This program allows approved personnel to regulate their facility's hot work operations. The approved personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in Chapter 26. These permits shall be issued only to their employees or hot work operations under their supervision.

Section 48. Subsection 105.6.28 of the 2003 International Fire Code is amended as follows:

105.6.28 LP-gas. An operational permit is required for:

1. Storage and use of LP-gas.

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Exceptions:

1. A permit is not required for individual containers with a ((~~500~~))125-gallon (((~~1893~~)) 473 L) water capacity or less serving occupancies in Group R-3.

2. A permit is not required for a LP-gas container having a water capacity not exceeding 48 pounds (nominal 20 pounds LP-gas) connected to a LP-gas grill unless located on or serving a public way.

2. Operation of cargo tankers that transport LP-gas.

Section 49. Subsection 105.6.30 of the 2003 International Fire Code is hereby repealed, and a new subsection 105.6.30 is adopted to read as follows:

105.6.30 Marine terminal. An annual operational permit is required to handle or temporarily locate containers, tanks, or cylinders of hazardous materials at marine terminals located within the Seattle City limits.

Section 50. Subsection 105.6.32 of the 2003 International Fire Code is amended as follows:

105.6.32 Open flames and torches. ((~~An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a hazardous fire area.~~)) See **105.6.24 Hot work operations.**

Point of Information

See section 105.6.24, which requires a permit for all hot work.

Section 51. Subsection 105.6.35 of the 2003 International Fire Code is amended as follows:

105.6.35 Places of assembly. An operational permit is required to operate a place of assembly with an occupant load of 100 or more.

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Section 52. Subsection 105.6.39 of the 2003 International Fire Code is hereby repealed.

Section 53. Subsection 105.6.40 of the 2003 International Fire Code is amended as follows:

105.6.39((40)) Repair garages and motor fuel-dispensing facilities. An operational permit is required for operation of repair garages and automotive, marine and fleet motor fuel-dispensing facilities.

Section 54. Subsection 105.6.41 of the 2003 International Fire Code is amended as follows:

105.6.40((1)) Rooftop heliports. An operational permit is required for the operation of a rooftop heliport.

Section 55. Subsection 105.6.42 of the 2003 International Fire Code is amended as follows:

105.6.41((2)) Spraying or dipping. An operational permit is required to conduct a spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 15.

Section 56. Subsection 105.6.43 of the 2003 International Fire Code is amended as follows:

105.6.42((3)) Storage of tires, scrap tires and tire byproducts. An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceeds 2,500 cubic feet (71 m^3) of total volume of scrap tires and for indoor storage of tires and tire

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byproducts. An operational permit is also required for indoor storage of tires and tire byproducts as regulated by Chapter 23.

Section 57. Subsection 105.6.44 of the 2003 International Fire Code is hereby repealed.

Section 58. Subsection 105.6.45 of the 2003 International Fire Code is amended as follows:

105.6.43((~~5~~)) Tire-rebuilding plants. An operational permit is required for the operation and maintenance of a tire-rebuilding plant.

Section 59. Subsection 105.6.46 of the 2003 International Fire Code is amended as follows:

105.6.44((~~6~~)) Waste handling. An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.

Section 60. Subsection 105.6.47 of the 2003 International Fire Code is amended as follows:

105.6.45((~~7~~)) Wood products. An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m^3).

Section 61. Subsection 105.7 of the 2003 International Fire Code is amended as follows:

105.7 Required ((~~construction~~)) installation permits. The fire code official is authorized to issue ((~~construction~~)) installation permits for work as set forth in Sections 105.7.1 through 105.7.10((~~2~~)).

Point of Information

Building permits for construction are issued by the Department of Planning and Design

(DPD). The fire code official does not require separate Fire Department issued installation permits for the following:

- Automatic fire-extinguishing systems.
- Fire alarm and detection systems and related equipment.
- Standpipe systems.

All fire protection systems must be Confidence Tested in accordance with this code and Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

FIRE DEPARTMENT INSTALLATION AND OPERATIONAL PERMITS

Where an installation permit is required, if an operational permit is also required, the approved installation permit is renewable annually as an operational permit.

Section 62. Subsections 105.7.1, 105.7.2, 105.7.3, 105.7.4, 105.7.5, 104.7.6, 105.7.7, 105.7.8, 105.7.9, 105.7.10, 105.7.11 and 105.7.12 of the 2003 International Fire Code are amended as follows:

105.7.1 ((~~Automatic fire-extinguishing systems. A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~)) Battery systems. An installation permit is required to install stationary lead-acid battery systems having an electrolyte capacity of more than 50 gallons (189 L).

105.7.2 Compressed gases. When the compressed gases in use or storage exceed the amounts listed in Table 105.6.9, an installation ((~~construction~~)) permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a compressed gas system.

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Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan filed pursuant to Section 2701.6.3. The 30-day period is not applicable when approved based on special circumstances requiring such waiver.

((~~**105.7.3 Fire alarm and detection systems and related equipment.** A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.3((4)) Fire pumps and related equipment. An installation ((~~construction~~)) permit is required for installation of ((~~or modification to fire pumps and related~~)) fuel tanks relating to operation of fire pumps, jockey pumps, controllers, and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.4((5)) Flammable and combustible liquids. An installation ((~~construction~~)) permit is required:

1. To repair or modify a pipeline for the transportation of flammable or combustible liquids.
2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.

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3. To install, alter, remove, abandon or otherwise dispose of a flammable or combustible liquid tank.

105.7.5((6)) Hazardous materials. An installation ((~~construction~~)) permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by Chapter 27 when the hazardous materials in use or storage exceed the amounts listed in Table 105.6.21.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.6((~~7~~)) Industrial ovens. An installation ((~~construction~~)) permit is required for installation of industrial ovens covered by Chapter 21.

Exceptions:

1. Routine maintenance.
2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.7((8)) LP-gas. An installation ((~~construction~~)) permit is required for installation of or modification to an LP-gas system.

((~~**105.7.9 Private fire hydrants.** A construction permit is required for the installation or modification of private fire hydrants.~~))

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105.7.8 Refrigeration equipment. An installation permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6.

105.7.9((~~10~~)) Spraying or dipping. An installation ((~~construction~~)) permit is required to install or modify a spray room, dip tank or booth.

((~~**105.7.11 Standpipe systems.** A construction permit is required for the installation, modification, or removal from service of a standpipe system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.10((~~2~~)) Temporary membrane structures, tents and canopies. An installation ((~~construction~~)) permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of 200 square feet (19 m^2), or a canopy in excess of 400 square feet (37 m^2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

((~~3. Fabric canopies and awnings open on all sides which comply with all of the following:~~

~~3.1. Individual canopies shall have a maximum size of 700 square feet (65 m^2).~~

~~3.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.~~

~~3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.~~))

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Section 63. Subsections 106.2 and 106.3 respectively of the 2003 International Fire Code are amended as follows:

106.2 Inspections. The fire code official is authorized to conduct such inspections as are deemed necessary to determine the extent of compliance with the provisions of this code and to approve reports of inspection by approved agencies or individuals. ((~~All reports of such inspections shall be prepared and submitted in writing for review and approval. Inspection reports shall be certified by a responsible officer of such approved agency or by the responsible individual.~~)) The fire code official is authorized to engage such expert opinion as deemed necessary to report upon unusual, detailed or complex technical issues subject to the approval of the governing body.

106.3 Concealed work. Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the fire code official shall have the authority to require that such work be exposed for inspection.

It shall be the joint and several duty of the permit applicant and contractor to cause the work to remain accessible and exposed for inspection purposes. Neither the fire code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

Section 64. A new subsection 106.4 is adopted to read as follows:

106.4 Special inspections. The fire code official is authorized to appoint qualified persons or agencies having special technical skills as special inspectors or plan reviewers and accept their inspection, plan review and evaluation of specialized fire protection equipment or systems.

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The fire code official is authorized to accept inspections performed by other jurisdictions and agencies and honor permits and certificates issued by other jurisdictions for activities regulated by this code, upon presentation to the fire code official of satisfactory evidence that such inspections, permits and certificates are substantially in accord with the fire safety requirements of this code.

Section 65. Section 108 of the 2003 International Fire Code is hereby repealed, and a new Section 108 is adopted to read as follows:

SECTION 108

APPEALS

108.1 Appeals. Appeals from decisions or actions pertaining to the application and interpretation of this Code shall first be addressed to the fire code official. If not resolved with the fire code official, the appellant may submit a written request to the fire code official for a review by the Fire Code Appeals Board in accordance with all applicable by-laws, rules, regulations and ordinances. The results of this review will be advisory only, in accordance with City of Seattle Ordinance 119799. Following receipt of the Fire Code Appeals Board recommendation the fire chief shall issue a final written decision.

Section 66. Subsection 109.1 of the 2003 International Fire Code is amended as follows:

109.1 Unlawful acts. It shall be unlawful for any person, firm, or corporation to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premises or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code. It is a violation of the Seattle Fire Code for any person, firm or corporation to fail to comply with the Seattle Fire Code.

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Section 67. Subsection 109.2 of the 2003 International Fire Code is amended as follows:

109.2 Notice of violation. When the fire code official finds a building, premises, vehicle, marine vessel, storage facility or outdoor area that is in violation of this code, the fire code official is authorized to issue ((~~prepare~~)) a written notice of violation describing the violation(s) ((~~conditions deemed unsafe~~)) and, when compliance is not immediate, specifying a time for reinspection. Nothing in this subsection shall be deemed to limit or preclude any other enforcement action or proceeding, and nothing in this section shall be deemed to obligate or require the fire code official to issue a notice of violation prior to the imposition of civil or criminal penalties.

* * *

Section 68. Subsection 109.3 of the 2003 International Fire Code is amended as follows:

109.3 ((~~Violation~~)) Civil penalties. Any person, firm or corporation ((~~Persons~~)) who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction or installation documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be subject to a cumulative civil penalty in an amount not to exceed $1,000 per day for each violation from the time the violation occurs or begins until compliance is achieved. The penalty shall be collected by civil action brought in the name of the City. The fire code official shall notify the City Attorney in writing of the name of any person, firm or corporation subject to the penalty, and the City Attorney shall, with the assistance of the fire code official, take appropriate action to collect the penalty. In any civil action for a penalty, the City has the burden of proving by a preponderance of the evidence that a violation exists or existed. ((~~guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~))

Section 69. Subsection 109.3.1 of the 2003 International Fire Code is amended as follows:

109.3.1 Alternative criminal penalty. Any person, firm or corporation who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction or installation documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a gross misdemeanor subject to the provisions of Seattle Municipal Code Chapters 12A.02 and 12A.04, except that absolute liability shall be imposed for such a violation or failure to comply and none of the mental states described in Section 12A.04.030 need be proved, except for a violation of Subsection 104.11.2. The fire code official may request the City Attorney prosecute such violations criminally as an alternative to the civil penalties provision. Each day that a violation continues shall be deemed a separate offense. ((~~**Abatement of violation.** In addition to the imposition of the penalties herein described, the fire code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.~~))

Section 70. A new subsection 109.3.2 is adopted to read as follows:

109.3.2 Abatement of violation. In addition to the imposition of civil and criminal penalties, the fire code official is authorized to institute appropriate action to prevent unlawful construction or installation 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.

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Section 71. Section 110 the 2003 International Fire Code, title only, is amended as follows:

UNSAFE BUILDINGS, PREMISES, MOTOR VEHICLES, AND MARINE VESSELS

Section 72. Subsection 110.1 of the 2003 International Fire Code is amended as follows:

110.1 General. If ((~~during the inspection of~~)) a premises, a building or structure or any building system, motor vehicle or marine vessel, in whole or in part, endangers any property, the health or safety or the occupants, or the occupants of neighboring premises, buildings, motor vehicles or marine vessels, the public or fire department personnel ((~~constitutes a clear and inimical threat to human life, safety or health~~)), the fire code official may ((~~shall~~)) issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section. ((~~and~~)) The fire code official may ((~~shall~~)) refer ((~~the~~)) any unsafe premises or building to the ((~~building department~~)) Department of Planning and Development for any repairs, alterations, remodeling, removing or demolition required.

* * *

Section 73. Subsection 110.2 of the 2003 International Fire Code is amended as follows:

110.2 Evacuation. The fire code official or the fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied premises, building, motor vehicle, or marine vessel deemed unsafe when such premises, building, motor vehicle, or marine vessel has hazardous conditions that present imminent danger to ((~~building~~)) occupants. Persons so notified shall immediately leave the structure or premises, motor vehicle or marine vessel and shall not enter or re-enter until authorized to do so by the fire code official or the fire department official in charge of the incident.

Section 74. Section 111 of the 2003 International Fire Code, title only, is amended as follows:

SECTION 111

STOP WORK OR USE ORDER

Section 75. Section 111 of the 2003 International Fire Code is amended as follows:

111.1 Order. Whenever the fire code official finds any work or use regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the fire code official is authorized to issue a stop work or use order.

111.2 Issuance. A stop work or use order shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work or use. Upon issuance of a stop work or use order, the cited work or use shall immediately cease. The stop work or use order shall state the reason for the order, and the conditions under which the cited work or use is authorized to resume.

111.3 Emergencies. Where an emergency exists, the fire code official shall not be required to give a written notice prior to stopping the work or use.

114.4 Failure to comply. It shall be a violation of this code for((~~A~~))any person ((~~who shall~~)) to continue any work or use after having been served with a stop work order or use order, except such work or use as that person is directed to perform to remove a violation or unsafe condition ((~~, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.~~))

Section 76. Subsection 201.3 of the 2003 International Fire Code is amended as follows:

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201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code*, *International Fuel Gas Code*, *International Mechanical Code* or ((~~*International*~~)) *Seattle Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

Section 77. A new subsection 201.5 is adopted to read as follows:

201.5 References to Other Codes. Whenever an International Code is referenced in this code, it shall mean the Seattle edition of that code, including local amendments. References to the "Building Code", "Fire Code", "Mechanical Code" and "Plumbing Code" mean the Seattle editions of those codes.

Section 78. Section 202 of the 2003 International Fire Code is amended by amending definitions of Educational Group E; Institutional Group I; Group I-1; Group I-2; Group I-4, day care facilities; and Residential Group R to read as follows:

* * *

[W] Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. Religious educational rooms and religious auditoriums, which are accessory to churches in accordance with Section 302.2 and have occupant loads of less than 100, shall be classified as Group A-3 occupancies.

Day care. The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than $2^1/_2$ years of age shall be classified as an E occupancy.

Exception: Family child day care homes licensed by the Washington State Department of Social and Health Services for the care of twelve or fewer children shall be classified as group R-3.

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* * *

[W] [B] Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people, cared for or living in a supervised environment and having physical limitations because of health or age, are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

Group I-1. This occupancy shall include buildings, structures or parts thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities
Group homes
Half-way houses
Residential board and care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer persons and adult family homes licensed by the Washington State Department of Social and Health Services shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2.

A facility such as above, housing at least six and not more than 16 persons, shall be classified as Group R-4.

A facility such as the above providing licensed care to clients in one of the categories listed in Section 313.1 regulated by either the Washington Department of Health or the Department of Social and Health Services shall be classified as Licensed Care Group LC.

[W]Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

Hospitals

Nursing homes (both intermediate care facilities and skilled nursing facilities)

Mental hospitals

Detoxification facilities.

A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2.

A facility such as the above providing licensed care to clients in one of the categories listed in Section 313.1 regulated by either the Washington Department of Health or the Department of Social and Health Services shall be classified as Licensed Care Group LC.

A child care facility which provides care on a 24-hour basis to more than five children $2^1/_2$ years of age or less shall be classified as Group I-2.

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Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers

Detention centers

Jails

Prerelease centers

Prisons

Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.4.1 through 308.4.5 (see Section 408.1) of the International Building Code.

Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted, to the exterior via means of egress without restraint. A Condition 1 facility is permitted to be constructed as Group R.

Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.

Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping units and group activity spaces, where egress is impeded by remote-controlled release of means of egress from such smoke compartment to another smoke compartment.

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Condition 4. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

[W] Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code*. Places of worship during religious functions are not included.

Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services shall be classified as Group I-4.

Exception: Where the occupants are capable of responding to an emergency situation without physical assistance from the staff the facility shall be classified as Group A-3.

Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children $2^1/_2$ years of age or less shall be classified as Group I-4.

Exceptions:

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1. A child day care facility which provides care for more than five but no more than 100 children 2-1/2 years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

2. Family child day care homes licensed by the Washington State Department of Social and Health Services for the care of 12 or fewer children shall be classified as Group R-3.

* * *

[W][B] Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classed as Institutional Group I or Licensed Care Group LC. Residential occupancies shall include the following:

R-1 Residential occupancies where the occupants are primarily transient in nature including:

Boarding houses (transient)

Hotels (transient)

Motels (transient)

R-2 Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses

Boarding houses (not transient)

Convents

Dormitories

Fraternities and sororities

Hotels (nontransient)

Monasteries

Motels (nontransient)

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Vacation timeshare properties

R-3 Residential occupancies where the occupancies are primarily permanent in nature and not classified as R-1, R-2, or I and where buildings do not contain more than two dwelling units as applicable in Section 101.2, including adult family homes and family child day care homes for the care of 2 or fewer children, licensed by the Washington State Department of Social and Health Services, or adult and child care facilities that provide accommodations for five or fewer persons of any age for less than 24-hours. Adult and child care facilities that are within a single-family home are permitted to comply with the *International Residential Code* in accordance with Section 101.2.

R-4 Residential occupancies shall include buildings arranged for occupancy as Residential Care/Assisted Living Facilities including more than five but not more than 16 occupants.

Exception: Adult family homes, family child day care homes and foster family care homes shall be classified as Group R-3.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except for the height and area limitations provided in Section 503 of the *International Building Code* or shall comply with the *International Residential Code* in accordance with Section 101.2.

Section 79. Section 202 of the 2003 International Fire Code is amended by adopting thereto definitions of ADULT FAMILY HOME; BUILDING, LOW-RISE; CHILD DAY CARE; ELECTRICAL CODE; EMERGENCY POWER SYSTEM; EXIT PLACARD; EXIT SIGN; FAMILY CHILD DAY CARE HOME; FIRE DETECTION SYSTEM; FIRE DISTRICT; HIGH-RISE BUILDING; MOTOR VEHICLE; MOTOR VEHICLE,

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UNATTENDED; LICENSED CARE GROUP LC; OIL BURNING EQUIPMENT; PF DEVICE; PORTABLE SCHOOL CLASSROOM; POWER TAP and STANDBY POWER SYSTEM to read as follows:

* * *

[W] ADULT FAMILY HOME means a dwelling in which a person or persons provide personal care, special care, room and board to more than one but not more than six adults who are not related by blood or marriage to the person or person providing the services.

* * *

BUILDING, LOW–RISE. Enclosed or partially enclosed buildings that comply with the following conditions.

1. Mean roof height, *h*, less than or equal to 60 feet (18 288 mm).
2. Mean roof height, *h*, does not exceed least horizontal dimension.

* * *

[W] CHILD DAY CARE, shall, for the purposes of these regulations, mean the care of children during any period of a 24-hour day.

* * *

[W] ELECTRICAL CODE is the National Electrical Code promulgated by the National Fire Protection Association, as adopted by this jurisdiction.

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* * *

[B] EMERGENCY POWER SYSTEM. See Section 602.1.

* * *

[B] EXIT PLACARD. See Section 1002.1.

[B] EXIT SIGN. See Section 1002.1.

* * *

[W] FAMILY CHILD DAY CARE HOME is a child day care facility, licensed by the state, located in the dwelling of the person or persons under whose direct care and supervision the child is placed, for the care of twelve or fewer children, including children who reside at the home.

* * *

FIRE DECTECTION SYSTEM. See Section 902.1.

* * *

[B] FIRE DISTRICT. See Section 2202.1.

* * *

HIGH-RISE BUILDING means a building having one or more floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

* * *

MOTOR VEHICLE. See Section 2202.1.

MOTOR VEHICLE, UNATTENDED. See Section 2202.1.

* * *

[W] LICENSED CARE GROUP LC. Licensed Care Group LC includes the use of a building, structure, or portion thereof, for the business of providing licensed care to clients in one of the following categories regulated by either the Washington Department of Health or the Department of Social and Health services:

1. Adult residential rehabilitation facility.
2. Alcoholism intensive inpatient treatment service.
3. Alcoholism detoxification service.
4. Alcoholism long-term treatment service.
5. Alcoholism recovery house service.
6. Boarding home.
7. Group care facility.
8. Group care facility for severely and multiple handicapped children.
9. Residential treatment facility for psychiatrically impaired children and youth.

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Exception: Where the care provided at an alcoholism detoxification service is acute care similar to that provided in a hospital, the facility shall be classified as a Group I-2 Occupancy.

* * *

OIL-BURNING EQUIPMENT. See Section 602.1.

* * *

PF DEVICE. See Section 2602.1.

* * *

[W] PORTABLE SCHOOL CLASSROOM. See 902.1.

POWER TAP. See Section 602.1.

* * *

[B] STANDBY POWER SYSTEM. See Section 602.1.

* * *

Section 80. Section 302.1 of the 2003 International Fire Code is amended as follows:

302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

BONFIRE. An outdoor fire utilized for ceremonial or recreational purposes and exceeding the size of a recreational fire.

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HI-BOY. A cart used to transport hot roofing materials on a roof.

OPEN BURNING. The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames, bonfires or recreational fires. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

POWERED INDUSTRIAL TRUCK. A forklift, tractor, platform lift truck or motorized hand truck powered by an electrical motor or internal combustion engine. Powered industrial trucks do not include farm vehicles or automotive vehicles for highway use.

RECREATIONAL FIRE. An outdoor fire burning materials other than rubbish where the fuel being burned ((~~is not contained in an incinerator, outdoor fireplace, barbeque grill or barbeque pit and~~))has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes. A recreational fire may be contained in an incinerator, outdoor fireplace, barbeque grill or barbeque pit.

Section 81. Subsection 302.2 of the 2003 International Fire Code is amended as follows:

303.2 Location. Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other approved means. Asphalt

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(tar) kettles and pots shall not be utilized inside or on the roof of a building or structure. Roofing kettles and operating asphalt (tar) kettles shall not block means of egress, gates, roadways or entrances.

Exception: When a practical difficulty is satisfactorily demonstrated, tar kettles may be located on a roof. All rooftop kettles shall require a temporary permit.

Section 82. A new subsection 303.10 is adopted to read as follows:

303.10 LPG fuel containers. The maximum individual LPG container capacity and the aggregate quantity of LPG allowed to be used in conjunction with tar kettles shall be in accordance with Chapter 38.

Section 83. Subsection 304.3.2 of the 2003 International Fire Code is amended as follows:

304.3.2 Capacity exceeding 5.33 cubic feet. Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m^3) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or approved combustible materials.

Exception: Waste accumulated for collection by the solid waste utility shall be stored in containers (to include recycling containers) specified in the City's solid waste collection contracts authorized by ordinance.

Section 84. A new subsection 306.1.1 is adopted to read as follows:

306.1.1 Fire extinguishers. Two approved fire extinguishers with a minimum 10-B:C rating shall be installed and maintained ready for use in projection rooms.

Section 85. Subsection 307.1 of the 2003 International Fire Code is amended as follows:

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307.1 General. ((~~A person shall not kindle or maintain or authorize to be kindled or maintained any open burning unless conducted and approved in accordance with this section.~~)) Open burning is prohibited in the City of Seattle. Bonfires and recreational fires shall be in accordance with Section 307.

Section 86. Subsections 307.2.1 and 307.2.2 of the 2003 International Fire Code are hereby repealed.

Section 87. Subsections 307.3 and 307.4 of the 2003 International Fire Code are amended as follows:

((~~**307.3 Location.** The location for open burning shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.~~

~~**Exceptions:**~~

~~1. Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.~~

~~2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.~~))

307.3((~~.1~~)) Bonfires. A bonfire is not allowed except by permit from the fire code official. ((~~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.~~))

307.4((~~3.2~~)) Recreational fires. Recreational fires shall not exceed a pile size of 3 feet (914mm) in diameter and 2 feet (610 mm) in height and shall not be conducted within 25 feet (7620 mm) of a structure or combustible material or vegetation. Trash, yard waste, rubbish and

paper are prohibited as fuel for recreational fires. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

307.5((4)) Attendance. ((~~Open burning, b~~))Bonfires ((~~or~~))and recreational fires 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.

Point of Information

See SFD Information Bulletin *Recreational and Cooking Fire Regulations* at www.seattle.gov/fire. For air quality and burn ban status information and regulations contact the Puget Sound Clean Air Agency as referenced in the above information bulletin.

Section 88. Subsection 308.1of the 2003 International Fire Code is amended as follows:

308.1 General. This section shall control open flames, fire and burning on all premises.

Exception: Bonfires and recreational fires shall be in accordance with Section 307.

Section 89. Subsections 308.3.1 and 308.3.1.1 of the 2003 International Fire Code are hereby repealed.

Section 90. Subsection 308.3.5 of the 2003 International Fire Code is amended as follows:

308.3.5 Religious ceremonies. ((~~When, in the opinion of the fire code official, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles. Hand-held candles shall not be passed from one person to another while lighted.~~))

Nothing in this code shall prevent the participants in religious ceremonies from carrying hand-held candles. (Ref. RCW 19.27.030 (3)). It is the objective of the fire code to prevent the risk of injury arising from the use of hand-held candles in places of public assembly by children aged 12 or under. A competent adult shall remain within 15 feet of the child at all times, unless an alternative equal safety standard is approved.

Section 91. Subsection 308.3.7 of the 2003 International Fire Code is amended as follows:

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

Exceptions:

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

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

   1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.6 provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants.

   1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants.

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.

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4. Where approved under permit by the fire code official.

Section 92. A new subsection 308.3.7.1 is adopted to read as follows:

308.3.7.1 Permit required . A permit is required for open-flame in a Group A occupancy.

Section 93. Subsection 310.3 of the 2003 International Fire Code is amended as follows:

310.3 "No Smoking" signs. The fire code official is authorized to order the posting of "No Smoking" signs in a conspicuous location in each structure or location in which smoking is prohibited. The content, lettering, size, color and location of required "No Smoking" signs shall be approved.

Point of Information

See Seattle Municipal Code 10.64 for requirements of posting "No Smoking" signs in public places.

Section 94. Subsection 311.1.1 of the 2003 International Fire Code is amended as follows:

311.1.1 Abandoned premises. Buildings, structures and premises for which an owner cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties shall be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the ((~~*International Property Maintenance Code* and the~~)) *International Building Code* and the *Seattle Municipal Code*.

Section 95. Subsection 311.3 of the 2003 International Fire Code is amended as follows:

311.3 Removal of combustibles. Persons owning, or in charge or control of, a vacant building or portion thereof, shall remove therefrom all accumulations of combustible materials, flammable or combustible waste or rubbish and shall securely lock or otherwise secure doors, windows and other openings to prevent entry by unauthorized persons. The premises shall be maintained clear of waste or hazardous materials.

Exception((s)):

((~~1.~~)) Buildings or portions of buildings undergoing additions, alterations, repairs, or change of occupancy in accordance with the *International Building Code*, where waste is controlled and removed as required by Section 304.

((~~2. Seasonally occupied buildings.~~))

Section 96. Section 313 of the 2003 International Fire Code is amended as follows:

SECTION 313

FUELED EQUIPMENT, MOTOR VEHICLES AND WATERCRAFT

313.1 Fueled equipment. Fueled equipment, including but not limited to ((~~motorcycles, mopeds~~)) portable generators, lawn-care equipment and portable cooking equipment, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. ((~~Where allowed by Section 313.~~)) When under a temporary permit for exhibits, trade shows or special events in accordance with Section 105.6.14.

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313.2 Fueled motor vehicles and watercraft. Fueled motor vehicles and watercraft, including but not limited to motorcycles, mopeds and motor boats shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. When under a temporary permit for exhibits, trade shows or special events in accordance with Sec. 105.6.14.

313.3((~~1.1~~)) Removal. The fire code official is authorized to require removal of fueled equipment, motor vehicles or watercraft from locations where the presence of such equipment, vehicles or crafts is determined by the fire code official to be hazardous.

313.4((~~2~~)) Group R occupancies. Motor ((~~V~~))vehicles and watercraft powered by flammable liquids, Class II combustible liquids, or compressed flammable gases shall not be stored within the living space of Group R buildings and shall be separated from other occupancies in accordance with the *International Building Code*.

Section 97. A new subsection 315.2.2.1 is adopted to read as follows:

315.2.2.1 Storage under stairways. Storage is prohibited under exit stairways.

Exception: Exit stairways in accordance with Section 1019.1.5.

Section 98. A new subsection 315.2.5 is adopted to read as follows:

315.2.5 Storage arrangements. Storage shall be within 20 feet of two aisles each at least 44 inches wide. No block pile shall exceed 40 X 40 feet unless approved by the fire code official. No dead end aisle shall be longer than 10 times the width. All storage in unsprinklered areas

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shall be within 150 feet aisle travel of fire department exterior access openings. Storage shall not obstruct access to extinguishers, standpipe outlets, sprinkler control shut down and safety controls or fire department access openings. (For high-piled storage see Chapter 23).

Section 99. New sections 316 and 317 are adopted to read as follows:

SECTION 316

FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS

316.1 Fixed guideway transit and passenger rail systems. Fixed guideway transit and passenger rail systems shall be in accordance with NFPA 130 as amended in this code.

SECTION 317

ROAD TUNNELS, BRIDGES AND OTHER LIMITED ACCESS HIGHWAYS

317.1 Road tunnels, bridges, and other limited access highways. Road tunnels, bridges, and other limited access highways shall be in accordance with NFPA 502 as amended in this code.

Section 100. Subsections 401.2, 401.3, and 401.4 of the 2003 International Fire Code are amended as follows:

401.2 Approval. Where required by this code, fire safety and evacuation plans((,)) and high-rise emergency operations plans, emergency procedures, and employee training programs shall be approved by the fire code official.

401.3 ((~~Emergency forces~~)) Fire Department notification. In the event an unwanted fire or other emergency occurs on a property, the owner or occupant shall immediately report such condition to the fire department. Building employees and tenants shall implement the appropriate emergency plans and procedures. No person shall, by verbal or written directive, require any delay in the reporting of a fire or other emergency to the fire department.

401.3.1 ((~~Making false report~~)) False alarms and reports. It shall be unlawful for a person to give, signal, or transmit, willfully and without cause, a false alarm or to make a false report of fire or other emergency.

401.3.2 Alarm activations. Upon activation of a fire or emergency alarm signal, employees or building staff shall immediately notify the fire department.

401.3.3 Emergency evacuation drills. Nothing in this section shall prohibit the sounding of a fire or emergency alarm signal for the carrying out of an emergency evacuation drill in accordance with the provisions of Section 405.

401.4 Interference with fire department operations. It shall be unlawful to interfere with, attempt to interfere with, conspire to interfere with, obstruct or restrict the mobility of or block the path of travel of a fire department emergency vehicle in any way, or to interfere with, attempt to interfere with, conspire to interfere with, obstruct or hamper any fire department operation. Failure to obey a lawful order of a Fire Department officer to evacuate a building or premises in the event of fire or other emergency is a violation of this code.

Section 101. A new subsection 401.6 is adopted to read as follows:

401.6 Evacuation required. In the event of activation of a fire or emergency alarm, 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 102. Section 404 of the 2003 International Fire Code is amended as follows:

SECTION 404

FIRE SAFETY AND EVACUATION PLANS AND HIGH-RISE EMERGENCY OPERATIONS PLANS

404.1 Fire safety and evacuation plans.

404.1.1 General. Fire safety and evacuation plans shall comply with the requirements of this section.

404.1.2 Where required. ((~~An approved f~~)) Fire safety and evacuation plans shall be prepared and maintained for the following occupancies and buildings.

1. Group A having an occupant load of 100 or more. ((~~, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000~~.))

2. Group B having an occupant load of 100 or more.

((~~2~~))3. Group E.

((~~3~~))4. Group H.

((~~4~~))5. Group I.

((~~5~~))6. Group R-1.

((~~6~~)) 7.Group R-4.

((~~7. High-rise buildings.~~))

8. Group M buildings having an occupant load of 500 or more persons or more than 100

persons above or below the lowest level of exit discharge.

9. Covered malls exceeding 50,000 square feet (4645 m^2) in aggregate floor area.

10. Underground buildings.

11. Buildings with an atrium and having an occupancy in Group A, E or M.

404.1.3 Approval required. Fire safety and evacuation plans for Group A occupancies with an occupant load of 100 or more shall be approved by the fire code official.

Point of Information

See Seattle Fire Dept. web page at www.seattle.gov/fire for guidelines and information regarding fire safety and evacuation plans.

((~~**404.3 Contents.** Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2~~.))

404.1.4 ((~~404.3.1~~)) Fire safety and evacuation plans. Fire safety and evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where approved, by selected floors or areas only.
2. The preferred and any alternative means of notifying occupants of a fire or emergency.
3. Identification and assignment of personnel responsible for carrying out duties in response to a fire emergency.
4. Procedures for personnel carrying out duties in response to a fire emergency.
5. The procedure for reporting a fire or other emergency to the fire department.
6. Procedures for accounting for employees and occupants after evacuation has been completed.

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7. Floor plans indicating the following:

7.1 Occupancy assembly point.

7.2 Exits.

7.3 Primary and secondary evacuation routes.

7.4 Areas of refuge.

7.5 Location of manual fire alarm boxes.

7.6 Location of portable fire extinguishers.

7.7 Location of occupant-use hose cabinets.

7.8 Location of fire alarm annunciators and controls.

((~~2. Procedures for employees who must remain to operate critical equipment before evacuating.~~

~~3. Procedures for accounting for employees and occupants after evacuation has been completed.~~

~~4. Identification and assignment of personnel responsible for rescue or emergency medical aid.~~

~~5. The preferred and any alternative means of notifying occupants of a fire or emergency.~~

~~6. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.~~

~~7. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.~~

~~8. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.~~

~~**404.3.2 Fire Safety Plans**~~

~~Fire safety plans shall include the following:~~

~~1. The procedure for reporting a fire or other emergency.~~

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~~2. The life safety strategy and procedures for notifying, relocating, or evacuating occupants.~~

~~3. Site plans indicating the following:~~

~~3.1. The occupancy assembly point.~~

~~3.2. The locations of fire hydrants.~~

~~3.3. The normal routes of fire department vehicle access.~~

~~4. Floor plans identifying the locations of the following:~~

~~4.1. Exits.~~

~~4.2. Primary evacuation routes.~~

~~4.3. Secondary evacuation routes.~~

~~4.4. Accessible egress routes.~~

~~4.5. Areas of refuge.~~

~~4.6. Manual fire alarm boxes.~~

~~4.7. Portable fire extinguishers.~~

~~4.8. Occupant-use hose stations.~~

~~4.9. Fire alarm annunciators and controls.~~

~~5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.~~

~~6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.~~

~~7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.~~))

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

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Section 1. Responsibilities.

Section 2. Fire Reporting.

Section 3. Evacuation.

Section 4. Fire Control Procedures.

Section 5. Post Fire Operations.

Section 6. Confidence Testing.

Section 7. High Value List.

Section 8. Shut-Off Valve List.

Section 9. Floor Plans.

404.3((4)) Maintenance. Fire safety and evacuation plans and high-rise emergency operations plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy, or the physical arrangement of the building.

404.4((5)) Availability. Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request. High-rise emergency operations plans shall be posted in the high-rise fire command center and one copy shall be furnished to the fire code official.

Section 103. Section 405 of the 2003 International Fire Code is amended by amending Table 405.2 to read as follows:

TABLE 405.2

FIRE AND EVACUATION DRILL

FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION

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Group A	Quarterly	Employees
Group E	Monthly[a]	All occupants
Group I	Quarterly on each shift	Employees((b))
Group R-1	Quarterly on each shift	Employees
Group R-4	Quarterly on each shift	Employees((b))
High-rise buildings	Annually	Staff and occupants[b]

a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.

((~~b. Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.~~))

b. **Exception:** Jail inmates, hospital patients, hotel guests and occupants of apartment or residential condominium units, unless such occupant is also a member of the high-rise building staff.

Section 104. Subsection 405.4 of the 2003 International Fire Code is hereby repealed.

Section 105. Subsections 405.5, 405.6, 405.7, 405.8 and 405.9 respectively of the 2003 International Fire Code are amended as follows:

405.4((5)) Record keeping. Records shall be maintained of required emergency evacuation drills and include the following information:

1. Identity of the person conducting the drill.
2. Date and time of the drill.
3. Notification method used.
4. Staff members on duty and participating.

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5. Number of occupants evacuated.

6. Special conditions simulated.

7. Problems encountered.

~~((8. Weather conditions when occupants were evacuated.~~

~~9~~)) 8. Time required to accomplish complete evacuation.

405.5((6)) Notification. Where required by the fire code official, prior notification of emergency evacuation drills shall be given to the fire code official.

405.6((~~7~~)) Initiation. Where a fire alarm system is provided, emergency evacuation drills shall be initiated by activating the fire alarm system. For buildings with central station monitoring, the responsible party for the building shall notify the central station monitoring company in advance of the drill in order to prevent a fire department response to the alarm activation.

405.7((8)) Accountability. As building occupants arrive at the assembly point, efforts shall be made to determine if all occupants have been successfully evacuated or have been accounted for.

405.8((9)) Recall and reentry. An electrically or mechanically operated signal used to recall occupants after an evacuation shall be separate and distinct from the signal used to initiate the evacuation. The recall signal initiation means shall be manually operated and under the control of the person in charge of the premises or the official in charge of the incident. No one shall reenter the premises until authorized to do so by the official in charge.

Section 106. Subsection 408.5.3 of the 2003 International Fire Code is amended as follows:

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408.5.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. ((~~Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program.~~)) Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

Section 107. Subsection 408.5.5 of the 2003 International Fire Code is amended as follows:

408.5.5 Resident participation. Emergency evacuation drills shall involve ((~~the actual evacuation of all residents to a selected assembly point.~~)) all residents participating in the drill according to the emergency instructions applicable to them.

Section 108. Subsection 408.10.3 of the 2003 International Fire Code is amended as follows:

408.10.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. ((~~Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program.~~)) Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

Section 109. Subsection 408.10.5 of the 2003 International Fire Code is amended as follows:

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408.10.5 Resident participation. Emergency evacuation drills shall be in accordance with the building fire safety and evacuation plan and shall involve residents participating in the drill according to the emergency instructions applicable to them. ((~~involve the actual evacuation of all residents to a selected assembly point and shall provide residents with experience in exiting through all required exits. All required exits shall be used during emergency evacuation drills.~~

~~**Exception:** Actual exiting from windows shall not be required. Opening the window and signaling for help shall be an acceptable alternative.~~))

Section 110. Subsections 408.11.1.1 and 408.11.1.2 respectively of the 2003 International Fire Code are amended as follows:

408.11.1.1 Approval. The lease plan shall be submitted to the fire code official ((~~for approval,~~)) and shall be maintained on site for immediate reference by responding fire service personnel.

408.11.1.2 Revisions. The lease plans shall be revised annually or as often as necessary to keep them current. Changes in use or occupancy classification ((~~Modifications or changes in tenants or occupancies~~)) shall not be made without prior approval of the fire code official and building official.

Section 111. Subsection 501.1 of the 2003 International Fire Code is amended as follows:

501.1 Scope. Fire service features for buildings, structures and premises shall comply with this chapter and Appendix D as amended.

Section 112. Section 502.1 of the 2003 International Fire Code is amended as follows:

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

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* * *

FIRE DEPARTMENT MASTER KEY. A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on specified properties.

Point of Information

The fire code official has approved the "Knox Box" as the access key box for use in the City of Seattle.

* * *

Section 113. Subsection 503.1.1 of the 2003 International Fire Code is amended as follows:

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.

Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where:

1. 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. 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.
3. There are not more than two Group R-3 or Group U occupancies.

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Section 114. Subsection 503.2.1 of the 2003 International Fire Code is amended as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ((~~13 feet 6 inches (4115 mm)~~)) 14 feet (4267 mm).

Exceptions:

1. Access roads serving not more than two Group R-3 or Group U occupancies shall have an unobstructed width of not less than 12 feet (3658 mm).
2. Public streets shall be in accordance with Seattle Department of Transportation requirements.

Section 115. Subsection 503.2.3 of the 2003 International Fire Code is amended as follows:

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. See AASHTO Highway Standard 20.

Section 116. Subsection 503.2.7 of the 2003 International Fire Code is amended as follows:

503.2.7 Grade. The grade of the fire apparatus access road shall ((~~be~~)) not exceed 10 percent unless approved by the fire code official. ((~~within the limits established by the fire code official based on the fire department's apparatus.~~))

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Section 117. Subsection 503.6 of the 2003 International Fire Code is amended as follows:

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire ((~~chief~~))code official. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times.

Section 118. Subsections 505.1 and 505.2 of the 2003 International Fire Code are amended as follows:

505.1 Address numbers. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. ((~~Numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).~~)) Letters or numbers shall be a minimum 3 inches (76 mm) in height for occupancies in Group R2 and R3 and not less than 5 inches (127 mm) for other occupancies. Letters and numbers shall have a minimum stroke of 0.5 inch (12.7 mm) of a contrasting color to the background itself.

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

Point of Information

Where marking is required, the signs shall be posted by the Seattle Department of Transportation for city streets and right of ways, and by the owner for private property.

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Section 119. Subsection 506.1 of the 2003 International Fire Code is amended as follows:

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the fire code official.

Point of Information

The fire code official has approved the "Knox Box" as the access key box for use in the City of Seattle.

Section 120. A new subsection 506.3 is adopted to read as follows:

506.3 Elevator key box. An elevator key box locked and keyed to the standard City elevator access key shall be provided. The elevator key box shall meet the following standards:

1. Dimensions - eight inches high, six inches wide and one inch deep.
2. Material - sixteen gauge steel welded.
3. Color - red (unless located in the main lobby above the call button, six feet nominal above the floor).
4. Labeling - "FOR FIRE DEPARTMENT USE."
5. Lock - Ace one-inch cylinder cam lock key #39504.

The elevator key box is to be installed at the designated recall floor above the Phase I recall switch or in the main lobby above the hall call button when no recall feature exists. The elevator key box is to be mounted six feet nominal above the floor. Other locations may be approved by the building official upon request, with notification to the fire code official.

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506.3.1 Elevator Keys. Keys for access to and for the operation of elevator equipment shall be tagged, labeled, and retained in the key box. The elevator key box shall contain fire emergency service keys (Phase I and II, one key for each switch). The elevator key box may in addition contain keys for any or all of the following:

1. Machine room door;
2. Secondary level door;
3. Pit door;
4. Roof door;
5. Independent, hospital emergency and/or attendant operation;
6. Hoistway access;
7. Mechanical hoist access devices (broken arm, lunar, etc.);
8. Miscellaneous switch keys;
9. Fire alarm panel room;
10. Sprinkler valve control room.

Point of Information

Due to security consideration, elevator key boxes should not contain master keys to tenant spaces. Keys in elevator key boxes should be limited to those for access of the building systems and equipment as listed in SFC 506.3.1.

Section 121. Subsection 508.3 of the 2003 International Fire Code is amended as follows:

508.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an approved method and shall be in accordance with Appendix B as amended. Unless otherwise approved by the fire code official, only those hydrants that meet all of the following conditions may be used to meet the fire flow requirements:

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1. Provide a minimum of 1,000 gpm at 20 psi flowing independently,

2. Provide a minimum of 500 gpm at 20 psi flowing simultaneously,

3. Are located within 500 feet of the building as measured by an approved route.

Section 122. Subsection 508.5.1 of the 2003 International Fire Code is amended as follows:

508.5.1 Where required. Where any portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than ((~~400 feet (122 m)~~)) 500 feet (152 m) 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. The number of fire hydrants required to be within 500 ft of any portion of a building or facility shall be determined by dividing the required fire flow by 2,000 and rounding up to the next whole number.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement from a hydrant shall be 600 feet (183 m)((~~.~~)), unless the building is equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.3.
2. For buildings 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 from a hydrant shall be 600 feet (183 m).

Section 123. A new subsection 508.7 is adopted to read as follows:

508.5.7 Hydrant marking. Hydrants shall be marked in a manner in accordance with Seattle Public Utilities.

Section 124. Subsection 601.2 of the 2003 International Fire Code is amended as follows:

601.2 Permits. Permits shall be obtained for refrigeration systems, ((~~and~~)) battery systems and fuel tanks connected to emergency and standby power systems as set forth in Section 105.6.

Section 125. Subsection 602.1 of the 2003 International Fire Code is amended as follows:

602.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

BATTERY, LEAD ACID. A group of electrochemical cells interconnected to supply a nominal voltage of DC power to a suitably connected electrical load. The number of cells connected in series determines the nominal voltage rating of the battery. The size of the cells determines the discharge capacity of the entire battery.

BATTERY SYSTEM, STATIONARY LEAD ACID. A system which consists of three interconnected subsystems:

1. A lead-acid battery.
2. A battery charger.
3. A collection of rectifiers, inverters, converters, and associated electrical equipment as required for a particular application.

[M] COMMERCIAL COOKING APPLIANCES. Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-

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jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or a portion thereof used for the preparation and serving of food.

[B] EMERGENCY POWER SYSTEM means electrical systems that comply with the *Seattle Electrical Code* Article 700.

[M] HOOD. An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

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

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

REFRIGERATION SYSTEM. A combination of interconnected refrigerant-containing parts constituting one closed refrigerant circuit in which a refrigerant is circulated for the purpose of extracting heat and in which a compressor is used for compressing the refrigerant vapor.

[B] STANDBY POWER SYSTEM means an electrical power system that complies with *Seattle Electrical Code* Article 701 Legally Required Standby Systems.

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Section 126. Subsection 603.1.3 of the 2003 International Fire Code is amended as follows:

603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with ((~~oil-burning equipment~~)) fuel-fired appliances shall be installed and maintained in accordance with Section 605 and the ((~~ICC~~)) *Electrical Code*.

Section 127. Subsection 603.1.6 of the 2003 International Fire Code is amended as follows:

603.1.6 Testing, diagrams and instructions. After installation of the fuel-fired appliances ((~~oil-burning equipment~~)), operation and combustion performance tests shall be conducted to determine that the ((~~burner~~)) appliance is in proper operating condition and that all accessory equipment, controls, and safety devices function properly.

603.1.6.1 Diagrams. Contractors installing industrial fuel-fired appliances ((~~oil-burning systems~~)) shall furnish not less than two copies of diagrams showing the main ((~~oil~~)) fuel lines and controlling valves, one copy of which shall be posted at the fuel-fired appliances ((~~oil-burning equipment~~)) and another at an approved location that will be accessible in case of emergency.

* * *

Section 128. Subsection 603.1.7 of the 2003 International Fire Code is amended as follows:

603.1.7 Clearances. Working clearances between oil-fired appliances and electrical panelboards and equipment shall be in accordance with the ((~~ICC~~)) *Electrical Code*. ((~~Clearances between oil-fired equipment and oil supply tanks shall be in accordance with NFPA 31~~)) A minimum 5-ft

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(1.5-m) separation shall be maintained between oil-fired appliances and equipment and fuel oil supply tanks.

Section 129. Subsection 603.3 of the 2003 International Fire Code is amended as follows:

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

Exception: Fuel-oil tanks containing Class II or III combustible liquids not exceeding an individual or aggregate capacity of 275-gallons connected to oil-burning equipment and located inside buildings are allowed outside of a Group H Occupancy. All other applicable requirements of Chapter 34 apply.

~~((**603.3.1 Maximum outside fuel oil storage above ground.** Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall comply with NFPA 31.~~

~~**603.3.2 Maximum inside fuel oil storage.** Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed inside any building shall be 660 gallons (2498 L). Where the amount of fuel oil stored inside a building exceeds 660 gallons (2498 L), the storage area shall be in compliance with the *International Building Code*.~~

~~**603.3.3 Underground storage of fuel oil.** The storage of fuel oil in underground storage tanks shall comply with NFPA 31.))~~

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Section 130. Subsection 603.4 of the 2003 International Fire Code is amended as follows:

603.4 Portable unvented heaters. Portable unvented fuel-fired heating equipment shall be prohibited in occupancies in Groups A, E, I, R-1, R-2, R-3 and R-4.

Exceptions:

1. Listed and approved unvented fuel-fired heaters in one- and two-family dwellings.
2. Gas-fired heating appliances located outdoors at permanent Group A drinking and dining establishments are allowed in accordance with Section 603.4.2.

603.4.1 Prohibited locations. Unvented fuel-fired heating equipment shall not be located in, or obtain combustion air from, any of the following rooms or spaces: sleeping rooms, bathrooms, toilet rooms or storage closets.

603.4.2 Portable gas-fired heating appliances at permanent drinking and dining establishments. Portable gas-fired heating appliances located outdoors at permanent drinking and dining establishments frequented by the public shall be in accordance with this section.

603.4.2.1 Location.

603.4.2.1.1 Prohibited locations. The storage or use of portable gas-fired heating appliances are prohibited:

1. inside Group A occupancies when connected to the fuel gas container,
2. on tabletops, and
3. inside tents, canopies and membrane structures.

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603.4.2.1.2 Buildings. Portable gas-fired heating appliances shall be located at least 5 feet from buildings.

603.4.2.1.3 Near combustible materials. Portable gas-fired heating appliances shall not be located beneath combustible overhangs, awnings, sunshades or similar combustible decorations.

603.4.2.1.4 Near exits. Portable gas-fired heating appliances shall not be located within 5 feet of exits or exit discharges.

603.4.2.2 Portable gas-fired heating appliance.

603.4.2.2.1 Listing and approval. Only listed and approved heating appliances utilizing a gas container that is integral to the appliance shall be used.

603.4.2.2.2 Installation and maintenance. Heating appliances shall be installed and maintained in accordance with the manufacturer's instructions.

603.4.2.2.3 Automatic shutoff device. Portable gas-fired heating appliances shall be equipped with an automatic device that will shut off the flow of gas to the main burner and, if applicable, the pilot in the event the flame is extinguished.

603.4.2.2.4 Tip-over switch. Heating appliances shall be equipped with a tilt or tip-over switch that automatically shuts off the flow of gas if the appliance is tilted more than 19 degrees from vertical.

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603.4.2.2.5 Guard against contact. The heating element or combustion chamber shall be permanently guarded so as to prevent accidental contact by persons or material.

603.4.2.3 Gas containers.

603.4.2.3.1 Approved containers. Only approved U.S. DOT or ASME gas containers shall be used.

603.4.2.3.2 Refilling containers. Gas containers shall not be refilled onsite.

603.4.2.3.3 Container replacement. Replacement of gas containers in the heating appliance shall not be conducted while the public is present.

603.4.2.3.4 Gas container storage.

603.4.2.3.4.1 Container capacity. The maximum individual capacity of gas containers used in connection with portable gas-fired heating appliances shall not exceed 20 pounds.

603.4.2.3.4.2 Maximum storage quantity. The maximum aggregate quantity of gas containers onsite awaiting use shall not exceed 100 pounds (5 x 20-lb. containers) and shall be stored outside in accordance with Section 603.4.2.3.4.5.

603.4.2.3.4.3 Indoor storage prohibited. Gas containers shall not be stored inside.

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603.4.2.3.4.4 Storage locker. Gas containers shall be located outside within lockable, ventilated metal storage lockers or racks to prevent unauthorized access.

603.4.2.3.4.5 Storage locker location. Ventilated metal storage lockers or racks shall be located at least 20 feet from exits, building openings, public ways and designated smoking areas.

603.4.2.3.4.6 Security of storage locker. Ventilated metal storage lockers or racks shall be secured against unauthorized entry.

603.4.2.3.4.7 Vehicle protection. Ventilated metal storage lockers for gas containers shall be protected from vehicular impact if subject to possible vehicle impact.

603.4.2.3.4.8 Container position. Gas containers shall be stored in an upright position such that the pressure relief valve is in direct contact with the vapor phase of the container.

603.4.2.4 Ignition sources. Smoking and open flame devices (e.g. candles, flaming food or beverage preparation) shall be prohibited within 5 feet of any gas-fired heating appliance. NO SMOKING signs shall be posted at affected areas.

603.4.2.5 Fire extinguishers. At least one portable fire extinguisher having a minimum rating of 2A:40BC shall be provided and mounted with the top located no higher than 5 feet above grade. Travel distance to the extinguisher shall not exceed 50 feet.

603.4.2.6 Leaking gas. In the event of a gas leak or suspected leak, the container shall be immediately removed from the premises. Periodic leak tests (with the use of soapy water) shall be conducted by trained personnel to ensure the container and fittings are tight.

603.4.2.7 Means of Egress. Drinking and dining areas where portable gas-fired heating appliances are used shall be provided with at least two means of egress.

Section 131. Subsection 603.5.2 of the 2003 International Fire Code is amended as follows:

603.5.2 Heating appliance installation. Heating appliances shall be installed in accordance with the manufacturer's instructions, the *International Building Code*, the *International Mechanical Code*, the *International Fuel Gas Code* and the ((~~ICC~~)) *Electrical Code.*

Section 132. Subsection 604.1 of the 2003 International Fire Code is amended as follows:

604.1 Installation. Emergency and standby power systems shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval.

Section 133. Subsection 604.2.2 of the 2003 International Fire Code is amended as follows:

604.2.2 Smoke control systems. ((~~Standby~~))Emergency power shall be provided for smoke control systems in accordance with Section 909.11.

Exception: Standby power is acceptable for shaft pressurization systems in low-rise buildings in accordance with Section 909.22.

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Section 134. Subsection 604.2.13 of the 2003 International Fire Code is amended as follows:

604.2.13 Covered mall buildings. Covered mall buildings exceeding 50,000 square feet (4645 m 2) shall be provided with ((~~standby~~))emergency power systems which are capable of operating the emergency voice/alarm communication.

Section 135. Subsection 604.2.14 of the 2003 International Fire Code is amended as follows:

604.2.14 High-rise buildings. ((~~Standby p~~))Power, light and emergency systems in high-rise buildings shall comply with the requirements of Sections 604.2.14.1 through 604.2.14.3.

604.2.14.1 ((~~Standby~~))Emergency power. An emergency((~~standby~~)) power system shall be provided. Where the emergency((~~standby~~)) system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour fire-resistance-rated fire barrier assemblies. System supervision with manual start and transfer features shall be provided at the fire command center.

604.2.14.1.1 Fuel supply. An on-premises fuel supply, sufficient for not less than 2-hour full-demand operation of the system, shall be provided.

((~~**Exception:** Where the system is supplied with pipeline natural gas and is approved.~~))

604.2.14.1.2 Capacity. The emergency((~~standby~~)) system shall have a capacity and rating that supplies all equipment required to be operational at the same time. The generating capacity is not required to be sized to operate all of the connected electrical equipment simultaneously.

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604.2.14.1.3 ((~~Connected facilities. Power and lighting facilities for the fire command center and elevators specified in Sections 403.8 and 403.9 of the *International Building Code*, as applicable, and electrically powered fire pumps required to maintain pressure, shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.~~)) Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10.
2. Elevator car lighting.
3. Emergency voice/alarm communications systems.
4. Automatic fire detection systems.
5. Fire alarm systems.
6. Power and lighting for the fire command center.
7. Lighting for mechanical rooms.
8. Electrically powered fire pumps.
9. Ventilation and automatic fire detection equipment for smokeproof enclosures.
10. Smoke control systems.
11. A selected elevator in each bank in accordance with Seattle Building Code Section 3016.7. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system—all elevators that respond to a single call button constitute a bank of elevators. All elevators shall be transferable to emergency power.

604.2.14.2 Separate circuits and fixtures. Separate lighting circuits and fixtures shall be required to provide sufficient light with an intensity of not less than 1 foot-candle (11 lux) measured at floor level in all means of egress corridors, stairways, smokeproof enclosures, elevator cars and lobbies, and other areas which are clearly a part of the escape route.

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((~~**604.2.14.2.1 Other circuits.** Circuits supplying lighting for the fire command center and mechanical equipment rooms shall be transferable to the standby source.~~))

((~~**604.2.14.3 Emergency systems.** Exit signs, exit illumination as required by Chapter 10, and elevator car lighting are classified as emergency systems and shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.~~

~~**Exception:** Exit sign, exit and means of egress illumination are permitted to be powered by a standby source in buildings of Group F and S occupancies.~~))

Section 136. Subsection 604.2.15 of the 2003 International Fire Code is amended as follows:

604.2.15 Underground buildings. Emergency ((~~and standby~~)) power systems in underground buildings covered in Chapter 4 of the *International Building Code* shall comply with Section((~~s~~)) 604.2.15.1, ((~~and 604.2.15.2.~~))

604.2.15.1 ((~~Standby~~))Emergency power. An emergency((~~standby~~)) power system complying with the ((~~ICC~~))*Electrical Code* shall be provided for ((~~standby~~))emergency power loads as specified in Section 604.2.15.1.1.

604.2.15.1.1 ((~~Standby~~))Emergency power loads. The following loads are classified as ((~~standby~~))emergency power loads:

1. Smoke control system.
2. Ventilation and automatic fire detection equipment for smokeproof enclosures.
3. Fire pumps.

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4. ((~~Standby~~))Emergency power shall be provided for elevators in accordance with Section 3003 of the *International Building Code*.

5. Emergency voice/alarm communication systems.

6. Fire alarm systems.

7. Automatic fire detection systems.

8. Elevator car lighting.

9. Means of egress lighting and exit sign illumination as required by Chapter 10.

((~~**[B] 604.2.15.1.2 Pickup time.** The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

~~**604.2.15.2 Emergency power.** An emergency power system complying with the ICC *Electrical Code* shall be provided for emergency power loads as specified in Section 604.2.15.2.1.~~

~~**604.2.15.2.1 Emergency power loads.** The following loads are classified as emergency power loads:~~

~~1. Emergency voice/alarm communication systems.~~

~~2. Fire alarm systems.~~

~~3. Automatic fire detection systems.~~

~~4. Elevator car lighting.~~

~~5. Means of egress lighting and exit sign illumination as required by Chapter 10.~~))

Section 137. Subsection 604.2.18 of the 2003 International Fire Code is amended as follows:

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604.2.18 Elevators. In buildings and structures where ((~~standby~~))emergency power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 604.2.18.1 through 604.2.18.4 and *Seattle Building Code* Section 3016.7.

604.2.18.1 Manual transfer. ((~~Standby~~))Emergency power shall be manually transferable to all elevators in each bank.

604.2.18.2 One elevator. Where only one elevator is installed, the elevator shall automatically transfer to ((~~standby~~))emergency power within ((~~60~~))10 seconds after failure of normal power.

604.2.18.3 Two or more elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to ((~~standby~~))emergency power within ((~~60~~))10 seconds after failure of normal power where the ((~~standby~~))emergency power source is of sufficient capacity to operate all elevators at the same time. Where the ((~~standby~~))emergency power source is not of sufficient capacity to operate all elevators at the same time, all elevators shall transfer to ((~~standby~~))emergency power in sequence, return to the designated landing and disconnect from the ((~~standby~~))emergency power source. After all elevators have been returned to the designated level, at least one elevator shall remain operable from the ((~~standby~~))emergency power source.

604.2.18.4 Venting. Where ((~~standby~~))emergency power is connected to elevators, the machine room ventilation or air conditioning shall be connected to the ((~~standby~~))emergency power source.

Section 138. A new subsection 604.2.19 is adopted to read as follows:

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604.2.19 Refrigeration systems. When treatment, detection, or continuous ventilation systems are required for refrigeration systems, such systems shall be connected to a secondary source of power to automatically supply electrical power in the event of loss from the primary source.

Section 139. Subsection 604.3.2 of the 2003 International Fire Code is amended as follows:

604.3.2 Written record. Written records of the inspection, testing and maintenance of emergency and standby power systems shall include the date of service, name of the servicing technician, a summary of conditions noted and a detailed description of any conditions requiring correction and what corrective action was taken. Such records shall be kept on the premises served by the emergency or standby power system and ((~~be available for inspection by~~))submitted to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 140. Subsection 605.1 of the 2003 International Fire Code is amended as follows:

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

Section 141. Subsection 605.3 of the 2003 International Fire Code is amended as follows:

605.3 Working space and clearance. A working space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided in

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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 ((~~ICC~~)) *Electrical Code*.
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).

* * *

Section 142. Subsection 605.4 of the 2003 International Fire Code is amended as follows:

605.4 Multiplug adapters. Multiplug adaptors, such as cube adaptors, unfused plug strips or any other device not complying with the ((~~ICC~~)) *Electrical Code* shall be prohibited.

* * *

Section 143. Subsection 605.9 of the 2003 International Fire Code is amended as follows:

605.9 Temporary wiring. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of the ((~~ICC~~)) *Electrical Code*.

Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities.

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Section 144. Subsection 606.8 of the 2003 International Fire Code is amended as follows:

606.8 Refrigerant detectors.

606.8.1 Within machinery rooms. Machinery rooms shall contain a refrigerant detector connected to an alarm system utilizing listed and approved fire alarm signaling devices capable of generating a sound level, distinctive from other alarm signals, of at least 15dB above the operating ambient sound pressure level of the space in which they are installed and initiating an approved distinctive visual alarm. ((~~with an audible and visual alarm.~~))

Where continuous mechanical ventilation is provided, failure of the ventilation system shall activate an audible and visual alarm.

The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant from a leak will concentrate. The alarm shall be actuated at a value not greater than the corresponding TLV-TWA values shown in the *International Mechanical Code* for the refrigerant classification.

Exception: Machinery room vapor detectors for ammonia systems shall actuate an alarm at a detection level not to exceed 1,000 ppm and shall automatically exhaust air from the machinery room in accordance with the International Mechanical Code Section 1105.6.4 for emergency conditions.

Detectors and alarms shall be placed in approved locations.

((~~**Exception:** Detectors are not required for ammonia systems where the machinery room complies with Section 1106.3 of the *International Mechanical Code.*~~))

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606.8.2 Outside of machinery rooms. Where evaporators and piping containing refrigerants in excess of the quantities in *International Mechanical Code* Table 1103.1 are located within rooms or spaces used exclusively for processing or storage of materials under refrigerated conditions, the refrigerated room or space shall be equipped with a refrigerant-vapor detector and alarm system complying with Section 606.8.1.

Activation of the refrigerant detector shall also automatically stop the flow of refrigerant to evaporators within the space and stop the flow of refrigerant in all supply lines leaving a machinery room whenever the refrigerant vapor concentration is detected at or above 50 percent of the IDLH or 25 percent of the LFL, whichever is lower.

Section 145. Subsection 606.15 of the 2003 International Fire Code is amended as follows:

606.15 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 requirements of the ((~~ICC~~)) *Electrical Code*.

Exception: Ammonia machinery rooms that are provided with ventilation in accordance with Section 1106.3 of the *International Mechanical Code*.

Section 146. A new subsection 606.16 is adopted to read as follows:

606.16 Secondary power source. When treatment, detection, continuous ventilation or alarm systems are required, such systems shall be connected to a secondary source of power to automatically supply electrical power in the event of loss of power from the primary source. See Section 604.2 and the Electrical Code.

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Section 147. Subsection 607.1 of the 2003 International Fire Code is amended as follows:

607.1 Required. Existing elevators with a travel distance of 25 level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.

Exception: Phase I recall will be initiated on any activation of the building's fire alarm system.

Section 148. Subsection 608.3 of the 2003 International Fire Code is amended as follows:

608.3 Room design and construction. Enclosure of stationary lead-acid system rooms shall comply with the *International Building Code*. See SBC Section 302. The battery systems are permitted to be in the same room with the equipment they support.

Section 149. Subsection 609.4 of the 2003 International Fire Code is amended as follows:

609.4 Room design and construction. Enclosure of VRLA battery system rooms shall comply with the *International Building Code*. See SBC Section 302. The battery systems are permitted to be in the same room with the equipment they support. When VRLA battery systems are installed in a separate equipment room accessible only to authorized personnel, they shall be allowed to be installed on an open rack for ease of maintenance. When a VRLA battery system is situated in an occupied work center, it shall be housed in a noncombustible cabinet or other enclosure to prevent access by unauthorized personnel.

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Section 150. Subsection 610.1 of the 2003 International Fire Code is amended as follows:

[M] 610.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this code and the *International Mechanical Code.* See also Section 904.11.

Section 151. A new subsection 803.1.4 is adopted to read as follows:

803.1.4 Atria

803.1.4.1 Fuel load. Combustible furnishings and decorative materials within atria shall be approved when located within an area that is more than 20 feet (6096 mm) below ceiling level sprinklers.

803.1.4.2 Decorative materials. Decorative material in atria shall be non-combustible, flame resistant or treated with a flame-retardant.

Section 152. Subsection 804.1 of the 2003 International Fire Code is amended as follows:

804.1 Natural cut trees. Natural cut trees, where permitted by this section, shall have the trunk bottoms cut off at least 0.5 inch (12.7 mm) above the original cut and shall be placed in a support device complying with Section 804.1.2.

804.1.1 Restricted occupancies. Natural cut trees shall be prohibited in Group ((~~A, E,~~)) 1-1, 1-2, 1-3, 1-4, LC, ((~~M, R-1, R-2~~)) and R-4 occupancies.

((~~**Exception:** Trees located in areas protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 shall not be prohibited in Groups A, E, M, R-1 and R-2~~)).

804.1.2 Support devices. The support device that holds the tree in an upright position shall be of a type that is stable and that meets all of the following criteria:

1. The device shall hold the tree securely and be of adequate size to avoid tipping over of the tree.

2. The device shall be capable of containing a minimum ((~~2-day~~)) supply of water in accordance with Table 804.1.2

3. The water level, when full, shall cover the tree stem at least 2 inches (51 mm). The water level shall be maintained above the fresh cut and checked at least once daily.

TABLE 804.1.2—SUPPORT STAND WATER CAPACITY

TREE STEM DIAMETER (inches)	MINIMUM SUPPORT STAND WATER CAPACITY (gallons)	TYPICAL DAILY WATER EVAPORATION AMOUNT (gallons)
Up to 4	1	¼ to 1
4 to 6	1-1/2	1-1/4 to 1-1/2
7 to 8	2	1-3/4 to 2
9 to 12	3	2-1/4 to 3
13 and over	4	Over 3

804.1.3 Dryness. The tree shall be removed from the building whenever the tree is determined to be dry by a needle pliability, discoloration or other approved means as approved by the fire code official ((~~needles or leaves fall off readily when a tree branch is shaken or if the needles are brittle and break when bent between the thumb and index finger~~)). The tree shall be checked daily for dryness.

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Section 153. Subsection 901.1 of the 2003 International Fire Code is amended as follows:

901.1 Scope. The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all fire protection systems. For the purposes of this chapter, fire walls not located on a property line shall not constitute a separate building.

Section 154. Subsection 901.4 of the 2003 International Fire Code is amended as follows:

901.4 Installation. Individuals who install, service, or maintain life safety systems and equipment shall obtain the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

Fire protection systems shall be maintained in accordance with the original installation standards for that system. Required systems shall be extended, altered, or augmented as necessary to maintain and continue protection whenever the building is altered, remodeled or added to. Alterations to fire protection systems shall be done in accordance with applicable standards.

* * *

Section 155. Subsection 901.5 of the 2003 International Fire Code is amended as follows:

901.5 Installation acceptance testing. Fire detection and alarm systems, fire-extinguishing systems, 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. Individuals who perform acceptance tests on fire and life safety systems shall obtain the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

* * *

Section 156. Subsection 901.6 of the 2003 International Fire Code is amended as follows:

901.6 Inspection, testing and maintenance. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Fire and life safety systems shall be confidence tested in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*. Nonrequired fire protection systems and equipment shall be inspected, tested and maintained in an operative condition or removed when approved by the code official.

* * *

Section 157. Subsection 901.6.2 of the 2003 International Fire Code is amended as follows:

901.6.2 Records. Records of all system inspections, tests, and maintenance required by the referenced standards shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request. In addition, confidence test documentation shall be submitted to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

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Section 158. Subsection 901.7 of the 2003 International Fire Code is amended as follows:

901.7 Systems out of service. Where a ((~~required~~)) fire protection system is out of service the procedures detailed in Administrative Rule 9.06.04 *Out-Of-Service Fire Alarm, Standpipe, Fire Sprinkler and Emergency Alarm Systems* shall be implemented. ((~~, 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.

* * *

Section 159. Section 902 of the 2003 International Fire Code is amended by adding thereto definitions for FIRE DETECTION SYSTEM and PORTABLE SCHOOL CLASSROOM to read as follows:

* * *

FIRE DECTION SYSTEM: A system of smoke or heat detectors monitored at an approved central station, with no requirement for notification appliances in the building.

* * *

[W] PORTABLE SCHOOL CLASSROOM A structure, transportable in one or more sections, which requires a chassis to be transported, and is designed to be used as an educational space with or without a permanent foundation. The structure shall be trailerable and capable of being demounted and relocated to other locations as needs arise.

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Section 160. Subsection 903.2 of the 2003 International Fire Code is amended as follows:

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

Exception: Spaces or areas ((~~in telecommunications buildings~~)) used exclusively for telecommunications equipment, associated electrical power distribution equipment, and batteries ((~~and standby engines~~)), provided those spaces or areas are equipped throughout with an automatic ((~~fire alarm~~)) smoke detection system and are separated from the remainder of the building by a wall with a fire-resistance rating of not less than 1 hour and a floor/ceiling assembly with a fire-resistance rating of not less than 2 hours.

* * *

Section 161. Subsection 903.2.1.2 of the 2003 International Fire Code is amended as follows:

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (464.5 m^2);
2. The fire area has an occupant load of ((~~300~~)) 100 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Item 3 does not apply to fire areas that include space located one floor above the level of exit discharge where the occupant load of the upper floor is less than 50.

Section 162. Subsection 903.2.2 of the 2003 International Fire Code is amended as follows:

[W] 903.2.2 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m^2) in area.
2. Throughout every portion of educational buildings below the level of exit discharge.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

3. Throughout all newly constructed Group E Occupancies having an occupant load of 50 or more for more than 12 hours per week or four hours in any one day. A minimum water supply meeting the requirements of NFPA 13 shall be required. The fire code official may reduce fire flow requirements for buildings protected by an approved automatic sprinkler system.

For the purpose of this section, additions exceeding 60 percent of the value of such building or structure, or alterations and repairs to any portion of a building or structure within a twelve-month period that exceeds 100 percent of the value of such building or structure shall be considered new construction. In the case of additions, fire walls shall define separate buildings.

Exceptions:

1. Portable school classrooms , provided aggregate areas of clusters of portable school classrooms does not exceed 5,000 square feet (1465$m^{2)}$; and clusters of portable school classrooms shall be separated as required in Chapter 5 of the *Seattle Building Code.*
2. Group E Day Care.

When not required by other provisions of this chapter, a fire-extinguishing system installed in accordance with NFPA 13 may be used for increases and substitutions allowed in

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Section 504.2, 506.3 and Table 601 of the *Seattle Building Code.*

Section 163. Subsection 903.2.5 of the 2003 International Fire Code is amended as follows:

903.2.5.1 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed in Group I-1 facilities.

Section 164. A new subsection 903.2.5.2 is adopted to read as follows:

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

Exception: An automatic sprinkler system need not be installed in any Group LC Occupancy licensed for six or fewer clients.

Section 165. A new subsection 903.2.6.2 is adopted to read as follows:

903.2.6.2 Covered Mall Buildings. The covered mall building and buildings connected shall be provided throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, which shall comply with the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the covered mall building prior to occupancy of any tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with alternate protection, as approved by the fire code official.
2. Sprinkler protection for the mall 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 by separate shut off valves.

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Exception: An automatic sprinkler system shall not be required in spaces or areas of open parking garages constructed in accordance with Section 406.3 of the Seattle Building Code.

Section 166. Subsection 903.2.7 of the 2003 International Fire Code is amended as follows:

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

Exception: Buildings complying with the *International Residential Code* and Chapter 5 of this code are not required to be sprinklered.

Section 167. A new subsection 903.2.8.3 is adopted to read as follows:

903.2.8.3 Liquor Warehouses. An automatic sprinkler system shall be installed in liquor warehouses.

Point of Information
Stockrooms of retail liquor sales outlets are not liquor warehouses.

Section 168. Subsection 903.2.10.1.1 of the 2003 International Fire Code is amended as follows:

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

Section 169. New subsections 903.2.10.4, 903.2.10.5, 903.2.10.6, 903.2.10.7, 903.2.10.8 and 903.2.10.9 are adopted to read as follows:

903.2.10.4 Basement storage and sale of combustible materials. An automatic sprinkler system shall be installed throughout basements that are not stories above grade plane that are used for storage or sale of combustible materials.

Exceptions:

1. Sprinklers are not required in portions of the basement not containing combustible materials and protected by a fire barrier with at least a one-hour fire-resistance rating.
2. Sprinklers are not required in storage rooms meeting the following criteria:
   - 2.1. The area of the room does not exceed 500 square feet;
   - 2.2. The room is protected by a fire barrier with at least a one-hour fire-resistance rating;
   - 2.3. The room contains no material classified as a flammable liquid, hazardous material or highly combustible material;
   - 2.4. The room is served by exterior fire access or interior access by a one-hour fire-resistance rated corridor.
   - 2.5 No more than three such rooms are permitted in any one basement.

903.2.10.5 High-rise buildings. High-rise 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 903.3.5.2.

Exception: An automatic sprinkler system shall not be required in spaces or areas used exclusively for telecommunications equipment, associated electrical power distribution equipment, and batteries, provided those spaces or areas are equipped throughout with an automatic smoke detectors and are separated from the remainder of the building by a wall

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with a fire-resistance rating of not less than 1 hour and a floor/ceiling assembly with a fire-resistance rating of not less than 2 hours.

903.2.10.5.1 High-rise building sprinkler system design. Combination standpipe/sprinkler risers in high-rise buildings using 6 in. pipe minimum, shall be used with the sprinkler system interconnected between and served from two standpipe risers. Shut-off valves, water-flow devices, and check valves (or pressure reducing valves) shall be provided on each floor at the sprinkler system connection to each standpipe. Two four-way fire department connections 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.

Exception: Dry pipe sprinkler systems serving parking garages may be supplied separately from the standpipe risers and use a single, separate two-way fire department connection.

903.2.10.6 Atriums. An approved automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed throughout buildings containing an atrium.

Exceptions:

1. That area of the building adjacent to or above the atrium need not be sprinklered provided that portion of the building is separated from the atrium portion by a 2-hour fire barrier wall or horizontal assembly or both.
2. Where the ceiling of the atrium is more than 55 feet (16,764 mm) above any floor area open to the atrium, sprinkler protection at the ceiling of the atrium is not required.

903.2.10.7 Special amusement buildings. Special amusement buildings shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where the

special amusement building is temporary, the sprinkler water supply shall be of an approved temporary means.

Exception: Automatic fire sprinklers are not required where the total floor area of a temporary special amusement building is less than 1,000 square feet (93 m 2) and the travel distance from any point to an exit is less than 50 feet (15 240 mm).

903.2.10.8 Stages. Stages shall be equipped with an automatic fire-extinguishing system in accordance with Chapter 9. The system shall be installed under the roof and gridiron, in the tie and fly galleries and in places behind the proscenium wall of the stage and in dressing rooms, lounges, workshops and storerooms accessory to such stages.

Exceptions:

1. Sprinklers are not required under stage areas less than 4 feet (1219 mm) in clear height utilized exclusively for storage of tables and chairs, provided the concealed space is separated from the adjacent spaces by not less than 5 /8 -inch (15.9 mm) Type X gypsum board.
2. Sprinklers are not required for stages 1,000 square feet (93 m 2) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs and a single backdrop.

903.2.10.9 Underground buildings. The highest level of exit discharge serving the underground portions of an underground building and all levels below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1. Water-flow switches and control valves shall be supervised in accordance with Section 903.4.

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Section 170. Subsection 903.3.1 of the 2003 International Fire Code is amended as follows:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Sections 903.3.1.1, 903.3.1.2 or 903.3.1.3, except as required by Administrative Rule 9.03.04 *Automatic Sprinklers and Standpipes*.

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.

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. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

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Section 171. Subsection 903.3.1.2 of the 2003 International Fire Code is amended as follows:

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in LC Occupancies and buildings of Group R, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R.

~~((**903.3.1.2.1 Balconies.** Sprinkler protection shall be provided for exterior balconies and ground floor patios of dwelling units where the building is of Type V construction. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members, and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies that are constructed of open wood joist construction.))~~

Section 172. Subsection 903.3.1.3 of the 2003 International Fire Code is amended as follows:

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one- and two-family dwellings, and townhouses where each unit has its own water service and when approved by the fire code official, shall be installed throughout in accordance with NFPA 13D.

Section 173. Subsection 903.3.2 of the 2003 International Fire Code is amended as follows:

903.3.2 Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

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1. Throughout all spaces within a smoke compartment containing patient sleeping units in Group I-2 in accordance with the *International Building Code.*
2. Dwelling units and sleeping units in Group R, LC and I-1 occupancies.
3. Light-hazard occupancies as defined in NFPA 13.

Section 174. Subsection 903.3.3 of the 2003 International Fire Code is amended 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 ((~~with due regard to obstructions that will delay activation or obstruct the water distribution pattern.~~)) In addition, ((A))automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width and depth. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exceptions:

1. Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.
2. Temporary covered booths, kiosks, or concession stands less than 300 square feet in area that are in spaces operating under a temporary place of assembly permit.

Section 175. Subsection 903.3.5.1.2 of the 2003 International Fire Code is amended as follows:

903.3.5.1.2 ((~~Residential e~~))Combination services. A single combination water supply shall be permitted for buildings that are not high-rise buildings provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

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Section 176. Subsection 903.3.5.2 of the 2003 International Fire Code is amended as follows:

903.3.5.2 Secondary water supply. A secondary on-site water supply ((~~equal~~)) of at least 15,000 gallons automatically available to the sprinkler system ((~~to the hydraulically calculated sprinkler demand, including the hose stream requirement,~~)) shall be provided for high-rise buildings. ((~~in Seismic Design Category C, D, E or F as determined by the *International Building Code*. The secondary water supply shall have a duration not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.~~))

Exception: Existing buildings including those undergoing substantial renovation.

Section 177. A new subsection 903.3.8 is adopted to read as follows:

903.3.8 System Type. Sprinkler systems protecting dwelling units and sleeping units shall be wet pipe systems.

Section 178. A new subsection 903.3.9 is adopted to read as follows:

903.3.9 Balconies. Sprinkler protection shall be provided for exterior balconies and ground floor patios of dwelling units where the building has combustible exterior siding, and the balcony or patio is recessed 4 feet (1.2 m) or more into the building, the roof or balcony above exceeds 4 feet (1.2 m) in depth, or the deck is enclosed. A deck is enclosed if less than 25% of its perimeter is open to the exterior. Solid railings less than 4 feet (1.2 m) in height are not considered enclosures. Storage closets on decks shall be sprinklered. Sprinklers shall be installed in accordance with NFPA 13 and the listing requirements of the sprinkler head.

Section 179. Subsection 903.4 of the 2003 International Fire Code is amended as follows:

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

Exceptions:

1. Non-required ((A))automatic sprinkler systems protecting one- and two-family dwellings.
2. Limited area systems serving fewer than 20 sprinklers.
3. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the automatic sprinkler system, and a separate shutoff valve for the automatic sprinkler system is not provided.
4. Jockey pump control valves that are sealed or locked in the open position.
5. Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.
6. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
7. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.

Section 180. Subsection 903.4.1 of the 2003 International Fire Code is amended as follows:

903.4.1 Signals. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to a central station service that is listed in the current edition of the Underwriter's Laboratories *Fire Protection Equipment Directory* under the category Central Station (UUFX) as a Full Service Company or as a Monitoring Company. Fire alarm systems in high-rise buildings and Group I and Group A occupancies (other than A-5) shall be monitored by a central station service that is listed in the current edition of the Underwriter's Laboratories *Fire Protection Equipment Directory* under the category Central Station (UUFX) as a Full

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Service Company or as a Fire Alarm Service – Local Company which subcontracts the monitoring, retransmission, and associated record keeping and reporting to a listed Full Service Company or Monitoring Company. The listing shall indicate that the Full Service Company or Fire Alarm Service – Local Company provides service to the Seattle area. ((~~an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.~~))

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves, located in limited area sprinkler system supply piping, shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

Section 181. Subsection 904.3 of the 2003 International Fire Code is amended as follows:

904.3 Installation. Automatic fire-extinguishing systems shall be installed in accordance with this section by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.

* * *

Section 182. Subsections 904.5, 904.6 and 904.7 of the 2003 International Fire Code are amended as follows:

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904.5 Wet-chemical systems. Wet-chemical extinguishing systems shall be installed, maintained, periodically inspected and tested in accordance with NFPA 17A and their listing by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

904.5.1 System test. Systems shall be inspected and tested for proper operation at 6-month intervals by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*. Tests shall include a check of the detection system, alarms and releasing devices, including manual stations and other associated equipment. Extinguishing system units shall be weighed and the required amount of agent verified. Stored pressure-type units shall be checked for the required pressure. The cartridge of cartridge-operated units shall be weighed and replaced at intervals indicated by the manufacturer. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

904.5.2 Fusible link maintenance. Fixed temperature-sensing elements shall be maintained to ensure proper operation of the system.

904.6 Dry-chemical systems. Dry-chemical extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 17 and their listing.

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904.6.1 System test. Systems shall be inspected and tested for proper operation at 6-month intervals. Tests shall include a check of the detection system, alarms and releasing devices, including manual stations and other associated equipment. Extinguishing system units shall be weighed, and the required amount of agent verified. Stored pressure-type units shall be checked for the required pressure. The cartridge of cartridge-operated units shall be weighed and replaced at intervals indicated by the manufacturer. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

904.6.2 Fusible link maintenance. Fixed temperature-sensing elements shall be maintained to ensure proper operation of the system.

904.7 Foam systems. Foam-extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 11, NFPA 11A and NFPA 16 and their listing.

904.7.1 System test. Foam-extinguishing systems shall be inspected and tested at intervals in accordance with NFPA 25. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 183. Subsection 904.8 of the 2003 International Fire Code is amended as follows:

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904.8 Carbon dioxide systems. Carbon dioxide extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12 and their listing.

* * *

Section 184. Subsection 904.8.1 of the 2003 International Fire Code is amended as follows:

904.8.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 185. Subsection 904.9 of the 2003 International Fire Code is amended as follows:

904.9 Halon systems. Halogenated extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12A and their listing.

* * *

Section 186. Subsection 904.9.1 of the 2003 International Fire Code is amended as follows:

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904.9.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 187. Subsection 904.10 of the 2003 International Fire Code is amended as follows:

904.10 Clean-agent systems. Clean-agent fire-extinguishing systems shall be installed, maintained, periodically inspected and tested by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 2001 and their listing.

* * *

Section 188. Subsection 904.10.1 of the 2003 International Fire Code is amended as follows:

904.10.1 System test. Systems shall be inspected and tested for proper operation at 12-month intervals. Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

Section 189. Subsection 904.11 of the 2003 International Fire Code is amended as follows:

904.11 Commercial cooking systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems of the type and arrangement protected. Preengineered automatic dry- and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. Other types of automatic fire-extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations. The system

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shall be installed by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with this code, its listing and the manufacturer's installation instructions. Automatic fire-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

1. Carbon dioxide extinguishing systems, NFPA 12.
2. Automatic sprinkler systems, NFPA 13.
3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
4. Dry-chemical extinguishing systems, NFPA 17.
5. Wet-chemical extinguishing systems, NFPA 17A.

Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 197 and listed, labeled and installed in accordance with Section 304.1 of the *International Mechanical Code*.

* * *

Section 190. Subsection 904.11.6.4 of the 2003 International Fire Code is amended as follows:

904.11.6.4 Extinguishing system service. Automatic fire-extinguishing systems shall be serviced by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a certificate of inspection shall be forwarded to the fire code official upon completion in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety System*.

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Section 191. Subsection 905.2 of the 2003 International Fire Code is amended as follows:

905.2 Installation standards. Standpipe systems shall be installed in accordance with this section and NFPA 14, and Administrative Rule 9.03.04 *Automatic Sprinklers and Standpipes*.

Section 192. Subsection 905.3.2 of the 2003 International Fire Code is amended as follows:

905.3.2 Group A. Class I automatic or manual wet standpipes shall be provided in nonsprinklered Group A buildings having an occupant load exceeding 1,000 persons.

Exception((s)):

((~~1.~~))Open-air-seating spaces without enclosed spaces.

((~~2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 75 feet (22 860 mm) or less above the lowest level of fire department vehicle access.~~))

Section 193. Subsection 905.3.3 of the 2003 International Fire Code is amended as follows:

905.3.3 Covered mall buildings. A covered mall building shall be equipped throughout with a class I manual standpipe system with ((~~where required by Section 905.3. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3 shall be equipped with Class I hose connections connected to a system sized to deliver 250 gallons per minute (946.4 L/min) at the most hydraulically remote outlet. H~~)) hose connections ((~~shall be~~)) provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.

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Section 194. A new subsection 905.3.7 is adopted to read as follows:

905.3.7 High-rise building standpipes. Standpipe risers in high-rise buildings shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 in. Two 2 ½ in. hose connections shall be provided on every intermediate floor level landing in every required stairway. Where pressure reduction valves (prv) 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.

Section 195. Subsection 905.4 of the 2003 International Fire Code is amended as follows:

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

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.
3. In every exit passageway at the entrance from the exit passageway to other areas of a building.
4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall, and at each floor-level landing within enclosed stairways opening directly onto the mall.
5. ((~~Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each~~)) At least one standpipe shall be provided with ((a)) two 2½ in. hose connections located ((~~either~~)) on the roof at least 10 feet (3048 mm) from the roof edge,

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skylight, light well or other opening, unless protected by a 42 in. high guardrail or equivalent. Additional roof connections shall be provided so that all portions of the roof are within 200 ft. of hose travel distance from a standpipe hose connection. Where stairs are required to provide roof access, the standpipe roof connections shall be located adjacent to the stair opening.

The roof hose connections shall be arranged to be operable without entering the building.

Roof connections in high-rise buildings are allowed to be located ((~~or~~)) at the highest landing of stairways 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 protected locations that are accessed through protected enclosures. Additional hose connections in parking garages are not required to be accessed through or located in protected enclosures. Protected enclosures and protected locations are either smoke barriers or exit enclosures constructed in accordance with the *Seattle Building Code*. ((~~the fire code official is authorized to require that additional hose connections be provided in approved locations.~~))

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Section 196. Subsections 905.8 and 905.9 of the 2003 International Fire Code are amended as follows:

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905.8 Dry standpipes. Dry standpipes are acceptable in other than high-rise buildings. ((~~shall not be installed.~~

~~**Exception:** Where subject to freezing and in accordance with NFPA 14.~~))

905.9 Valve supervision. Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall also be transmitted to the control unit.

Exceptions:

1. Valves to underground key or hub valves in roadway boxes provided by the municipality or public utility do not require supervision.
2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system nor provided with monitoring by a central station service.

Section 197. Subsection 906.1 of the 2003 International Fire Code is amended as follows:

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

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

Exception: Fire extinguishers are not required for residential buildings that do not have interior common space, such as townhouses. ((~~In all Group A, B and E occupancies equipped throughout with quick- response sprinklers, fire extinguishers shall be required only in special hazard areas.~~))

2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or combustible liquids are stored, used or dispensed.

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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.

Section 198. Subsection 907.1 of the 2003 International Fire Code is amended as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures, and new fire alarm systems being installed in existing structures. The requirements of Section 907.3 are applicable to existing buildings and structures. All fire alarm and fire detection systems shall be designed, installed and maintained in accordance with the requirements of NFPA 72, except for the locations of initiating devices which shall meet Section 907 of the Seattle Fire Code.

Buildings required by this section to be provided with a fire alarm system shall be provided with a single fire alarm system.

Exception: A single system is not required in existing buildings that are being increased in size and the existing fire alarm system is unable to expand into the new space. In those cases the multiple systems shall be arranged as described below for non- required fire alarm systems.

Buildings not required by this section to be provided with a fire alarm system may be provided with multiple partial fire alarm systems provided:

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1. The systems are connected so that all systems simultaneously activate alarm notification appliances upon a signal from any of the fire alarm systems in the building.

2. The location of each systems annunciator panel (or main panel) is also provided with annunciator panels with reset capability for every other system in the building.

* * *

Section 199. Subsection 907.2 of the 2003 International Fire Code is amended as follows:

907.2 Where required—new buildings and structures. An approved manual, automatic, or manual and automatic fire alarm system shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23. Where automatic sprinkler protection installed in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

((~~An approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances and equipment shall comply with Section 907.1.2. The automatic fire detectors shall be smoke detectors, except that an approved alternative type of detector shall be installed in spaces such as boiler rooms where, during normal operation, products of combustion are present in sufficient quantity to actuate a smoke detector.~~))

* * *

Section 200. Subsection 907.2.5 of the 2003 International Fire Code is amended as follows:

907.2.5 Group H. A manual fire alarm system shall be installed in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings. An automatic

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smoke detection system shall be installed ((~~for~~)) in spaces containing highly toxic gases, organic peroxides and oxidizers in accordance with Chapters 37, 39 and 40, respectively.

Section 201. Subsections 907.2.6 of the 2003 International Fire Code is amended as follows:

907.2.6 Group I. A manual fire alarm system and an automatic ((~~fire~~)) smoke detection system shall be installed in Group I occupancies. An electrically supervised, automatic smoke detection system shall be provided in waiting areas that are open to corridors.

Exception: Manual fire alarm boxes in patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.1 are not exceeded.

* * *

Section 202. Subsection 907.2.6.1 of the 2003 International Fire Code is amended as follows:

907.2.6.1 Group I-2. Corridors in nursing homes (both intermediate care and skilled nursing facilities), detoxification facilities and spaces open to the corridors shall be equipped with an automatic ((~~fire~~)) smoke detection system.

Exceptions:

1. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each patient sleeping unit and shall provide an audible and visual alarm at the nursing station attending each unit.

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2. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping unit doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

Section 203. Subsection 907.2.7 of the 2003 International Fire Code is amended as follows:

907.2.7 Group M. A manual fire alarm system shall be installed in Group M occupancies, other than covered mall buildings complying with Section 402 of the *International Building Code*, having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge. See section 907.2.20 for covered mall building fire alarm requirements.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system and the alarm notification appliances will activate upon sprinkler water flow.

((~~**907.2.7.1 Occupant notification.** During times that the building is occupied, in lieu of the automatic activation of alarm notification appliances, the manual fire alarm system shall be allowed to activate an alarm signal at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.2.12.2. 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.~~))

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Section 204. Subsection 907.2.8.1 of the 2003 International Fire Code is amended as follows:

907.2.8.1 Manual and automatic fire alarm system. A ((~~manual~~)) fire alarm system shall be installed in Group R-1 occupancies.

Exceptions:

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

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

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

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

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

Section 205. Subsection 907.2.8.2 of the 2003 International Fire Code is amended as follows:

907.2.8.1.1((~~2~~)) Automatic ((~~fire alarm~~)) detection ((~~system~~)). ((~~An a~~)) Automatic ((~~fire alarm system~~)) smoke detectors shall be installed throughout all interior corridors serving guestrooms. Automatic heat detectors shall be provided in any unsprinklered interior areas outside guestrooms other than attics and crawl spaces.

Exception: ((~~An automatic fire detection system is~~)) Smoke detectors are not required in buildings that do not have interior corridors serving guestrooms and each guestroom has a means of egress door opening directly to an exterior exit access that leads directly to an exit.

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Section 206. Subsection 907.2.8.3 of the 2003 International Fire Code is amended as follows:

907.2.8.1.2((3)) Smoke alarms. Smoke alarms shall be installed as required by Section 907.2.10. In buildings that are not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the smoke alarms in guestrooms shall be connected to an emergency electrical system and shall be annunciated by guestroom at a constantly attended location from which the fire alarm system is capable of being manually activated.

Section 207. Subsection 907.2.9 of the 2003 International Fire Code is amended as follows:

907.2.9 Group R-2. A manual and automatic fire alarm system shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

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

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

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

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

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

~~3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Sections 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1022.6, Exception 4.~~))

Section 208. A new subsection 907.2.9.1 is adopted to read as follows:

907.2.9.1 Automatic detection. Automatic heat detectors shall be provided in any unsprinklered interior areas outside dwelling units other than attics and crawl spaces.

Section 209. Subsection 907.2.12 of the 2003 International Fire Code is amended as follows:

907.2.12 High-rise buildings. Buildings having floors used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communication system in accordance with Section 907.2.12.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412 of the *International Building Code*.
2. Open parking garages in accordance with Section 406.3 of the *International Building Code*.

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3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code.*

4. Low-hazard special occupancies in accordance with Section 503.1.2 of the *International Building Code.*

((~~5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code.*~~))

Section 210. Subsection 907.2.12.1 of the 2003 International Fire Code is amended as follows:

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

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

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Section 211. Subsection 907.2.12.2 of the 2003 International Fire Code is amended as follows:

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

((~~1. Elevator lobbies.~~

~~2. Corridors.~~

~~3. Rooms and tenant spaces exceeding 1,000 square feet (93 m^2) in area.~~

~~4. Dwelling units and sleeping units in Group R-2 occupancies.~~

~~5. Sleeping units in Group R-1 occupancies.~~

~~6. Areas of refuge as defined in Section 1002.~~))

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

Section 212. Subsection 907.2.12.3 of the 2003 International Fire Code is amended as follows:

907.2.12.3 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 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms,

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areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway. Eight portable handsets for the communication system shall be provided in the fire command center.

Exception: Fire department radio systems where approved by the fire department.

Section 213. Subsection 907.2.18.1 of the 2003 International Fire Code is amended as follows:

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

1. ((~~Mechanical equipment, e~~)) Electrical, transformer, 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 m^3/s) and serving not more than 10 air inlet openings.
5. Within 5 feet (1524 mm) of doors exiting into stairways that are smokeproof enclosures or are pressurized stairways.

Section 214. A new subsection 907.2.24 is adopted to read as follows:

907.2.24 Group LC. Fire alarm systems shall be installed in Group LC occupancies that are three or more stories above grade plane in height or have more than 16 clients. The alarm system shall include manual pull stations at every exit from every level and smoke detectors throughout exit paths.

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Section 215. Subsection 907.4.1 of the 2003 International Fire Code is amended as follows:

907.4.1 Location. Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each exit at every floor level. Additional manual fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet (60 960 mm).

Exception: Manual fire alarm boxes are not required on sprinklered floors of Group F, M, S and B occupancies, other than Group B laboratory facilities. ((~~shall not be required in Group E occupancies where the building is equipped throughout with an approved automatic sprinkler system, the notification appliances will activate on sprinkler water flow and manual activation is provided from a normally occupied location.~~))

Section 216. Subsection 907.7 of the 2003 International Fire Code is amended as follows:

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

1. ((~~Required automatic fire alarm system.~~)) Automatic heat and smoke detectors, other than duct detectors, and dwelling unit smoke alarms.
2. Sprinkler water-flow devices.
3. ((~~Required m~~))Manual fire alarm boxes.
4. Any other fire suppression system installed within the building, except for laboratory fume hood suppression systems.

Section 217. Subsection 907.9.1 of the 2003 International Fire Code is amended as follows:

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907.9.1 Annunciator panel. ((~~**Zoning indicator panel.** A zoning indicator panel and the associated controls shall be provided in an approved location.~~)) Annunciator panels shall be located inside the building at the main entrance. The fire code official may approve exterior annunciator panels designed specifically for that purpose. Graphic annunciators, when provided, shall be mounted to maintain the viewer's directional orientation. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of an audible-alarm silencing switch.

Alarm panels and annunciators shall not be installed where they would obstruct exiting. The required exit width plus 12 inches shall be provided when the panel is located in a means of egress. Alarm panels shall not be installed in an exit enclosure providing the sole exit from any space.

Section 218. Subsection 907.10.2 of the 2003 International Fire Code is amended as follows:

907.10.2 Audible alarms. Audible alarm notification appliances shall be provided and sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. 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 occupied space within the building, or in the case of non-required partial fire alarm systems, throughout the space that is being provided with the fire alarm system. The minimum sound pressure levels shall be: 70 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. The maximum sound pressure level for audible alarm notification appliances shall be 120 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances

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shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required. In assembly facilities with high sound levels such as nightclubs, bars, etc. an interface shall be provided between the fire alarm system and noise source to reduce the noise level upon activation of the fire alarm system.

Exceptions:

1. Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.
2. Audibility is not required for fire detection systems monitored by an approved central station.

Section 219. A new subsection 907.2.10.2.1 is adopted to read as follows:

907.10.2.1 Audible alarms in existing buildings. Required fire alarm systems in existing residential buildings shall provide a sound level of 60 dBa minimum or 15 dBa above ambient noise levels in sleeping rooms.

Section 220. Subsection 907.12 of the 2003 International Fire Code is amended as follows:

907.12 Duct smoke detectors. Duct smoke detectors shall be connected to the building's fire alarm control panel as a supervisory signal when a fire alarm system is provided. Duct detectors shall not activate a fire alarm signal. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors are monitored by a central station alarm service ((~~activate the building's alarm notification appliances~~)).

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2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Section 221. Subsection 907.15 of the 2003 International Fire Code is amended as follows:

907.15 Monitoring. Where required by this chapter or by the *International Building Code*, an approved supervising station in accordance with NFPA 72 shall monitor fire alarm systems.

Exception: Supervisory service is not required for:

1. Single- and multiple-station smoke alarms required by Section 907.2.10.
2. Smoke detectors in Group I-3 occupancies.
3. Non-required ((A))automatic sprinkler systems in one- and two-family dwellings.

Section 222. Subsection 907.17 of the 2003 International Fire Code is amended as follows:

907.17 Acceptance tests. Upon completion of the installation of the fire alarm system and after the electrical inspector has signed off on the installation, alarm notification appliances and circuits, alarm-initiating devices and circuits, supervisory-signal initiating devices and circuits, signaling line circuits, and primary and secondary power supplies shall be tested in accordance with NFPA 72 in the presence of the fire code official, by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.

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Section 223. Subsection 907.20 of the 2003 International Fire Code is amended as follows:

907.20 Inspection, testing and maintenance. The maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with this section and Chapter 7 of NFPA 72. The systems shall be worked on only by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.* Documentation of testing shall be forwarded to the fire code official in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems.*

* * *

Section 224. A new subsection 907.21 is adopted to read as follows:

907.21 Fire Alarm Equipment. Alarm-initiating devices, alarm-signaling devices, and annunciators shall not be concealed, obstructed, deactivated, or impaired.

Exception: When authorized by the fire code official.

Fire alarm equipment shall not be reset upon activation unless authorized by the fire code official.

Section 225. Subsections 909.1 and 909.2 of the 2003 International Fire Code are amended as follows:

[B] 909.1 Scope and purpose. This section applies to mechanical or passive smoke control systems when they are required for new buildings or portions thereof by provisions of the *International Building Code* or 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.

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These provisions are not intended for the preservation of contents, the timely restoration of operations, or for assistance in fire suppression or overhaul activities. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-venting provisions found in Section 910. Mechanical smoke control systems shall not be considered exhaust systems under Chapter 5 of the *International Mechanical Code*.

[B] 909.2 General design requirements. Buildings, structures, or parts thereof required by the *International Building Code* or this code to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of Section 909 and the generally accepted and well-established principles of engineering relevant to the design. The construction documents shall include sufficient information and detail to describe adequately the elements of the design necessary for the proper implementation of the smoke control systems. These documents shall be accompanied with sufficient information and analysis to demonstrate compliance with these provisions.

Code Alternate CA909: Smoke control systems complying with the following in lieu of Sections 909.6, 909.7, 909.8 and 909.18.6 may be approved for high-rise buildings.

1. Building Ventilation. Natural or mechanical ventilation for the removal of products of combustion shall be provided in every story and basement in accordance with either item 1.1, 1.2 or 1.3.

1.1. Manually operable windows or panels shall be distributed around the perimeter of the building at not more than 50-foot (15 240 mm) intervals, and shall be aligned vertically. The operable area of the windows or panels shall not be less than 20 square feet per 50 linear feet of perimeter. The windows shall be identified with a white dot 2 inches in diameter located in the bottom one-third of the window.

EXCEPTIONS:

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1. In Group R, Division 1 hotel occupancies, each guest room or suite having an exterior wall may be provided with 2 square feet (.19 m^2) of venting area in lieu of the area specified above.

2. Windows may be of fixed tempered glass provided that no coating or film is applied which will modify the natural breaking characteristics of the glass.

1.2. The mechanical air-handling equipment may be designed to accomplish smoke removal in lieu of the requirements of Item 1.1 above. Under fire conditions, the return and exhaust air shall be moved directly to the outside without recirculation to other sections of the building. The air-handling system shall provide a minimum of one exhaust air change each 10 minutes for the area involved.

1.3. Any other approved design which will produce equivalent results.

2. Shaft Pressurization. Shafts shall be protected by a shaft pressurization system complying with following:

2.1. All elevator shafts shall be pressurized to 0.10 inch of water column. Enclosed stairways shall be pressurized to 0.15 inch of water column. Exit passageways connecting pressurized stairways to the exterior shall be pressurized to 0.15 inches of water column. Other vertical shafts may be required to be pressurized as determined by the building official at the predesign conference. The pressure difference shall be measured between the shaft and the main occupied area on each floor.

EXCEPTION: Subject to the approval of the building official, pressurization may be omitted for elevators and enclosed stairways less than 75 feet (22 860 mm) in height.

2.2. Shaft pressurization shall be activated by a fire alarm system on each floor located in a manner approved by the building official and the fire chief. The fire alarm system shall include a smoke detector installed outside the enclosure and within

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15 feet (4572 mm) of shaft enclosure doors.

2.3. Areas separated by two-hour enclosure walls served by common ventilation equipment shall have automatic-closing dampers to prevent loss of pressurization.

2.4. Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by a minimum of two-hour fire-resistive construction. Duct work shall be constructed of noncombustible materials conforming to the requirements of the Mechanical Code.

2.5. Air for stairway pressurization shall be introduced supplied near the bottom of the shaft and at intervals sufficient to maintain the required pressure throughout the shaft. several other points in the shaft.

Note: The performance goal for item 2.5 is compliance with minimum and maximum pressures at all levels of the shaft, and to ensure upward flow of air and smoke.

2.6 Shaft pressurization air intakes shall be located at the exterior of the building.

EXCEPTION: Intakes for elevator shaft pressurization may be located within the building provided they are located no more than 20 feet (6096 mm) from major openings in the building exterior such as loading docks and vehicular entrances. Such intake shall be provided with smoke detectors which shall deactivate the pressurization system for that shaft.

2.7. Whenever shaft pressurization is activated, all horizontal exit doors which have hold-open devices shall be automatically released to close.

2.8. Other measures to prevent loss of pressurization shall be provided in the design and construction of shafts, such as quality of workmanship and caulking of penetrations and joints.

2.9. Exit enclosures shall be equipped with a barometric dampered relief opening at the top, and a motorized damper as required by the Energy Code. The motorized

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damper shall be of the normally open type (open with the power off). The enclosure shall be supplied mechanically with sufficient air to discharge a minimum of 2,500 cubic feet per minute through the relief opening while maintaining a minimum positive pressure of 0.15-inch water column in the shaft relative to atmospheric pressure with all doors closed. Supply air ducts shall be enclosed in construction at least equivalent to that of the exit enclosure between the exterior of the building and the exit enclosure. Activation of the mechanical equipment shall be initiated by the building fire alarm system. Such equipment shall also be activated by actuation of the automatic sprinkler system.

Section 226. Subsection 909.11 of the 2003 International Fire Code is amended as follows:

909.11 Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved ((~~standby~~)) emergency power system ((~~source~~)) complying with the ((~~ICC~~)) *Seattle Electrical Code*. The ((~~standby~~)) emergency power source and its transfer switches shall be in a separate room from the normal power transformers and switch gear and shall be enclosed in a room constructed of not less than 1-hour fire-resistance-rated fire barriers ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes. Transfer to full ((~~standby~~)) emergency power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with the ((~~ICC~~)) *Seattle Electrical Code*.

* * *

Section 227. Subsection 909.12.1 of the 2003 International Fire Code is hereby repealed.

Section 228. Subsection 909.12.2 of the 2003 International Fire Code is amended as follows:

909.12.1((2)) Activation. Smoke control systems shall be activated in accordance with this section.

909.12.1.1((.2.1)) Pressurization, airflow or exhaust method. Mechanical smoke control systems using the pressurization, airflow or exhaust method shall have completely automatic control.

909.12.1.2((2.2)) Passive method. Passive smoke control systems actuated by approved spot-type detectors listed for releasing service shall be permitted.

Section 229. A new subsection 909.22 is adopted to read as follows:

909.22 Pressurization for low-rise buildings. Where elevator or stairway shaft pressurization is provided in accordance with exception 5 to Section 707.14.1 or exception 4 of Section 1018.2, the pressurization system shall comply with the following:

1. Shafts shall be pressurized to 0.15 inch of water column relative to the main occupied area on each floor.

   Exception: Elevator shafts in buildings that are protected throughout with an automatic sprinkler system may be pressurized to not less than 0.10 inch of water column.

Stairway pressurization shall be measured with all stairway doors closed. Elevator pressurization shall be measured with elevator cars at the designated recall level with the doors in the open position.

2. The shaft pressurization shall be activated by smoke detectors in the corridors located near the shaft on each floor as approved by the building official and the fire chief. If the

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building has a fire alarm panel, smoke detectors shall be connected to it, with power supplied by it.

3. Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by construction equal to that required for the shaft.
4. Air intakes for shafts other than elevators shall be located at the exterior of the building. Intakes for elevator shaft pressurization may be located within the building provided they are located no more than 20 feet (6096 mm) from major openings in the building exterior such as loading docks and vehicular entrances. Such intake shall be provided with smoke detectors which shall deactivate the pressurization system for that shaft.
5. An emergency source of power shall be provided for the fire alarm system.
6. A standby source of power shall e provided for the pressurization system according to Seattle Electrical Code Section 701.11. A connection ahead of the service disconnecting means shall be permitted as the sole source of power to the pressurization system.
7. Other measures to prevent loss of pressurization shall be provided in the design and construction of shafts, such as quality of workmanship and caulking of penetrations and joints.

Section 230. Section 1002 of the 2003 International Fire Code is amended by adding thereto new definitions of EXIT PLACARD and EXIT SIGN to read as follows:

* * *

EXIT PLACARD. A non-illuminated sign or a sign painted on a wall indicating the direction of egress.

EXIT SIGN. An internally-illuminated sign indicating the direction of egress.

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Section 231. Table 1004.1.2 of the 2003 International Fire Code is amended as follows:

TABLE 1004.1.2

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal Baggage claim Baggage handling Concourse Waiting areas	 20 gross 300 gross 100 gross 15 gross
Assembly Gaming floors (keno, slots, etc.)	 11 gross
Assembly with fixed seats	See Section 1004.7
Assembly without fixed seats Concentrated (chairs only—not fixed) Standing space Unconcentrated (tables and chairs)	 7 net 5 net 15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas and commercial laboratories Without sprinkler protection With sprinkler protection	 100 gross 130 gross

Courtrooms—other than fixed seating areas	40 net
Dormitories	50 gross
Educational Classroom area Shops, laboratories and other vocational room areas	 20 net 50 net
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient treatment areas Outpatient areas Sleeping areas	 240 gross 100 gross 120 gross
Kitchens, commercial	200 gross
Library Reading rooms Stack area	 50 net 100 gross
Locker rooms	50 gross
Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	 60 gross 30 gross 300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	

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Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room[1]	300 gross
Warehouses	500 gross

For SI:1 square foot = 0.0929 m^2.

1. For electrical equipment areas, see also Sections 110-26 and 110-33 of the *Seattle Electrical Code.*

Section 232. Section 1006 of the 2003 International Fire Code is amended as follows:

[B]SECTION 1006

MEANS OF EGRESS ILLUMINATION

1006.1 Illumination required. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

Exceptions:

1. Occupancies in Group U.
2. Aisle accessways in Group A.
3. Dwelling units and sleeping units in Groups R-1, R-2 and R-3.
4. Sleeping units of Group I occupancies.

1006.2 Illumination locations ((~~level~~)). Illumination shall be provided at every point in ((~~The~~))the means of egress ((~~illumination level shall not be less than 1 foot candle (11 lux) at the floor level~~)) Luminaires shall be installed whenever exit signs are required as specified in Section 1011.

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Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the floor level is permitted to be reduced during performances to not less than 0.2 foot-candle (2.15 lux) provided that the required illumination is automatically restored upon activation of a premise's fire alarm system where such system is provided.

Code Alternate CA1006.2: Compliance with the following paragraphs will be deemed to satisfy the requirement for means of egress illumination at every point in the means of egress. Means of egress illumination systems that comply with this Code Alternate shall also comply with Sections 1006.3 and 1006.4.

1. **Location and Fixture Placement**. Means of egress illumination shall be located in stairways, corridors, halls, passenger elevator cars, lobbies, rooms with an occupant load of 100 or more, and other areas required to provide safe egress from the premises and immediately outside of the building exit when required by the building official. Fixtures shall be installed to not less than the following schedule:

Interior and exterior stairways and landings and outside building exit	At least one per landing
Corridors and halls and designated means of egress paths in parking garages	At least one for each 40 lineal feet
Lobbies, vestibules, foyers, elevator cars and other similar areas as required	At least one for each 250 sq. ft.
Warehouses	See Item 2 below.

These fixtures may be included in the watts per square foot calculation for means of egress illumination.

2. **Amount of Illumination**. Where means of egress illumination is required, illumination shall be provided at the rate of 0.1 watt of fluorescent illumination per square foot of area.

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Installations using incandescent lamps shall have a minimum wattage of at least 3 times the fluorescent requirements. Use of other light sources shall be subject to the approval of the building official.

EXCEPTIONS:

1. In warehouses, the allowable minimum illumination may be 0.1 watt per square foot (0.03 watts for fluorescent) provided fixtures are placed either:

   1.1 Where means of egress pathways are not designated, fixtures shall be placed to cover an area not larger than 1,600 square feet, or

   1.2 Where means of egress pathways are designated, fixtures shall be placed at least one for every 40 lineal feet.

2. In theaters, auditoriums or other places of assembly where motion pictures or other projections are made by means of directed light, the minimum allowable illumination may be reduced to 0.05 watts per square foot of floor area (0.02 watts for fluorescent). The higher level of required illumination shall be automatically restored upon activation of a premise's fire alarm system where such system is provided.

3. In Groups B, F-1, M and S-1 Occupancies, when approved by the building official, the minimum allowable illumination may be reduced to 0.05 watts per square foot (0.02 watts for fluorescent) of floor area.

4. In Group B Occupancies and open parking garages, when approved by the building official, the illumination may be eliminated when within 50 feet of a window wall or open side and where light is not totally obscured.

Means of egress illumination fixtures shall be spaced and designed to give adequate distribution of light for safe egress and so that the failure of any individual lighting element, such as the burning out of a light bulb, will not leave any space in total darkness. Illumination from

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battery operated fixtures shall provide the same level of illumination required for hard-wired fixtures.

1006.3 Power supply. ((~~**Illumination emergency power.**~~)) The power supply for means of egress illumination shall normally be provided by the premise's electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate the following areas:

1. Exit access corridors, passageways and aisles in rooms and spaces which require two or more means of egress.
2. Exit access corridors and exit stairways located in buildings required to have two or more exits.
3. Exterior egress components at other than the level of exit discharge until exit discharge is accomplished for buildings required to have two or more exits.
4. Interior exit discharge elements, as permitted in Section 1023.1, in buildings required to have two or more exits.
5. The portion of the exterior exit discharge immediately adjacent to exit discharge doorways in buildings required to have two or more exits.

The emergency power system shall provide power for a duration of not less than 90 minutes 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 Section 2702 of the *Seattle Building Code*.

1006.4 ((~~Performance of system~~)) Illumination levels.

1006.4.1 Normal power. When under normal power, the illumination level shall be not less than one foot candle at floor level at every point in the means of egress.

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1006.4.2 Emergency power. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle (6 lux) average and a minimum at any point of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

Section 233. Subsection 1008.1 of the 2003 International Fire Code is amended as follows:

1008.1 Doors. Means of egress doors shall meet the requirements of this section. Doors serving a means of egress system shall meet the requirements of this section and Section 1017.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. See Section 3201 for doors swinging over public property.

Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on means of egress doors. Means of egress doors shall not be concealed by curtains, drapes, decorations or similar materials.

* * *

Section 234. Subsection 1008.1.2 of the 2003 International Fire Code is amended as follows:

1008.1.2 Door swing. Egress doors shall be side-hinged or pivoted swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.

2. Group I-3 occupancies used as a place of detention.

3. Doors within or serving a single dwelling unit in Groups R-2 and R-3 as applicable in Section 101.2.

4. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.

5. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.

6. Power-operated doors in accordance with Section 1008.1.3.2.

7. In other than H occupancies, manually-operated horizontal sliding doors are permitted in a means of egress from occupied spaces with an occupant load of 10 or less.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15-pound (67 N) force. Forces shall be applied to the latch side. Within an accessible route, at exterior doors where environmental conditions require a closing pressure greater than 8.5 pounds, power operated doors shall be used within the accessible route of travel.

Section 235. Subsection 1008.1.3.4 of the 2003 International Fire Code is amended as follows:

1008.1.3.4 Access-controlled egress doors. The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, M, R-1 and R-2 are permitted to be equipped with an

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approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.

2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.

3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.

4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.

5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.

6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.

7. The access control system shall be listed or shall be comprised of approved components.

Note: Components bearing a "recognized component" mark from an approved agency shall be approved.

Section 236. Subsection 1008.1.4 of the 2003 International Fire Code is amended as follows:

1008.1.4 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 as applicable in Section 101.2 where the following apply:
   1.1. A door is permitted to open at the top step of a((~~n interior~~)) flight of stairs, provided the door does not swing over the top step.
   1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1017.2, which are not on an accessible route.
3. In Group R-3 occupancies, the landing at an exterior doorway shall not be more than $7^3/_4$ inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).
5. Exterior decks, patios or balconies that are part of Type B dwelling units and have impervious surfaces, and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.

Section 237. Subsection 1008.1.5 of the 2003 International Fire Code is amended as follows:

1008.1.5 Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is the greater. Doors in the fully open position shall not reduce a required

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dimension by more than 7 inches (178 mm). When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. When doors open over landings, doors in any position shall not reduce the landing length to less than 12 inches (305 mm). Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

Exception: Landing length in the direction of travel in Group R-3 as applicable in Section 101.2 and Group U and within individual units of Group R-2 as applicable in Section 101.2, need not exceed 36 inches (914 mm).

Interpretation I1008.1.5: Landing length, width and slope shall be measured as specified in Section 1009.4 and 1009.5.1. See Figures 1008.1.5(1) and 1008.1.5(2) of the Seattle Building Code for illustrations of the requirements of this section.

Section 238. Subsection 1008.1.8.3 of the 2003 International Fire Code is amended as follows:

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint as approved by the building official.
2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in churches, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   - 2.1. The locking device is readily distinguishable as locked,
   - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED ((~~WHEN BUILDING IS OCCUPIED~~)) DURING BUSINESS HOURS. The sign shall be in letters 1 inch (25 mm) high on a contrasting background,

2.3. The use of the key-operated locking device is revokable by the building official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware on the egress side of the door.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.

Section 239. Subsection 1008.1.8.4 of the 2003 International Fire Code is amended as follows:

1008.1.8.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted on required means of egress doors.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts or self-latching flush bolts are permitted on the inactive leaf.

Section 240. Subsection 1008.1.8.6 of the 2003 International Fire Code is amended as follows:

1008.1.8.6 Special Locking Arrangements

1008.1.8.6.1 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in

accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. Delayed egress locks are permitted in libraries and Group A and E occupancies in locations other than at main exit doors. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

   Exception: Where approved, a delay of not more than 30 seconds is permitted.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6. Emergency lighting shall be provided at the door.

Section 241. Subsection 1009.1 of the 2003 International Fire Code is amended as follows:

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1009.1 Stairway width. The width of stairways shall be determined as specified in Section 1005.1, but such width shall not be less than 44 inches (1118 mm). See Section 1007.3 for accessible means of egress stairways.

Exceptions:

1. Stairways serving an occupant load of 50 or less shall have a width of not less than 36 inches (914 mm).
2. Spiral stairways as provided for in Section 1009.9.
3. Aisle stairs complying with Section 1024.
4. Where a stairway lift is installed on stairways serving occupancies in Group R-3, or within dwelling units in occupancies in Group R-2, both as applicable in Section 101.2, a clear passage width not less than 20 inches (508 mm) shall be provided. If the seat and platform can be folded when not in use, the distance shall be measured from the folded position.
5. Stairways that are not part of a required means of egress.

Section 242. Subsection 1009.3 of the 2003 International Fire Code is amended as follows:

1009.3 Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm). Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads

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are narrower and a minimum tread depth of 10 inches (254 mm). The greatest winder tread depth at the 12-inch (305 mm) walk line within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm).

Exceptions:

1. Circular stairways in accordance with Section 1009.7.
2. Winders in accordance with Section 1009.8.
3. Spiral stairways in accordance with Section 1009.9.
4. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1024.11.2.
5. In occupancies in Group R-3, as applicable in Section 101.2, within dwelling units in occupancies in Group R-2, as applicable in Section 101.2, and in occupancies in Group U, which are accessory to an occupancy in Group R-3, as applicable in Section 101.2, the maximum riser height shall be 7.75 inches (197 mm) and the minimum tread depth shall be 10 inches (254 mm), the minimum winder tread depth at the walk line shall be 10 inches (254 mm), and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).

((~~6. See the *International Existing Building Code* for the replacement of existing stairways.~~))

Section 243. Subsection 1009.3.1 of the 2003 International Fire Code is amended as follows:

1009.3.1 Dimensional uniformity. Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser or between the largest and smallest tread shall not exceed 0.375 inch (9.5 mm) in any flight of stairs.

Exceptions:

1. Nonuniform riser dimensions of aisle stairs complying with Section 1024.11.2.
2. Consistently shaped winders, complying with Section 1009.8, differing from rectangular treads in the same stairway flight.

Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope ((~~to less than 4 inches (102 mm) in height with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8 percent slope) of stairway width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).~~))

Section 244. Subsection 1009.6 of the 2003 International Fire Code is amended as follows:

1009.6 Vertical rise. A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings.

Exceptions:

1. Aisle stairs complying with Section 1024.
2. Stairways that are not part of a required means of egress.

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Section 245. Subsections1009.11.4 and 1009.11.5 of the 2003 International Fire Code are amended as follows:

1009.11.4 Continuity. Handrail-gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

Exceptions:

1. Handrails within dwelling units are permitted to be interrupted by a newel post at a stair landing.
2. Within a dwelling unit, the use of a volute, turnout or starting easing is allowed on the lowest tread.
3. Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1.5 inches (38 mm) of the bottom of the handrail shall not be considered to be obstructions and provided further that for each 0.5 inch (13 mm) of additional handrail perimeter dimension above 4 inches (102 mm), the vertical clearance dimension of 1.5 inches (38 mm) shall be permitted to be reduced by 0.125 inch (3 mm).
4. Handrails on stairways that are not part of a required means of egress need not be continuous.

1009.11.5 Handrail extensions. Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent stair flight. Where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser.

Exceptions:

1. Handrails within a dwelling unit that is not required to be accessible need extend only from the top riser to the bottom riser.
2. Aisle handrails in Group A occupancies in accordance with Section 1024.13.

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3. Handrail extensions are not required on handrails on stairways that are not part of a required means of egress.

Section 246. Subsection 1009.12 of the 2003 International Fire Code is amended as follows:

1009.12 Stairway to roof. In buildings four or more stories in height above grade at least one stairway shall extend to the roof surface through a penthouse complying with Section 1509.2 of the *Seattle Building Code*. ((~~unless the roof has a slope steeper than four units vertical in 12 units horizontal (33 percent slope). In buildings without an occupied roof, access to the roof from the top story shall be permitted to be by an alternating tread device.~~))

Exceptions:

1. A stairway to the roof is not required in Group R-3 occupancies.
2. Penthouses are not required for roofs with a slope steeper than four units vertical in 12 units horizontal (33 percent slope).

1009.12.1 Roof access. Where a stairway is provided to ((~~roof, access to the roof shall be provided through a penthouse complying with Section 1509.2 of the *International Building Code*.~~)) ~~.~~)) he top floor of any building four or more stories in height and a penthouse is not required, an approved ladder and roof hatch openable to the exterior shall be provided at the highest point of the stair shaft. The roof hatch shall be not less than 11 square feet (1.1 m^2) in area and shall have a minimum dimension of 2 feet, 6 inches (762 mm). See Section 403 of the *Seattle Building Code* for provisions for high-rise buildings.

Exception: A roof hatch need not be provided for stairways that extend to the roof with an opening onto that roof.

((~~**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 (1.5 m^2) in area and having a minimum dimension of 2 feet (610 mm).~~))

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Section 247. A new subsection 1009.13 is adopted to read as follows:

[W] 1009.13 Ladders. Stairs or ladders used in the interior of individual dwelling units to gain access to areas 200 square feet (18.6 m^2) or less which do not contain the primary bathroom or kitchen are exempt from the requirements of Section 1019.

Section 248. Subsection 1010.8 of the 2003 International Fire Code is amended as follows:

1010.8 Handrails. Ramps with a rise greater than 6 inches (152 mm) shall have handrails on both sides complying with Section 1009.11. At least one handrail shall extend in the direction of ramp run not less than 12 inches (305 mm) horizontally beyond the top and bottom of the ramp runs.

Section 249. Section 1011 of the 2003 International Fire Code is amended as follows:

SECTION 1011

EXIT SIGNS

1011.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. Either exit signs or exit placards shall be located at any other location determined by the building official to be necessary to clearly indicate the direction of egress.

Exceptions:

1. Exit signs are not required in rooms or areas which require only one exit or exit access other than in buildings designed with a single exit stairway according to Code Alternate CA1004.2b.
2. Main exterior exit doors or gates which obviously and clearly are identifiable as exits need not have exit signs where approved by the building official.
3. Exit signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. Exit signs are not required in sleeping areas in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.
6. Exit signs are not required within individual tenant spaces of Group B offices.
7. Exit signs shall not be required on exterior stairways serving exterior exit balconies.

Interpretation I1011.1a: Exit placards may be used to identify exits in occupancies where exit signs are not required.

1011.2 Illumination. Exit signs shall be internally or externally illuminated at all times.

Exception: Tactile signs required by Section 1011.3 need not be provided with illumination.

1011.3 Tactile exit signs. A tactile sign stating EXIT and complying with ICC A117.1 shall be provided adjacent to each door to an egress stairway, an exit passageway and the exit discharge.

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1011.4 ((~~Internally illuminated~~)) Listing of exit signs. ((~~Internally illuminated~~)) All exit signs shall be listed and labeled and shall be installed in accordance with the manufacturer's instructions and Section 2702. Exit signs shall be illuminated at all times.

1011.5 Externally illuminated exit signs. Externally illuminated exit signs shall comply with Sections 1011.5.1 through 1011.5.3.

1011.5.1 Graphics. Every exit sign, exit placard and directional exit sign shall have plainly legible green letters not less than 6 inches (152 mm) high with the principal strokes of the letters not less than 0.75 inch (19.1 mm) wide. The word "EXIT" shall have letters having a width not less than 2 inches (51 mm) wide except the letter "I," and the minimum spacing between letters shall not be less than 0.375 inch (9.5 mm). Signs and placards larger than the minimum established in this section shall have letter widths, strokes and spacing in proportion to their height.

The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when the exit sign illumination means is or is not energized. If an arrow is provided as part of the exit sign or placard, the construction shall be such that the arrow direction cannot be readily changed.

EXCEPTION: Existing exit signs or placards with letters at least 5 inches (127 mm) in height may be reused.

((~~**1011.5.2 Exit sign illumination.** The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 foot-candles (54 lux).~~))

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1011.5.2((3)) Power source. Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

Exception: Approved exit sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.

1011.5.3 Not-an-Exit Warnings. Placards reading "NOT AN EXIT" shall be installed at all doorways, passageways or stairways which are not exits, exit accesses or exit discharges, and which may be mistaken for an exit. A sign indicating the use of the doorway, passageway or stairway, such as "TO BASEMENT", "STORE ROOM", "LINEN CLOSET", is permitted in lieu of the "NOT AN EXIT" sign.

Section 250. Subsection 1013.2 of the 2003 International Fire Code is amended as follows:

1013.2 Egress through intervening spaces. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served; are not a high-hazard occupancy and provide a discernible path of egress travel to an exit. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes. An exit access shall not pass through a room that can be locked to prevent egress. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms. Unless approved by the building official, where

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two or more exits are required, exit travel shall not pass through an exit enclosure as the only way to reach another exit.

Exceptions:

1. Means of egress are not prohibited through a kitchen area serving adjoining rooms constituting part of the same dwelling unit or sleeping unit.
2. Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H occupancy when the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

Section 251. Subsection 1013.5.1 of the 2003 International Fire Code is amended as follows:

1013.5.1 Wall separation. Exterior egress balconies shall be separated from the interior of the building by walls and opening protectives as required for corridors.

Exceptions:

1. Separation is not required where the exterior egress balcony is served by at least two stairs and a dead-end travel condition does not require travel past an unprotected opening to reach a stair.
2. Separation is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Section 252. Subsection 1014.2.1 of the 2003 International Fire Code is amended as follows:

1014.2.1 Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit

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doors or exit access doorways. Interlocking or scissor stairs and stairways that share a wall with other exit enclosures shall be counted as one exit stairway.

Exceptions:

1. Where exit enclosures are provided as a portion of the required exit and are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1016, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
3. Where approved by the building official, exits from retail and office tenant spaces in Group B and M Occupancies shall be as far apart as reasonably practicable.

Section 253. Table 1015.1 of the 2003 International Fire Code is amended as follows:

TABLE 1015.1

EXIT ACCESS TRAVEL DISTANCE[a]

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, I-1, M, R, S-1	200	250[b]
B	200	300[c]
F-2, S-2, U	300	400[b]
H-1	Not Permitted	75[c]
H-2	Not Permitted	100[c]
H-3	Not Permitted	150[c]

H-4	Not Permitted	175[c]
H-5	Not Permitted	200[c]
I-2, I-3, I-4	150	200[c]

For SI:1 foot = 304.8 mm.

a. See the following sections for modifications to exit access travel distance requirements:

Section 402: For the distance limitation in malls.

Section 404: For the distance limitation through an atrium space.

Section 1015.2: For increased limitation in Groups F-1 and S-1.

Section 1024.7: For increased limitation in assembly seating.

Section 1024.7: For increased limitation for assembly open-air seating.

Section 1018.2: For buildings with one exit.

Chapter 31: For the limitation in temporary structures.

b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where sprinkler systems according to Section 903.3.1.2 are permitted.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Note: Where standpipes are required in open parking garages, additional standpipe connections may be required where hose travel distances are exceeded. See Section 905.4

Section 254. Subsection 1016.1 and Table 1016.1 of the 2003 International Fire Code are amended as follows:

1016.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1016.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for fire partitions.

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Exceptions:

1. A fire-resistance rating is not required for corridors in an occupancy in Group E where each room that is used for instruction has at least one door directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.
2. A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.
3. A fire-resistance rating is not required for corridors in open parking garages.
4. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1014.1.
5. In office areas located in buildings of Types IA or IB construction, corridor walls need not be of fire-resistive construction where the corridor side of the corridor walls is finished with materials having a maximum Class B rating as defined in Chapter 8. This exception does not apply to outpatient clinics and medical offices.
6. The occupant load of Group B conference rooms, lunch rooms without grease-producing cooking and other assembly rooms with an occupant load of less than 50 in each room need not be considered when determining whether corridor construction is required, provided such rooms are accessory to an office tenant located in a building of Type IA or IB construction. This provision may be used in other construction types when the floor on which the assembly room is located is equipped with an automatic sprinkler system.

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TABLE 1016.1

CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING(hours)	
		Without sprinkler system	With sprinkler system[c]
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	((~~Greater than 10~~)) All	1	((~~0.5~~)) 1
I-2[a], I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1[b]

a. For requirements for occupancies in Group I-2, see Section 407.3.

b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.7.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.

Section 255. Subsections 1016.3 and 1016.4 of the 2003 International Fire Code are amended as follows:

1016.3 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors. In other than Group B office occupancies in Types IA and IB construction, dead ends shall not be more than ((~~20~~)) 25 feet (((~~6096~~)) 7620 mm) in length. In buildings of Types IA and IB construction, areas containing Group B offices may have dead ends not exceeding 75 feet (22 860 mm) in length, provided the

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cumulative occupant load shall not exceed 50 for all areas for which the dead end serves as the only means of egress.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section202, definition of Occupancy Group I-3), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B and F where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

1016.4 Air movement in corridors. Exit access corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts except as allowed by Seattle Mechanical Code Section 601.2.

((~~**Exceptions:**~~

~~1. Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall be permitted provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor.~~

~~2. Where located within a dwelling unit, the use of corridors for conveying return air shall not be prohibited.~~

~~3. Where located within tenant spaces of 1,000 square feet (93 m^2) or less in area, utilization of corridors for conveying return air is permitted.~~))

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Section 256. Subsection 1017.2 of the 2003 International Fire Code is amended as follows:

1017.2 Exterior exit doors. Buildings or structures used for human occupancy shall have at least one exterior door that meets the requirements of Section 1008.1.1 and Section 1008.1.2.

* * *

Section 257. Subsection 1018.1 of the 2003 International Fire Code is amended as follows:

1018.1 Minimum number of exits. All rooms and spaces within each story shall be provided with and have access to the minimum number of approved independent exits as required by Table 1018.1 based on the occupant load, except as modified in Section 1014.1 or 1018.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way.

Exceptions:

1. Occupied roofs with an occupant load of 10 or less may have one exit.
2. Access to only one exit or exit-access doorway is permitted for floors below the first story above grade plane where:
   - 2.1 The area of the floor does not exceed 900 square feet (83.61 m^2);
   - 2.2 Travel distance is less than 50 feet (15 240 mm); and
   - 2.3 The floor contains only storage rooms, laundry rooms, and maintenance offices.

* * *

Section 258. Subsection 1018.2 of the 2003 International Fire Code is amended as follows:

1018.2 Buildings with one exit. Only one exit shall be required in buildings as described below:

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1. Buildings described in Table 1018.2, provided that the building has not more than one level below the first story above grade plane.
2. Buildings of Group R-3 occupancy.
3. Single-level buildings with the occupied space at the level of exit discharge provided that the story or space complies with Section 1014.1 as a space with one means of egress.
4. Not more than 5 stories of Group R-2 occupancy in buildings not over 6 stories may be served by a single exit under the following conditions:

4.1. There shall be no more than four dwelling units on any floor.

4.2. The building shall be of not less than one-hour fire-resistive construction and shall also be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. Residential type sprinkler heads shall be used in all habitable spaces in each dwelling unit.

4.3. There shall be no more than two single exit stairway conditions on the same property.

4.4. An exterior stairway or exit enclosure shall be provided. The exit enclosure, including any related exit passageway, shall be pressurized in accordance with Section 909.22. Doors in the exit enclosure shall swing into the exit enclosure regardless of the occupant load served, provided that doors from the exit enclosure to the building exterior may swing in the direction of exit travel.

4.5. A corridor shall separate each dwelling unit entry/exit door from the door to an exit enclosure, including any related exit passageway, on each floor. Dwelling unit doors shall not open directly into an enclosed stairway. Dwelling unit doors may open directly into an exterior stairway.

4.6. There shall be no more than 20 feet (6096 mm) of travel distance to the exit stairway from the entry/exit door of any dwelling unit.

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4.7. The exit shall not terminate in an exit court where the court depth exceeds the court width unless it is possible to exit in either direction to the public way.

4.8. Elevators shall be pressurized in accordance with Section 909.22 or shall open into elevator lobbies. Elevator lobbies shall be separated from the remainder of the building and from the exit stairway with fire partitions. Doors shall be automatic closing actuated by smoke detector. Where approved by the building official, natural ventilation may be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases.

4.9. Other occupancies are permitted in the same building provided they comply with all the requirements of this code. Except for parking garages accessory to the Group R occupancy, other occupancies shall not communicate with the Group R occupancy portion of the building or with the single-exit stairway.

4.10. There shall be no openings within 10 feet (3048 mm) of unprotected openings into the stairway other than required exit doors having a one-hour fire-resistance rating.

Section 259. Subsection 1019.1 and 1019.2 of the 2003 International Fire Code are amended as follows:

1019.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers. Exit enclosures shall have a fire-resistance rating of not less than 2 hours where connecting more than four stories ((~~or more~~)) and not less than 1 hour where connecting ((~~less than~~)) four and fewer stories. The number of stories connected by the shaft enclosure shall include any basements but not any mezzanines. An exit enclosure shall not be used for any purpose other than means of egress, circulation and access. Enclosures shall be constructed as fire barriers in accordance with Section 706. Exit enclosures shall terminate at the exterior of

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the building or an exit passageway shall connect the exit enclosures to the exterior of the building.

Exceptions:

1. In other than Group H and I occupancies, a stairway serving an occupant load of less than 10 not more than one story above the level of exit discharge is not required to be enclosed.
2. Exits in buildings of Group A-5 where all portions of the means of egress are essentially open to the outside need not be enclosed.
3. Stairways serving and contained within a single residential dwelling unit or sleeping unit in occupancies in Group R-2 or R-3 and sleeping units in occupancies in Group R-1 are not required to be enclosed.
4. Stairways that are not a required means of egress element are not required to be enclosed where such stairways comply with Section 707.2.
5. Stairways in open parking structures which serve only the parking structure are not required to be enclosed.
6. Stairways in occupancies in Group I-3 as provided for in Section 408.3.6 are not required to be enclosed.
7. Means of egress stairways as required by Section 410.5.4 are not required to be enclosed.
8. In other than occupancy Groups H and I, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors.
9. In other than occupancy Groups H and I, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be

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enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories.

1019.1.1 Openings and penetrations. Exit enclosure opening protectives shall be in accordance with the requirements of Section 715 of the *International Building Code.*

Except as permitted in Section 402.4.6 of the *International Building Code*, openings in exit enclosures other than unexposed exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure.

Interpretation I1019.1.1: Elevators and accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into an exit enclosure.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door conforming to the requirements in Section 715.3 of the *International Building Code*. Fire door assemblies in exit enclosures shall comply with Section 715.3.4 of the *International Building Code*

1019.1.2 Penetrations. Penetrations into and openings through an exit enclosure are prohibited except for required exit doors, equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and sprinkler monitoring, and electrical raceway serving the exit enclosure and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Piping used exclusively for the drainage of rainfall runoff from roof areas is permitted to penetrate exit enclosures, provided the roof is not used for a helistop or heliport. Such penetrations shall be protected in accordance with Section 712 of the *International Building Code*. Unfired unit heaters required

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for freeze protection of fire protection equipment may penetrate one membrane. The conduit serving the heater may penetrate both membranes. There shall be no penetrations or communication openings, whether protected or not, between adjacent exit enclosures.

Section 260. Subsection 1019.1.7 and subsection 1019.1.8 of the 2003 International Fire Code are amended as follows:

1019.1.7 Stairway ((~~floor number~~)) signs. A sign shall be provided at each floor landing in interior vertical exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and the identification of the stair. The signage shall also state the story of, and the direction to the exit discharge, ((~~and the availability of~~)) whether there is roof access from the stairway for the fire department, and whether the roof is accessed by roof hatch. The sign shall be located 5 feet (1524 mm) above the floor landing in a position which is readily visible when the doors are in the open and closed positions.

1019.1.8 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with Section 909.20 of the *International Building Code.*

Exception: Smokeproof enclosures are not required in buildings that comply with CA909.

* * *

Section 261. A new subsection 1019.1.9 is adopted to read as follows:

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1019.1.9 Equipment in exit enclosures. Equipment is prohibited in exit enclosures except for equipment necessary for independent pressurization, sprinkler piping, standpipes, electrical equipment for fire department communication and sprinkler monitoring, and unit heaters required to protect fire protection equipment from freezing.

Section 262. Section 1020 of the 2003 International Fire Code is amended as follows:

[B] SECTION 1020

EXIT PASSAGEWAYS

1020.1 Exit passageway. Exit passageways serving as an exit component in a means of egress system shall comply with the requirements of this section. An exit passageway shall not be used for any purpose other than as a means of egress, circulation and access.

1020.2 Width. The width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches (1118 mm), except that exit passageways serving an occupant load of ((~~less than~~)) 50 or less shall not be less than 36 inches (914 mm) in width.

The required width of exit passageways shall be unobstructed.

Exception: Doors, when fully opened, and handrails, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) on each side.

1020.3 Construction. Exit passageway enclosures shall have walls, floors and ceilings of not less than 1-hour fire-resistance rating, and not less than that required for any connecting exit

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enclosure. Exit passageways shall be constructed as fire barriers in accordance with Section 706 of the *International Building Code.*

1020.4 Openings and penetrations. Exit passageway opening protectives shall be in accordance with the requirements of Section 715 of the *International Building Code.*

Except as permitted in Section 402.4.6 of the *International Building Code*, openings in exit passageways other than unexposed exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.

Interpretation I1020.4: Accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into exit passageways.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door conforming to the requirements in Section 715.3 of the *International Building Code*. Fire door assemblies in exit passageways shall comply with Section 715.3.4 of the *International Building Code.*

Elevators shall not open into an exit passageway.

1020.5 Penetrations. Penetrations into and openings through an exit passageway are prohibited except for required exit doors, equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceway serving the exit passageway and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Such penetrations shall be protected in accordance with Section 712 of the *International Building Code*. There shall be no penetrations or communicating openings, whether protected or not, between adjacent exit passageways.

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Exception: Unfired unit heaters allowed by Section 1020.1 to be installed in exit enclosures may penetrate one membrane. The conduit serving the heater may penetrate both membranes.

Section 263. Subsection 1022.3 of the 2003 International Fire Code is amended as follows:

1022.3 Open side. Exterior exit ramps and stairways serving as an element of a required means of egress shall be at least 50 percent open on at least one side. An open side shall have a minimum of ((~~35~~)) 28 square feet (((~~3.3~~)) 2.6 m^2) of aggregate open area adjacent to each floor. The open area shall be distributed to prevent accumulation of smoke or toxic gases. ((~~level and the level of each intermediate landing. The required open area shall be located not less than 42 inches (1067 mm) above the adjacent floor or landing level.~~))

Section 264. Subsection 1023.1 of the 2003 International Fire Code is amended as follows:

1023.1 General. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building except into an exit or as otherwise approved by the building official.

Exceptions:

1. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through areas on the level of discharge provided all of the following are met:
   1.1. Such exit enclosures egress to a free and unobstructed way to the exterior of the building, which way is readily visible and identifiable from the point of termination of the exit enclosure.

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1.2. The entire area of the level of discharge is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.

1.3. The egress path from the exit enclosure on the level of discharge is protected throughout by an approved automatic sprinkler system. All portions of the level of discharge with access to the egress path shall either be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, or separated from the egress path in accordance with the requirements for the enclosure of exits.

2. A maximum of 50 percent of the number and capacity of the exit enclosures is permitted to egress through a vestibule provided all of the following are met:

2.1. The entire area of the vestibule is separated from areas below by construction conforming to the fire-resistance rating for the exit enclosure.

2.2. The depth from the exterior of the building is not greater than 10 feet (3048 mm) and the length is not greater than 30 feet (9144 mm).

2.3. The area is separated from the remainder of the level of exit discharge by construction providing protection at least the equivalent of approved wired glass in steel frames.

2.4. The area is used only for means of egress and exits directly to the outside.

3. Stairways in open parking garages complying with Section 1019.1, Exception 5, are permitted to egress through the open parking garage at the level of exit discharge.

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Section 265. Subsection 1023.5.2 of the 2003 International Fire Code is amended as follows:

1023.5.2 Construction and openings. Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall be not less than 1-hour fire-resistance-rated exterior walls complying with Section 704 of the *International Building Code* for a distance of 10 feet (3048 mm) above the floor of the court, and openings therein shall be equipped with fixed or self-closing, $^3/_4$-hour opening protective assemblies.

Exceptions:

1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving Group R-3 as applicable in Section 1001.1.
3. In buildings other than those which have a single means of egress under Section 1018.2 exception 4, opening protection need not be provided where it is possible to exit in two directions from the court.

Section 266. Subsection 1023.6 of the 2003 International Fire Code is amended as follows:

1023.6 Access to a public way. The exit discharge shall provide a direct and unobstructed access to a public way.

Exception: Where access to a public way cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate at least 5 square feet (0.28 m^2) for each person.
2. The area shall be located on the same property at least 50 feet (15 240 mm) away from the building requiring egress.
3. The area shall be permanently maintained and identified as a safe dispersal area.

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4. The area shall be provided with a safe and unobstructed path of travel from the building.

5. The area shall be provided with at least two gates.

Section 267. Subsection 1024.9.5 of the 2003 International Fire Code is amended as follows:

1024.9.5 Assembly aisle termination. Each end of an aisle shall terminate at cross aisle, foyer, doorway, vomitory or concourse having access to an exit.

Exceptions:

1. Dead-end aisles shall not be greater than ((~~20~~)) 25 feet (((~~6096~~)) 7620 mm) in length.
2. Dead-end aisles longer than 20 feet (6096 mm) are permitted where seats beyond the 20-foot (6096 mm) dead-end aisle are no more than 24 seats from another aisle, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row.
3. For smoke-protected assembly seating, the dead-end aisle length of vertical aisles shall not exceed a distance of 21 rows.
4. For smoke-protected assembly seating, a longer dead-end aisle is permitted where seats beyond the 21-row dead-end aisle are not more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row.

Section 268. Subsection 1024.11 of the 2003 International Fire Code is amended as follows:

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1024.11 Assembly aisle walking surfaces. Aisles with a slope not exceeding one unit vertical in eight units horizontal (12.5-percent slope) shall consist of a ramp having a slip-resistant walking surface. Aisles with a slope exceeding one unit vertical in eight units horizontal (12.5-percent slope) shall consist of a series of risers and treads that extends across the full width of aisles and complies with Sections 1024.11.1 through 1024.11.3.

[W] **EXCEPTION:** When provided with fixed seating, aisles in Group A-1 Occupancies are permitted to have a slope not steeper than one unit vertical to five units horizontal (20-percent slope).

1024.11.1 Treads. Tread depths shall be a minimum of ((~~11~~)) 10 inches (((~~279~~)) 254 mm) and shall have dimensional uniformity.

Exception: The tolerance between adjacent treads shall not exceed 0.188 inch (4.8 mm).

* * *

Section 269. Subsection 1024.13 of the 2003 International Fire Code is amended as follows:

1024.13 Handrails. Ramped aisles having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and aisle stairs shall be provided with handrails located either at the side or within the aisle width.

Exceptions:

1. Handrails are not required for ramped aisles having a gradient no greater than one unit vertical in ((~~eight~~)) five units horizontal (((~~12.5~~)) 20 percent slope) and seating on both sides.
2. Handrails are not required if, at the side of the aisle, there is a guard that complies with the graspability requirements of handrails.

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Section 270. Subsection 1024.13.2 of the 2003 International Fire Code is hereby repealed.

Section 271. Subsection 1101.3 of the 2003 International Fire Code is amended as follows:

1101.3 Permits. For permits to operate aircraft-refueling vehicles, application of flammable or combustible finishes, and hot work, see Section 105.6. For permits to operate helicopters to move suspended loads over populated areas see Section 105.6.22.2 Helicopter lifts.

Section 272. Subsection 1207.3 of the 2003 International Fire Code is amended as follows:

1207.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall conform to the requirements of Chapter 34 and be located underground or outside, above ground.

Exceptions: ((~~As provided in NFPA 32 for inside storage or treatment tanks.~~))

1. Solvent storage tanks located within solvent tank storage rooms in accordance with Section 1207.2 where the individual tank capacity does not exceed 1,500 gallons and the aggregate quantity of solvent inside the room does not exceed 3,000 gallons.
2. Solvent tanks located within approved rooms or buildings in accordance with Section 3404.3.7 for the use, mixing and dispensing of flammable and combustible liquids.

Section 273. A new subsection 1303.1.1 is adopted to read as follows:

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1303.1.1 Static accumulation. When processes or conditions exist where combustible dust could be ignited by static electricity, means shall be provided to prevent the accumulation of a static charge.

Section 274. Subsection 1404.5 of the 2003 International Fire Code is amended as follows:

1404.5 Fire watch. Fire watch for buildings under construction or alteration shall be provided in accordance with Administrative Rule 9.06.04 *Out-Of-Service Fire Alarm, Standpipe, Fire Sprinkler and Emergency Alarm Systems.* When required by the fire code official for building 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.

Section 275. Subsection 1408.1 of the 2003 International Fire Code is amended as follows:

1408.1 Program superintendent. Where required ((~~The~~))the owner shall designate a person to be the Fire Prevention Program Superintendent who shall be responsible for the fire prevention program 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.

Section 276. Subsection 1410.1 of the 2003 International Fire Code is amended as follows:

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1410.1 Required access. Approved vehicle access for fire fighting shall be provided to within 100 feet (30480 mm) of all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30480 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.

Section 277. Subsection 1413.1 of the 2003 International Fire Code is amended as follows:

1413.1 Where required. Buildings four or more stories in height shall be provided with not less than one Class I standpipe in accordance with Section 905 for use during construction. Such standpipes shall be installed when the progress of construction is not more than 40 feet (12 192 mm) in height above the lowest level of fire department access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairs. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

Section 278. Subsection 1414.1 of the 2003 International Fire Code is amended as follows:

1414.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the *International Building Code*, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 105.3.3 and Administrative Rule 9.06.04 *Partial / Phased Occupancy, Occupancy During Construction and Temporary Certificates of Occupancy*.

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Section 279. Subsection 1503.2.1 of the 2003 International Fire Code is amended as follows:

1503.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall comply with this chapter and the ((~~ICC~~)) *Electrical Code*.

* * *

Section 280. Subsection 1503.2.1.1 of the 2003 International Fire Code is amended as follows:

1503.2.1.1 Spray ((~~spaces~~)) areas and vapor areas. Electrical wiring and equipment in spray ~~spaces~~ areas and vapor areas shall be of an explosion-proof type approved for use in such hazardous locations. Such areas shall be considered to be Class I, Division 1 or Class II, Division 1 hazardous locations in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 281. Subsection 1503.2.1.1of the 2003 International Fire Code is amended as follows:

1503.2.1.2 Electrical wiring and equipment in resin application areas. Electrical wiring and equipment located in resin application areas shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 282. Subsection 1503.2.1.5 of the 2003 International Fire Code is amended as follows:

1503.2.1.5 Areas subject to overspray deposits. Electrical equipment in spraying areas located such that deposits of combustible residues could readily accumulate thereon shall be specifically approved for locations containing deposits of readily ignitable residue and explosive vapors in accordance with the ((~~ICC~~)) *Electrical Code*.

Exceptions:

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1. Wiring in rigid conduit.

2. Boxes or fittings not containing taps, splices or terminal connections.

3. Equipment allowed by Sections 1504 and 1506 and Chapter 21.

Section 283. Subsection 1503.2.1.6 of the 2003 International Fire Code is amended as follows:

1503.2.1.6 Flexible power cords. The use of flexible power cords shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 284. Subsection 1503.2.2 of the 2003 International Fire Code is amended as follows:

1503.2.2 Open flames and sparks. Open flames and spark-producing devices shall not be located in spray ((~~spaces~~)) areas or vapor areas and shall not be located within 20 feet (6096 mm) of such areas unless separated by a permanent partition.

Exception: Drying and baking apparatus complying with Section 1504.7.2.

Section 285. Subsections 1503.2.4, 1503.2.5, and 1503.2.6 of the 2003 International Fire Code are amended as follows:

1503.2.4 Equipment enclosures. Equipment or apparatus that is capable of producing sparks or particles of hot metal that would fall into a spray ((~~space~~)) area or vapor area shall be totally enclosed.

1503.2.5 Grounding. Metal parts of spray booths, exhaust ducts and piping systems conveying Class I or II liquids shall be electrically grounded in accordance with the ((~~ICC~~)) *Electrical Code*. Metallic parts located in resin application areas, including but not limited to exhaust

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ducts, ventilation fans, spray application equipment, workpieces and piping, shall be electrically grounded.

1503.2.6 Smoking prohibited. Smoking shall be prohibited in spray ((~~spaces~~)) areas or vapor areas. "No Smoking" signs complying with Section 310 shall be conspicuously posted in such areas.

Section 286. Subsection 1504.1 of the 2003 International Fire Code is amended as follows:

1504.1 Location of spray-finishing operations. Spray-finishing operations conducted in buildings used for Group A, E, I or R occupancies shall be located in a spray room protected with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 and separated vertically and horizontally from other areas in accordance with the *International Building Code*. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or limited spraying space approved for such use.

Spray-finishing operations shall not be conducted in basements.

* * *

Section 287. Subsections 1504.1.3 of the 2003 International Fire Code is amended as follows:

1504.1.3 Spray((~~ing spaces~~)) areas. Spray((~~ing spaces~~)) areas shall be designed and constructed in accordance with the *International Building Code* and Sections 1504.1.3.1, 1504.2, 1504.3, 1504.4, 1504.5 and 1504.6 of this code.

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1504.1.3.1 Floor. Combustible floor construction in spraying ((~~spaces~~)) areas shall be covered by approved, non- combustible, nonsparking material, except where combustible coverings, such as thin paper or plastic and strippable coatings are utilized over noncombustible materials to facilitate cleaning operations in spraying spaces.

Section 288. Subsection 1504.1.4 of the 2003 International Fire Code is amended as follows:

1504.1.4 Limited spraying spaces. Limited spraying spaces shall comply with Sections 1504.1.4.1 through 1504.1.4.4.

Limited spraying spaces are prohibited when they are used as the exclusive location for spray finishing operations where auto refinishing and collision repair are the primary business.

* * *

Section 289. Subsection 1504.1.4.4 of the 2003 International Fire Code is amended as follows:

1504.1.4.4 Electrical wiring. Electrical wiring within 10 feet (3048 mm) of the floor and 20 feet (6096 mm) horizontally of the limited spraying space shall be de-signed for Class I, Division 2 locations in accordance with the ((~~ICC~~)) *Electrical Code.*

Section 290. Subsection 1504.3.5 of the 2003 International Fire Code is amended as follows:

1504.3.5 Filter disposal. Discarded filter pads shall be immediately ((~~removed to a safe, detached location or~~)) placed in a noncombustible container with a tight-fitting lid and disposed of ((~~properly~~)) in accordance with local and state hazardous waste regulations.

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Section 291. Subsection 1504.5 of the 2003 International Fire Code is amended as follows:

1504.5 Illumination. Where spraying ((~~spaces~~)) areas, spray rooms or spray booths are illuminated through glass panels or other transparent materials, only fixed lighting units shall be utilized as a source of illumination.

* * *

Section 292. Subsection 1504.7.2.2 of the 2003 International Fire Code is amended as follows:

1504.7.2.2 Portable infrared apparatus. When portable infrared drying apparatus is used, electrical wiring and portable infrared drying equipment shall comply with the ((~~ICC~~)) *Electrical Code.* Electrical equipment located within 18 inches (457 mm) of floor level shall be approved for Class I, Division 2 hazardous locations. Metallic parts of drying apparatus shall be electrically bonded and grounded. During spraying operations, portable drying apparatus and electrical connections and wiring thereto shall not be located within spray booths, spray rooms or other areas where spray residue would be deposited thereon.

Section 293. Subsection 1504.7.2.3 of the 2003 International Fire Code is amended as follows:

1504.7.2.3 Sources of ignition. Except as specifically provided in ((~~this section~~))Section 1504.7.2.2, drying or baking units utilizing a heating system having open flames or which are capable of producing sparks, shall not be installed in a spraying area.

Section 294. Subsection 1703.2.1 of the 2003 International Fire Code is amended as follows:

1703.2.1 Electricity. Electricity shall be shut off.

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Exception: Circulating fans that have been specifically designed for utilization in hazardous atmospheres and installed in accordance with the ((~~ICC~~)) *Electrical Code* and temporary remote control power leads with control switches located outside the fumigant space for powering such fans.

Section 295. Subsection 2201.1 of the 2003 International Fire Code is amended as follows:

2201.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities and repair garages shall be in accordance with this chapter and the *International Building Code, International Fuel Gas Code* and the *International Mechanical Code*. Such operations shall include both operations that are accessible to the public and private operations.

For provisions relating to the transfer of flammable and combustible liquids directly from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments, see Section 3406.5.4.5.

Section 296. Subsection 2201.5 of the 2003 International Fire Code is amended as follows:

2201.5 Electrical. Electrical wiring and equipment shall be suitable for the locations in which they are installed and shall comply with Section 605, NFPA 30A and the ((~~ICC~~)) *Electrical Code*.

Section 297. Subsection 2202.1 of the 2003 International Fire Code is amended as follows:

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2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

* * *

FIRE DISTRICT shall consist of that part of the city within the boundary described in Section 401 of the *Seattle Building Code* as follows:

Beginning at the intersection of the center line of Alaskan Way and Clay Street; thence northeasterly along the center line of Clay Street to an intersection with the center line of Denny Way; thence easterly along the center line of Denny Way to an intersection with the center line of Yale Avenue; thence southeasterly along the center line of Yale Avenue to an intersection with the center line of Interstate Highway 5; thence southerly and south-easterly along the center line of Interstate 5 to an intersection with the center line of 7th Avenue South; thence southerly along the center line of 7th Avenue South to an intersection with the center line of Dearborn Street; thence westerly along the center line of Dearborn Street to an intersection with the center line of Airport Way; thence northwesterly along the center line of Airport Way to an intersection with the center line of 4th Avenue South; thence southerly along the center line of 4th Avenue south to an intersection with the center line of South Royal Brougham Way; thence westerly along said center line of South Royal Brougham Way to an intersection with the center line of South Alaskan Way; thence southerly along the center line of South Alaskan Way to an intersection with the center line of South Massachusetts Street, thence westerly along the centerline of South Massachusetts Street to the Outer Harbor Line in Elliott Bay, thence northerly and northwesterly along said Outer Harbor Line to an intersection with the center line of West Harrison Street, thence easterly along the center line of West Harrison Street to an intersection with the center line of Alaskan Way, then southeasterly along the center line of Alaskan Way to the point of beginning.

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For a map of the City of Seattle Fire District, see the *Seattle Building Code.*

* * *

MARINE MOTOR FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as fuel for ((~~watercraft~~)) marine vessels are stored and dispensed from fixed equipment on shore, piers, wharves, floats or barges into the fuel tanks of ((~~watercraft~~))marine vessels and shall include all other facilities used in connection therewith.

Point of Information

Marine motor fuel-dispensing facilities are not to be confused with marine bulk plants that transfer fuel by way of flange to flange connections. Marine motor fuel-dispensing facilities use automotive type dispensing equipment for fueling primarily pleasure craft.

MOTOR VEHICLE includes, but is not limited to, a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in the transportation of passengers or property. It does not include a vehicle, locomotive, or car operated exclusively on a rail or rails, or a trolley bus operated by electric power derived from a fixed overhead wire, furnishing local passenger transportation similar to street-railway service. The term "motor vehicle" also includes freight containers or cargo tanks used, or intended for use, in connection with motor vehicles. For reference, see 49 CFR Pt. 171.8 (October 2002).

MOTOR VEHICLE, UNATTENDED means a motor vehicle where the driver cannot see the motor vehicle or hear noises in or near the motor vehicle.

Exceptions:

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1. Necessary absence in connection with loading and unloading the motor vehicle.

2. Stops for meals during the day or night, if the point of parking is well lighted.

3. When in case of accident or other emergency, the driver must leave to obtain assistance.

* * *

Section 298. Subsection 2203.2 of the 2003 International Fire Code is amended as follows:

2203.2 Emergency disconnect switches. An approved, clearly identified and readily accessible emergency disconnect switch shall be provided at an approved location, to stop the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. An emergency disconnect switch for exterior fuel dispensers shall be located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, the fuel dispensers. For interior fuel-dispensing operations, the emergency disconnect switch shall be installed at an approved location. Such devices shall be distinctly labeled as: EMERGENCY FUEL SHUTOFF. Signs shall be provided in approved locations and letters shall not be less than 3 inches (76.2 mm) in height and ½ inch (12.7 mm) in stroke.

Section 299. Subsection 2204.4.1 of the 2003 International Fire Code is amended as follows:

2204.4.1 Approved containers required. Class I, II and IIIA liquids shall not be dispensed into a portable container unless such container is of approved material and construction, and has a tight closure with screwed or spring-loaded cover so designed that the contents can be dispensed without spilling. Liquids shall not be dispensed into portable tanks or cargo tanks.

It shall be unlawful to sell, offer for sale, or distribute any container for the storage and/or handling of flammable liquids, unless such container has been approved for such purpose

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under applicable provisions of this code.

Section 300. Subsection 2205.1.2 of the 2003 International Fire Code is amended as follows:

2205.1.2 Tank capacity calculation. The driver, operator or attendant of a tank vehicle shall, before making delivery to a tank, shall manually gauge the tank to determine the unfilled, available capacity of such tank ((~~by an approved gauging device~~)).

Section 301. Subsection 2206.2.1 of the 2003 International Fire Code is amended as follows:

2206.2.1 Underground tanks. Underground tanks for the storage of Class I, II and IIIA liquid fuels shall comply with Chapter 34.

Point of Information

The fire code official is authorized to defer regulation of underground storage tank installations to the Washington State Department of Ecology.

* * *

Section 302. Subsection 2206.2.2 of the 2003 International Fire Code is amended as follows:

2206.2.2 Above-ground tanks located inside buildings. Above-ground tanks for the storage of Class I, II and IIIA liquid fuels are allowed to be located in buildings. Such tanks shall be located in special enclosures complying with Section 2206.2.6, or in a liquid storage room or a liquid storage warehouse complying with Chapter 34((~~, or shall be listed and labeled as protected above-ground tanks~~)).

Exceptions:

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1. Above ground tanks listed and labeled as protected above ground tanks containing Class I flammable liquids and having an individual capacity not exceeding 120 gallons.

2. Above ground tanks listed and labeled as protected above ground tanks containing Class II or III-A combustible liquids and having an individual capacity not exceeding 240 gallons.

Section 303. Subsection 2206.2.3 of the 2003 International Fire Code is amended as follows:

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

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

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

3. Above-ground tanks containing Class I liquids for fueling motor vehicles are prohibited in the Fire District.

4. Above-ground tanks containing Class I liquids for fueling motor vehicles are allowed outside the Fire District only when located within an Industrial [I] zone, as defined in the Seattle Land Use Code.

((~~3~~))5. Tanks containing Class I liquid fuels shall not exceed 12,000 gallons (45 420 L) in individual capacity or ~~48,000~~ 12,000 gallons (((~~181 680~~)) 45 420 L) in aggregate capacity. Tanks containing Class II or III-A liquid fuels shall not exceed 12,000 gallons (45 420 L)

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in individual capacity or 48,000 gallons (181 680 L) in aggregate capacity. The total maximum aggregate quantity of all flammable and combustible liquids in aboveground storage tanks on site shall not exceed 48,000 gallons. Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30 480 mm).

((4))6. Tanks located at farms, construction projects, or rural areas shall comply with Section 3406.2.

Section 304. Subsection 2206.2.4.1 of the 2003 International Fire Code is amended as follows:

2206.2.4.1 Tank capacity limits. Tanks storing Class I liquids shall be limited to a maximum individual capacity of 12,000 gallons (45 420 L) and an aggregate capacity at an individual site of 12,000 gallons (45 420 L). Tanks storing ((~~and~~)) Class II and III-A liquids at an individual site shall be limited to a maximum individual capacity of ((~~15,000~~)) 12,000 gallons (((~~56 775~~)) 45 420 L) and an aggregate capacity of 48,000 gallons (181 680 L).

Section 305. Subsection 2206.2.4.2 of the 2003 International Fire Code is amended as follows:

2206.2.4.2 Above-ground tanks located in above-grade vaults or below-grade vaults at ((~~F~~))fleet vehicle motor fuel-dispensing facilities. Vaulted ((~~T~~))tanks storing Class II and Class IIIA liquids at a fleet vehicle motor fuel-dispensing facility shall be limited to a maximum individual capacity of 20,000 gallons (75 700 L) and an aggregate capacity of 80,000 gallons (302 800 L).

Section 306. Subsection 2206.7.6 of the 2003 International Fire Code is amended as follows:

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2206.7.6 Fuel delivery nozzles. A listed automatic-closing-type hose nozzle valve with ((~~or without~~)) a latch-open device shall be provided on island-type dispensers used for dispensing Class I, II or IIIA liquids. Overhead-type dispensing units shall be provided with a listed automatic-closing-type hose nozzle valve without a latch-open device.

Exception: A listed automatic-closing-type hose nozzle valve with latch-open device is allowed to be used on overhead-type dispensing units where the design of the system is such that the hose nozzle valve will close automatically in the event the valve is released from a fill opening or upon impact with a driveway.

Section 307. A new subsection 2207.1.1 is adopted to read as follows:

2207.1.1 Prohibited locations. Motor fuel-dispensing facilities for liquefied petroleum gas (LP-gas) fuel are prohibited in the Fire District.

Section 308. Subsection 2208.8.1.2.4 of the 2003 International Fire Code is amended as follows:

2208.8.1.2.4 Grounding and bonding. The structure or appurtenance used for supporting the cylinder shall be grounded in accordance with the ((~~ICC~~)) *Electrical Code*. The cylinder valve shall be bonded prior to the commencement of venting operations.

Section 309. A new subsection 2209.1.1 is adopted to read as follows:

2209.1.1 Prohibited locations. Hydrogen motor fuel-dispensing and generation facilities are prohibited in the Fire District.

Section 310. Subsection 2209.2.3 of the 2003 International Fire Code is amended as follows:

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2209.2.3 Electrical equipment. Electrical installations shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 311. Subsection 2211.3.1 of the 2003 International Fire Code is amended as follows:

2211.3.1 Equipment. Appliances and equipment installed in a repair garage shall comply with the provisions of the *International Building Code,* the *International Mechanical Code* and the ((~~ICC~~)) *Electrical Code.*

Section 312. Subsection 2211.8.1.2.4 of the 2003 International Fire Code is amended as follows:

2211.8.1.2.4 Grounding and bonding. Cylinders, containers or tanks and piping systems used for defueling shall be bonded and grounded. Structures or appurtenances used for supporting the cylinders, containers or tanks shall be grounded in accordance with the ((~~ICC~~)) *Electrical Code*. The valve of the vehicle storage tank shall be bonded with the defueling system prior to the commencement of discharge or defueling operations.

Section 313. Subsection 2301.1 of the 2003 International Fire Code is amended as follows:

2301.1 Scope. High-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 28.
2. Flammable and combustible liquids shall be in accordance with Chapter 34.
3. Hazardous materials shall be in accordance with Chapter 27.
4. Storage of combustible paper records shall be in accordance with NFPA 232((~~1C~~)).

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Section 314. Subsection 2307.2 of the 2003 International Fire Code is amended as follows:

2307.2 Fire protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire-resistance-rated fire barrier walls constructed in accordance with the *International Building Code*. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with the *International Building Code* and NFPA 13((~~231~~)).

2307.2.1 Shelf storage. Shelf storage greater than 12 feet (3658 mm) but less than 15 feet (4572 mm) in height shall be in accordance with the fire protection requirements set forth in NFPA 13 ((~~231~~)).

Section 315. Subsection 2308.2 of the 2003 International Fire Code is amended as follows:

2308.2 Fire protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire barrier walls constructed in accordance with the *International Building Code*. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with Section 903.3.1.1, the *International Building Code* and NFPA 13 ((~~231C~~)).

* * *

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Section 316. Subsection 2308.2.2 of the 2003 International Fire Code is amended as follows:

2308.2.2 Racks with solid shelving. Racks with solid shelving having an area greater than 20 ((~~32~~)) square feet (1.85 ((~~3~~)) m 2), measured between approved flue spaces at all four edges of the shelf, shall be in accordance with this section.

Exceptions:

1. Racks with mesh, grated, slatted or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising at least 50 percent of overall shelf area, and with approved flue spaces, are allowed to be treated as racks without solid shelves.
2. Racks used for the storage of combustible paper records, with solid shelving, shall be in accordance with NFPA 232 ((~~1C~~)).

Section 317. Subsection 2308.2.2.1 of the 2003 International Fire Code is amended as follows:

2308.2.2.1 Fire protection. Fire protection for racks with solid shelving shall be in accordance with NFPA ((~~231C~~))13.

Section 318. Subsection 2308.4 of the 2003 International Fire Code is amended as follows:

2308.4 Column protection. Steel building columns shall be protected in accordance with NFPA 13((~~231C~~)).

Section 319. Subsection 2310.1 of the 2003 International Fire Code is amended as follows:

2310.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be in accordance with Sections

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2306 and 2308 and NFPA 232 ((~~1C~~)). Palletized storage of records shall be in accordance with Section 2307.

Section 320. Subsection 2403.2 of the 2003 International Fire Code is amended as follows:

2403.2 Approval required. Tents and membrane structures having an area in excess of 200 square feet (19 m 2) and canopies in excess of 400 square feet (37 m 2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exceptions:

1. Tents used exclusively for recreational camping purposes.

((~~2. Fabric canopies open on all sides which comply with all of the following:~~

~~2.1. Individual canopies having a maximum size of 700 square feet (65 m 2).~~

~~2.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m 2) total.~~

~~2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.~~))

Section 321. Subsection 2403.12.6.1 of the 2003 International Fire Code is amended as follows:

2403.12.6.1 Exit sign illumination. Exit signs shall be of an approved self-luminous type or shall be internally or externally illuminated by fixtures supplied in the following manner:

1. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less; or

2. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from

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storage batteries or from the on-site generator set, and the system shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 322. Subsection 2404.5 of the 2003 International Fire Code is amended as follows:

2404.5 Combustible materials. Hay, straw, shavings or similar combustible materials shall not be located within any tent, canopy or membrane structure containing an assembly occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time. The areas within and adjacent to the tent or air-supported structure shall be maintained clear of all combustible materials or vegetation that could create a fire hazard within ((~~20~~)) 30 feet (((~~6096~~)) 9144 mm) from the structure. Combustible trash shall be removed at least once a day from the structure during the period the structure is occupied by the public.

Section 323. Subsection 2404.15.7 of the 2003 International Fire Code is amended as follows:

2404.15.7 Electrical heating and cooking equipment. Electrical cooking and heating equipment shall comply with the ((~~ICC~~)) *Electrical Code*.

Section 324. Subsection 2505.4 of the 2003 International Fire Code is amended as follows:

2505.4 Distance from lot lines and buildings. Tire storage piles shall be located at least 50 feet (15 240 mm) from lot lines and buildings.

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Exception: When stored on a single rack having dimensions not exceeding 68"x 48"x 76" for commercial display, the distance to property lines that can be built upon may be reduced to 10 ft and no separation is required from buildings on the same property.

Section 325. Subsection 2601.1 of the 2003 International Fire Code is amended as follows:

2601.1 Scope. Welding, cutting, open torches and other hot work operations and equipment shall comply with this chapter.

Exception: Hot work on board marine vessels at dock or under construction or repair shall be in accordance with Administrative Rules 26.01.04, *Cutting, Welding and Other Hot Work on Marine Vessels* and 26.02.04, *Designated Hot Work Facilities and Shipyards*.

Section 326. Subsection 2601.3 of the 2003 International Fire Code is amended as follows:

2601.3 Restricted areas. Hot work shall only be conducted in areas designed or authorized for that purpose by the personnel responsible for a Hot Work Program. Hot work shall not be conducted in the following areas unless specific approval has been obtained from the fire code official:

1. Areas where the sprinkler system is impaired.
2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.
3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.
4. On board ships at dock or ships under construction or repair.
5. At other locations as specified by the fire code official.

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Section 327. Subsection 2601.5 of the 2003 International Fire Code is amended as follows:

2601.5 Design and installation of oxygen-fuel gas systems. The design and installation of ((~~A~~))an oxygen-fuel gas system with two or more manifolded cylinders of oxygen shall be in accordance with NFPA 51.

Section 328. Subsection 2602.1 of the 2003 International Fire Code is amended as follows:

2602.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

* * *

HOT WORK. Operations including cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems, glass-blowing, weed burning, use of any open-flame or arc-producing device and any activity involving riveting, burning, silbrazing, use of powder-actuated tools or any similar spark, arc or flame producing activity. Grinding, drilling, heating of couplings or other machinery, abrasive blasting and similar spark-producing operations in areas where flammable or explosive atmospheres may be present or produced may be considered hot work ((~~or any other similar activity~~)).

* * *

HOT WORK EQUIPMENT. Electric or gas welding or cutting equipment or any other equipment used for hot work.

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HOT WORK PERMITS. Permits issued by the responsible person at the facility under the hot work permit program permitting welding or other hot work to be ((~~done~~)) conducted in locations referred to in Section 2603.3 and pre-permitted by the fire code official.

* * *

PF DEVICE. A wet or dry device (or assembly of devices) in a fuel gas line designed to perform the following three functions:

(a) Prevent backflow of oxygen into the fuel gas supply system;

(b) Prevent the passage of flame into the fuel gas supply system (flashback);

(c) Prevent the development of a fuel gas–oxygen mixture at sufficient pressure so that its ignition would achieve combustion pressures that could cause failure to perform functions (a) and (b). This device is given a diagram symbol, PF. A wet PF device is commonly known as a hydraulic seal, hydraulic valve, or hydraulic back-pressure valve.

* * *

Section 329. Subsection 2604.2 of the 2003 International Fire Code is amended as follows:

2604.2 Fire watch. Fire watches shall be established and conducted in accordance with Sections 2604.2.1 through 2604.2.6.

2604.2.1 When required. A fire watch shall be provided during hot work activities and shall continue for a minimum of 30 minutes after the conclusion of the work. The fire code official, or the responsible manager under a hot work program, is authorized to extend the fire watch based on the hazards or work being performed.

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((~~**Exception:** Where the hot work area has no fire hazards or combustible exposures.~~))

2604.2.2 Location. The fire watch shall include the entire hot work area and be positioned so that the extinguishment of a spot fire is not delayed. Hot work conducted in areas with vertical or horizontal fire exposures that are not observable by a single individual shall have additional personnel assigned to fire watches to ensure that exposed areas are monitored.

2604.2.3 Duties. Individuals designated to fire watch duty shall have no other duties except to watch for fire, ((~~have fire-extinguishing equipment readily available and shall be trained in the use of such equipment. Individuals assigned to fire watch duty shall be responsible for~~)) extinguish((~~ing~~)) spot fires and communicate((~~ing~~)) an alarm.

2604.2.4 Fire extinguishing equipment and training. The individuals responsible for performing the hot work and individuals responsible for providing the fire watch shall ((~~be trained in the use of portable fire extinguishers~~)) have fire-extinguishing equipment readily available and shall be trained in the use of such equipment.

2604.2.5 Fire hoses. Where hoselines are required, they shall be connected, charged and ready for operation.

2604.2.6 Fire extinguisher. A minimum of one portable fire extinguisher complying with Section 906 and with a minimum ((~~2-A:20-B:C~~)) 2-A:40-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.

Section 330. Section 2605 of the 2003 International Fire Code is amended as follows

SECTION 2605

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GAS ((~~WELDING AND CUTTING~~))HOT WORK

2605.1 General. Devices or attachments mixing air or oxygen with combustible gases prior to consumption, except at the burner or in a standard torch or blow pipe, shall not be allowed unless approved.

2605.2 Cylinder and container storage, handling and use. Storage, handling and use of compressed gas cylinders, containers and tanks shall be in accordance with this section and Chapter 30.

2605.3 Precautions. Cylinders, valves, regulators, hose and other apparatus and fittings for oxygen shall be kept free from oil or grease. Oxygen cylinders, apparatus and fittings shall not be handled with oily hands, oily gloves, or greasy tools or equipment.

2605.4 Fuel gases and liquid oxygen.

2605.4.1 Acetylene and other nonliquefied flammable gases.

2605.4.1.1 Prohibitions. Acetylene gas shall not be:

1. piped except in approved cylinder manifolds and cylinder manifold connections, or
2. utilized at a pressure exceeding 15 pounds per square inch gauge (psig) (103 kPa) unless dissolved in a suitable solvent in cylinders manufactured in accordance with DOTn 49 CFR.

2605.4.1.2 Unalloyed copper. Acetylene gas shall not be brought in contact with unalloyed copper, except in a blowpipe or torch.

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2605.4.1.3 Maximum acetylene and other nonliquefied flammable gas quantities inside buildings. The maximum quantity of acetylene and other nonliquefied flammable gas used and stored inside buildings in conjunction with hot work operations shall be in accordance with this section.

2605.4.1.3.1 Group A, B, E, I, M and R Occupancies. Acetylene gas and other nonliquefied flammable gas shall not be stored or used in Group A, B, E, I, M or R Occupancies.

Exceptions:

1. Individual cylinders not exceeding 150 cubic feet each at normal temperature and pressure (NTP). Aggregate quantity of flammable gas shall not exceed 1,000 cubic feet in unsprinklered buildings and 2,000 cubic feet in sprinklered buildings.
2. Buildings under construction or demolition where individual acetylene gas and other nonliquefied flammable gas cylinders do not exceed 300 cubic feet each at normal temperature and pressure and the aggregate storage quantity inside the building does not exceed 1,000 cubic feet.

2605.4.1.3.2 Group F and S Occupancies. Acetylene and other nonliquefied flammable gas shall not be stored or used in Group F and S Occupancies in excess of the maximum allowable quantities set forth in Table 2703.1.1 (1).

2605.4.1.3.3 Mixed use occupancies. Individual fuel gas cylinders within F or S occupancies in buildings having any other use shall be limited to 250 cubic feet at normal temperature and pressure and shall be limited to a total aggregate gas capacity

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of 1,000 cubic feet (70.8 m3) at normal temperature and pressure of acetylene or other nonliquefied flammable gas.

2605.4.2 Liquefied petroleum gas (LP-gas) and methylacetylenepropadiene (MAPP gas).

2605.4.2.1 Maximum LP-gas and MAPP gas quantities inside buildings. The maximum quantity of LP-gas and MAPP gas used and stored inside buildings in conjunction with hot work operations shall be in accordance with this section.

Point of Information

1 pound LP-gas capacity is equivalent to 2.2 pounds water capacity.

1 gallon of LP-gas at 60 F weighs 4.22 pounds.

1 gallon of water weighs 8.33 pounds.

2605.4.2.1.1 Group A, B, E, I , M and R Occupancies. LP-gas and MAPP shall not be stored or used in Group A, B, E, I, M or R Occupancies.

Exceptions:

1. A single LP-gas or a single MAPP gas cylinder not exceeding 50-pounds water capacity (nominal 20 pounds LP-gas) in Group E and M occupancies.
2. Individual LP-gas or MAPP gas cylinders not exceeding 12-pounds water capacity (nominal 5 pounds LP-gas) in Group I occupancies.
3. Unoccupied buildings under construction or demolition where individual LP-gas or MAPP gas cylinders do not exceed 240 pounds water capacity (nominal 100 pounds LP-gas) and the aggregate quantity inside the building does not exceed an aggregate water capacity of 735-pounds (nominal 300 pounds LP-gas on the site.

4. Occupied buildings under construction or demolition where individual LP-gas or MAPP gas cylinders do not exceed 104 pounds water capacity (nominal 43.5 pounds LP-gas) and the aggregate quantity inside the building does not exceed 357 pounds water capacity (nominal 150 pounds LP-gas).

2605.4.2.1.2 Group F and S Occupancies. LP-gas and MAPP gas shall not be stored or used in excess of 735 pounds aggregate water capacity (nominal 300 pounds LP-gas) in Group F and S Occupancies.

2605.4.2.1.3 Mixed use occupancies. LP-gas and MAPP gas storage and use inside Group F and S occupancies within buildings having any other use shall be limited to cylinders having an individual water capacity not exceeding 50 pounds (nominal 20 pounds LP-gas) and a total aggregate water capacity not to exceed 144 pounds (nominal 60 pounds LP-gas).

2605.4.3 Liquid oxygen (LOX). Liquid oxygen shall not be stored or used in an unsprinklered building in an aggregate quantity exceeding 45 gallons per control area or an aggregate quantity of 90 gallons per control area in a sprinklered building.

2605.4.4 Separation of cylinders in storage. Fuel gas cylinders shall be separated from compressed oxygen cylinders and liquid oxygen containers by a minimum of 20 feet (6.1 m) or by a barrier of noncombustible construction at least five feet high having a fire-resistive rating of at least ½ hour. The barrier shall interrupt all lines of sight between oxygen and fuel gas cylinders within 20 feet of each other.

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2605.5 Remote locations. Oxygen and fuel-gas cylinders and acetylene generators shall be located away from the hot work area to prevent such cylinders or generators from being heated by radiation from heated materials, sparks or slag, or misdirection of the torch flame.

2605.6 Cylinders shutoff. The torch valve shall be closed and the gas supply to the torch completely shut off when gas ((~~welding or cutting~~)) hot work operations are discontinued for a period of 1 hour or more.

2605.7 Prohibited operation. ((~~Welding or cutting~~)) Hot work shall not be held or supported on compressed gas cylinders or containers.

2605.8 Tests. Tests for leaks in piping systems and equipment shall be made with soapy water. The use of flames shall be prohibited for leak testing.

Section 331. Subsection 2606.4 of the 2003 International Fire Code is amended as follows:

2606.4 Emergency disconnect. A switch or circuit breaker shall be provided so that fixed electric welders and control equipment can be disconnected from the supply circuit. The disconnect shall be installed in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 332. A new subsection 2609.8 is adopted to read as follows:

2609.8 PF Devices. PF devices shall be designed and installed in fuel gas lines in accordance with NFPA 51.

Section 333. Subsection 2701.1 of the 2003 International Fire Code is amended as follows:

2701.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter. This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that when specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. The quantities of alcoholic beverages, medicines, foodstuffs, cosmetics, and consumer or industrial products containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, in retail or wholesale sales occupancies, are unlimited when packaged in individual containers not exceeding 1.3 gallons (5 L).
2. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications when applied in accordance with the manufacturer's instructions and label directions.
3. The off-site transportation of hazardous materials when in accordance with DOT regulations.
4. Building materials not otherwise regulated by this code.
5. Refrigeration systems (see Section 606).
6. Stationary lead-acid batteries regulated by Section 608.
7. The display, storage, sale or use of fireworks and explosives in accordance with Chapter 33.
8. Corrosives utilized in personal and household products in the manufacturer's original consumer packaging in Group M occupancies.
9. The storage of distilled spirits and wines in wooden barrels and casks.
10. Hazardous materials handled at marine terminals in accordance with Section 2701.1.2.

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Section 334. Subsection 2701.1.1 of the 2003 International Fire Code is amended as follows:

2701.1.1 Waiver. The provisions of this chapter are waived when the fire code official determines that such enforcement is preempted by other codes, statutes or ordinances or that as a matter of fire and life safety, other satisfactory regulatory safeguards or satisfactory industry standards are in place. ((~~The details of any action granting such a waiver shall be recorded and entered in the files of the code enforcement agency.~~)) A request for such a determination by the fire code official shall be made in writing to the fire code official. The fire code official shall provide a written response, stating the fire code official's determination and giving the reason for the determination, within a reasonable period of time. A record of such determinations shall be kept by the fire marshal's office and made available to the public upon request.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology.

Section 335. A new subsection 2701.1.2 is adopted to read as follows:

2701.1.2 Hazardous materials at marine terminals. Hazardous materials which are handled and temporarily located at marine terminals and are incidental to transportation shall be in accordance with SFD Administrative Rule 27.01.04 *Marine Terminals*.

Section 336. Subsection 2701.5 of the 2003 International Fire Code is amended as follows:

2701.5 Permits. Permits shall be required as set forth in Sections 105.6 and 105.7.

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When required by the fire code official, permittees shall apply for approval to permanently close a storage, use or handling facility. Such application shall be submitted at least 30 days prior to the termination of the storage, use or handling of hazardous materials. The fire code official is authorized to require that the application be accompanied by an approved facility closure plan in accordance with Section 2701.((~~5~~))6.3.

* * *

Section 337. Subsection 2701.5.2 of the 2003 International Fire Code is amended as follows:

2701.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire code official, an application for a permit shall include an HMIS, such as SARA (Superfund Amendments and Reauthorization Act of 1986) Title III, Tier II Report, or other approved statement. The HMIS shall include the following information:

1. Manufacturer's name.
2. Chemical name, trade names, hazardous ingredients.
3. Hazard classification.
4. MSDS or equivalent.
5. United Nations (UN), North America (NA) or the Chemical Abstract Service (CAS) identification number.
6. Maximum quantity stored or used on-site at one time.
7. Storage conditions related to the storage type, temperature and pressure.

Point of Information

Prior to developing a HMIS, please contact the Hazardous Materials Section of the Fire Prevention Division for specific guidelines, format and assistance.

Section 338. Subsection 2701.6 of the 2003 International Fire Code is amended as follows:

2701.6 Facility closure. Facilities shall be placed out of service in accordance with Sections 2701.6.1 through 2701.6.3.

2701.6.1 Temporarily out-of-service facilities. Facilities that are temporarily out of service shall continue to maintain a permit and be monitored and inspected. Facilities for which a closure plan is required in accordance with Section 2701.5 shall notify the fire code official when the facility out-of-service period exceeds 15 days.

2701.6.2 Permanently out-of-service facilities. Facilities for which a permit is not kept current or is not monitored and inspected on a regular basis shall be deemed to be permanently out of service and shall be closed in an approved manner. When required by the fire code official, permittees shall apply for approval to close permanently storage, use or handling facilities. The fire code official is authorized to require that such application be accompanied by an approved facility closure plan in accordance with Section 2701.((~~5~~))6.3.

2701.6.3 Facility closure plan. When a facility closure plan is required in accordance with Section 2701.((~~4~~))5 to terminate storage, dispensing, handling or use of hazardous materials, it shall be submitted to the fire code official at least 30 days prior to facility closure. The plan shall demonstrate that hazardous materials which are stored, dispensed, handled or used in the facility will be transported, disposed of or reused in a manner that eliminates the need for further maintenance and any threat to public health and safety.

Section 339. Subsection 2703.2.2.2 of the 2003 International Fire Code is amended as follows:

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2703.2.2.2 Additional regulations for supply piping for health-hazard materials. Supply piping and tubing for gases and liquids having a health-hazard ranking of 3 or 4 in accordance with NFPA704 shall be in accordance with ANSI B31.3, the *Seattle Mechanical Code* and the following:

1. Piping and tubing utilized for the transmission of highly toxic, toxic or highly volatile corrosive liquids and gases shall have welded, threaded or flanged connections throughout except for connections located within a ventilated enclosure if the material is a gas, or an approved method of drainage or containment is provided for connections if the material is a liquid.
2. Piping and tubing shall not be located within corridors, within any portion of a means of egress required to be enclosed in fire-resistance-rated construction or in concealed spaces in areas not classified as Group H occupancies.

   Exception: Piping and tubing within the space defined by the walls of corridors and the floor or roof above or in concealed spaces above other occupancies when installed in accordance with Section 415.9.6.3 of the *International Building Code* for Group H-5 occupancies.

Section 340. Subsection 2703.2.4.1 of the 2003 International Fire Code is amended as follows:

2703.2.4.1 Underground tanks.

2703.2.4.1.1 General. Underground tanks used for the storage of liquid hazardous materials shall be located, installed and protected in accordance with this code and applicable state and federal regulations.

Point of Information

Permits and inspections relating to underground storage tank installations are deferred

to the Washington State Department of Ecology.

2703.2.4.1.2 Secondary containment for underground tanks. Underground tanks used for the storage of liquid hazardous materials shall be provided with secondary containment. In lieu of providing secondary containment for an underground tank, an aboveground tank in an underground vault complying with Section 3404.2.8 shall be permitted. Underground vaults shall be otherwise regulated as underground tank installations.

Section 341. Subsection 2703.2.6 of the 2003 International Fire Code is amended as follows:

2703.2.6 Maintenance. In addition to the requirements of Section 2703.2.3, equipment, machinery and required detection and alarm systems associated with hazardous materials shall be maintained as specified by the manufacturer and in an operable condition. Defective containers, cylinders and tanks shall be removed from service, repaired or disposed of in an approved manner. Defective equipment or machinery shall be removed from service and repaired or replaced. Required detection and alarm systems shall be replaced or repaired where defective.

Section 342. A new subsection 2703.2.9 is adopted to read as follows:

2703.2.9 Testing. The following systems shall be tested not less than annually or in accordance with an approved schedule. Written records of the tests conducted shall be maintained in accordance with the provisions of Section 107.2.1

1. Gas detection and shutoff. See Section 3704.2.2.10.
2. Limit controls. See Sections 2703.2.7, 2704.8 and 2705.1.4.
3. Emergency alarm and supervision. See Sections 2704.9, 2704.10, 2705.1.6, and 2705.4.4.
4. Monitoring devices and alarm. See Section 2704.2.2.5.

5. Remotely located manually-activated fail-safe emergency shutoff valves. See Section 4103.1.1.

Exception: Where written documentation is provided by the system manufacturer documenting that testing will damage the device or system. All such systems and devices shall be maintained as specified by the manufacturer.

Section 343. Subsection 2703.3.1 of the 2003 International Fire Code is amended as follows:

2703.3.1 Unauthorized discharges. The fire code official shall be immediately notified and the requirements set forth in sections 2703.3.1.1 through 2703.3.1.4 shall be complied with ((~~W~~))when hazardous materials are released in quantities reportable under state, federal or local regulations, or when any spill or accidental release, inside or outside of a building, could present a fire or life safety hazard. ((~~the fire code official shall be notified and the following procedures required in accordance with Sections 2703.3.1.1 through 2703.3.1.4.~~))

* * *

Section 344. Subsection 2703.7.3 of the 2003 International Fire Code is amended as follows:

2703.7.3 Industrial trucks. Powered industrial trucks used in areas designated as hazardous (classified) locations in accordance with the ((~~ICC~~)) *Electrical Code* shall be listed and labeled for use in the environment intended in accordance with NFPA 505.

Section 345. Subsection 2703.8.7.1 of the 2003 International Fire Code is amended as follows:

2703.8.7.1 Construction. The interior of cabinets shall be treated, coated or constructed of materials that are nonreactive with the hazardous material stored. Such treatment, coating or

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construction shall include the entire interior of the cabinet. Cabinets shall either be listed in accordance with UL 1275 as suitable for the intended storage or constructed in accordance with the following:

1. Cabinets shall be of steel having a thickness of not less than 0.0478 inch (1.2 mm) (No. 18 gage). The cabinet, including the door, shall be double walled with a 1.5-inch (38 mm) airspace between the walls. Joints shall be riveted or welded and shall be tight fitting. Doors shall be well fitted, self-closing and equipped with a self-latching device.
2. The bottoms of cabinets utilized for the storage of liquids shall be liquid tight to a minimum height of 2 inches (51 mm).

Electrical equipment and devices within cabinets used for the storage of hazardous gases or liquids shall be in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 346. Subsection 2703.9.4 of the 2003 International Fire Code is amended as follows:

2703.9.4 Electrical wiring and equipment. Electrical wiring and equipment shall be installed and maintained in accordance with the ((~~ICC~~)) *Electrical Code*.

Section 347. Subsection 2704.3.1 of the 2003 International Fire Code is amended as follows:

2704.3.1 System requirements. Exhaust ventilation systems shall comply with all of the following:

1. Installation shall be in accordance with the *International Mechanical Code*.
2. Mechanical ventilation shall be at a rate of not less than 1 cubic foot per minute per square foot [0.00508 m 3 /(s ·m 2)] of floor area over the storage area.
3. Systems shall operate continuously unless alternative designs are approved.

4. A manual shutoff control shall be provided outside of the room in a position adjacent to the access door to the room or in an approved location. The switch shall be ((~~of the~~)) a break-glass or other approved type and shall be labeled: VENTILATION SYSTEM EMERGENCY SHUTOFF.
5. Exhaust ventilation shall be designed to consider the density of the potential fumes or vapors released. For fumes or vapors that are heavier than air, exhaust shall be taken from a point within 12 inches (305 mm) of the floor. For fumes or vapors that are lighter than air, exhaust shall be taken from a point within 12 inches (305 mm) of the highest point of the room.
6. The location of both the exhaust and inlet air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.
7. Exhaust ((~~ventilation~~)) air shall not be recirculated within the room or building if the materials stored are capable of emitting hazardous vapors.

Section 348. Subsection 2704.7 of the 2003 International Fire Code is amended as follows:

2704.7 Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with the ((~~ICC~~)) *Electrical Code* and Section 604.

Exceptions:

1. Storage areas for Class 1 and 2 oxidizers.
2. Storage areas for Class III, IV and V organic peroxides.
3. For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
4. Standby power for mechanical ventilation, treatment systems and temperature control

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systems shall not be required where an approved fail-safe engineered system is installed.

Section 349. Subsection 2704.13 of the 2003 International Fire Code is amended as follows:

2704.13 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material storage areas, such storage shall not be considered indoor storage when the area is constructed in accordance with the requirements for weather protection as required by Section 414.6 of the *International Building Code.*

Exception: Storage of explosive materials shall be considered as indoor storage.

Point of Information

When this code allows for the reduction of the set back distance required from outdoor storage areas to adjacent buildings by the construction of a fire-resistive wall in specific chapters elsewhere in this code, that reduction allowance is not considered to meet the intent of the requirement for distance in Item 2 of Section 414.6 in the SBC. The fire-resistive wall and the reduction in distance combined with a weather protection canopy is considered to be indoor storage.

Section 350. Subsection 2705.1.5 of the 2003 International Fire Code is amended as follows:

2705.1.5 Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, manual alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with the ((~~ICC~~)) *Electrical Code* and Section 604.

Exceptions:

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1. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.
2. Systems for highly toxic or toxic gases shall be provided with emergency power in accordance with Sections 3704.2.2.8 and 3704.3.2.6.

Section 351. Subsection 2705.3.9 of the 2003 International Fire Code is amended as follows:

2705.3.9 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material use areas, such use shall not be considered indoor use when the area is constructed in accordance with the requirements for weather protection as required in Section 414.6 of the *International Building Code.*

Exception: Use of explosive materials shall be considered as indoor use.

Point of Information

When this code allows for the reduction of the set back distance required from outdoor storage areas to adjacent buildings by the construction of a fire-resistive wall in specific chapters elsewhere in this code, that reduction allowance is not considered to meet the intent of the requirement for distance in Item 2 of Section 414.6 in the SBC. The fire-resistive wall and the reduction in distance combined with a weather protection canopy is considered to be indoor storage.

Section 352. Subsection 2801.1 of the 2003 International Fire Code is amended as follows:

2801.1 Scope. The provisions of this chapter, the *International Building Code* and where specifically indicated, NFPA 30B, shall apply to the manufacturing, storage and display of aerosol products in addition to the requirements of Chapter 27.

Section 353. Subsection 2802.1 of the 2003 International Fire Code is amended as follows:

2802.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AEROSOL. A product that is dispensed from an aerosol container by a propellant. Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat of combustion that is greater than 13,000 Btu/lb (30 kJ/g).

AEROSOL CONTAINER. A metal can, or a glass or plastic bottle designed to dispense an aerosol. ((~~Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).~~))

AEROSOL WAREHOUSE. A building used for warehousing aerosol products.

PROPELLANT. The liquefied or compressed gas in an aerosol container that expels the contents from an aerosol container when the valve is actuated. A propellant is considered flammable if it forms a flammable mixture with air, or if a flame is self-propagating in a mixture with air.

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RETAIL DISPLAY AREA. The area of a Group M occupancy open for the purpose of viewing or purchasing merchandise offered for sale. Individuals in such establishments are free to circulate among the items offered for sale which are typically displayed on shelves, racks or the floor.

Section 354. Subsection 2803.1 of the 2003 International Fire Code is amended as follows:

2803.1 Classification levels. Aerosol products shall be classified as Level 1, 2 or 3 in accordance with Table 2803.1 ((~~and NFPA 30B~~)). Aerosol products in cartons which are not identified in accordance with this section shall be classified as Level 3.

Section 355. Subsection 2804.1 of the 2003 International Fire Code is amended as follows:

2804.1 General. The inside storage of Level 2 and 3 aerosol products shall comply with Sections 2804.2 through 2804.7 ((~~and NFPA 30B~~)). Level I aerosol products shall be considered equivalent to a Class III commodity and shall comply with the requirements for palletized or rack storage in NFPA 13.

2804.1.1 Aerosol container size limits. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

Section 356. Subsection 3001.1 of the 2003 International Fire Code is amended as follows:

3001.1 Scope. Storage, use and handling of compressed gases in compressed gas containers, cylinders, tanks and systems shall comply with this chapter, including those gases regulated

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elsewhere in this code. ((~~Partially full compressed gas containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.~~))

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Compressed natural gas (CNG) for use as a vehicular fuel shall comply with Chapter 22, NFPA 52 and the *International Fuel Gas Code*.

Partially full compressed gas containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.

((~~Cutting and welding~~)) Hot work gases shall also comply with Chapters 26 and 27.

Cryogenic fluids shall also comply with Chapter 32. Liquefied natural gas for use as a vehicular fuel shall also comply with NFPA 57 and NFPA 59A.

Compressed gases classified as hazardous materials shall also comply with Chapter 27 for general requirements and chapters addressing specific hazards, including Chapters 35 (Flammable Gases), 37 (Highly Toxic and Toxic Materials), 40 (Oxidizers) and 41 (Pyrophoric).

LP-gas shall also comply with Chapter 38 and the *International Fuel Gas Code*.

Section 357. Subsection 3003.5.6 of the 2003 International Fire Code is amended as follows:

3003.5.6 Heating. Compressed gas containers, cylinders and tanks, whether full or partially full, shall not be heated by devices which could raise the surface temperature of the container,

cylinder or tank to above 125 ° F (52 ° C). Heating devices shall comply with the *International Mechanical Code* and the ((~~ICC~~)) *Electrical Code* Approved heating methods involving temperatures of less than 125 ° F (52 ° C) are allowed to be used by trained personnel. Devices designed to maintain individual compressed gas containers, cylinders or tanks at constant temperature shall be approved and shall be designed to be fail safe.

Section 358. Subsection 3003.6 of the 2003 International Fire Code is amended as follows:

3003.6 Wiring and equipment. Electrical wiring and equipment shall comply with the ((~~ICC~~)) *Electrical Code*. Compressed gas containers, cylinders, tanks and systems shall not be located where they could become part of an electrical circuit. Compressed gas containers, cylinders, tanks and systems shall not be used for electrical grounding.

Section 359. Subsection 3006.4 of the 2003 International Fire Code is hereby repealed.

Section 360. Subsection 3201.1 of the 2003 International Fire Code is amended as follows:

3201.1 Scope. Storage, use and handling of cryogenic fluids shall comply with this chapter. Cryogenic fluids classified as hazardous materials shall also comply with Chapter 27 for general requirements. ((~~Partially full containers having residual cryogenic fluids shall be considered as full for the purposes of the controls required.~~))

Exceptions:

1. Fluids used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied natural gas (LNG). Liquefied natural gas shall comply with NFPA 59A, *Standard for Gaseous Hydrogen Systems at Consumer Sites*.

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Partially full containers having residual cryogenic fluids shall be considered as full for the purposes of the controls required.

Oxidizing cryogenic fluids, including oxygen, shall comply with NFPA 50, *Standard for Bulk Oxygen Systems at Consumer Sites*.

Flammable cryogenic fluids, including hydrogen, methane and carbon monoxide, shall comply with NFPA 50B, *Standard for Liquefied Hydrogen Systems at Consumer Sites*.

Inert cryogenic fluids, including argon, helium and nitrogen, shall comply with CGA P-18.

Section 361. Subsection 3203.7 of the 2003 International Fire Code is amended as follows:

3203.7 Electrical wiring and equipment. Electrical wiring and equipment shall comply with the ((~~ICC~~)) *Electrical Code* and Sections 3203.7.1 and 3203.7.2.

3203.7.1 Location. Containers and systems shall not be located where they could become part of an electrical circuit.

3203.7.2 Electrical grounding and bonding. Containers and systems shall not be used for electrical grounding. When electrical grounding and bonding is required, the system shall comply with the ((~~ICC~~)) *Electrical Code*. The grounding system shall be protected against corrosion, including corrosion caused by stray electric currents.

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Section 362. Subsection 3301.1 of the 2003 International Fire Code is amended as follows:

3301.1 Scope. The provisions of this chapter shall govern the possession, manufacture, storage, handling, sale and use of explosives, explosive materials, fireworks and small arms ammunition. The manufacture, storage, handling, sale and use of fireworks shall be governed by chapter 70.77 RCW, and by chapter 212-12 WAC.

Exceptions:

1. The Armed Forces of the United States, Coast Guard or National Guard.
2. Explosives in forms prescribed by the official United States Pharmacopoeia.
3. The possession, storage and use of small arms ammunition when packaged in accordance with DOTn packaging requirements.
4. The possession, storage, and use of not more than 1 pound (0.454 kg) of commercially manufactured sporting black powder, 20 pounds (9 kg) of smokeless powder and 10,000 small arms primers for hand loading of small arms ammunition for personal consumption.

Point of Information

The term "for personal consumption" means for use by private individuals and not for resale.

5. The use of explosive materials by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
6. Special industrial explosive devices which in the aggregate contain less than 50 pounds (23 kg) of explosive materials.
7. The possession, storage and use of blank industrial-power load cartridges when packaged in accordance with DOTn packaging regulations.
8. Transportation in accordance with DOTn 49 CFR Parts 100-178.
9. Items preempted by federal regulations.

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10. Explosive material, fireworks, pyrotechnic special-effect material, and small arms ammunition located at permitted marine terminals in accordance with Administrative Rule 27.01.04 *Marine Terminals*.

3301.1.1 Explosive material standard. In addition to the requirements of this chapter, NFPA 495 shall govern the manufacture, transportation, storage, sale, handling and use of explosive materials. See also chapter 70.74 RCW and chapter 296-52 WAC.

~~((3301.1.2 Explosive material terminals. In addition to the requirements of this chapter, the operation of explosive material terminals shall conform to the provisions of NFPA 498.))~~

3301.1.2((~~3~~)) Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Storage and handling of fireworks as permitted in Section 3304.

((~~2. Manufacture, assembly and testing of fireworks as permitted in Section 3305.~~ ~~3~~))2. The use of fireworks for display as permitted in Section 3308.

((4))3. The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable local or state laws, ordinances and regulations provided such fireworks comply with CPSC 16 CFR, Parts 1500 and 1507, and DOTn 49 CFR, Parts 100-178, for consumer fireworks.

3301.1.3((4)) Rocketry. The storage~~,~~ and handling ~~and use~~ of model and high-power rockets shall comply with the requirements of NFPA 1122, ~~NFPA 1125~~, and NFPA 1127.

Manufacturing and firing of model rockets is prohibited.

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Display of model rocket motors shall be in accordance with Section 3306.5.

3301.1.4((5)) Ammonium nitrate. The storage and handling of ammonium nitrate shall comply with the requirements of NFPA 490 and Chapter 40.

Exception: Storage of ammonium nitrate in magazines with blasting agents shall comply with the requirements of NFPA 495.

Section 363. Subsection 3301.2.4 of the 2003 International Fire Code is amended as follows:

3301.2.4 Financial responsibility. Before a permit is issued, as required by Section 3301.2, ((~~the applicant shall file with the jurisdiction a corporate surety bond in the principal sum of $100,000 or a public liability insurance policy for the same amount, for the purpose of the payment of all damages to persons or property which arise from, or are caused by, the conduct of any act authorized by the permit upon which any judicial judgment results. The fire code official is authorized to specify a greater or lesser amount when, in his or her opinion, conditions at the location of use indicate a greater or lesser amount is required. Government entities shall be exempt from this bond requirement~~)) liability insurance in accordance with Section 105.3.5 of this code shall be obtained.

3301.2.4.1 Blasting. Before approval to do blasting is issued, the applicant for approval shall ((~~file a bond or~~)) submit a certificate of insurance in such form, amount and coverage as determined by the legal department of the jurisdiction to be adequate in each case to indemnify the jurisdiction against any and all damages arising from permitted blasting.

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((~~**3301.2.4.2 Fireworks display.** The permit holder shall furnish a bond or certificate of insurance in an amount deemed adequate by the fire code official for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors.~~))

Section 364. Subsection 3301.3 of the 2003 International Fire Code is amended as follows:

3301.3 Prohibited explosives <u>and activities</u>.

<u>3301.3.1 Prohibited explosives.</u> Permits shall not be issued or renewed for possession, manufacture, storage, handling, sale or use of the following materials and such materials currently in storage or use shall be disposed of in an approved manner.

1. Liquid nitroglycerin.
2. Dynamite containing more than 60-percent liquid explosive ingredient.
3. Dynamite having an unsatisfactory absorbent or one that permits leakage of a liquid explosive ingredient under any conditions liable to exist during storage.
4. Nitrocellulose in a dry and uncompressed condition in a quantity greater than 10 pounds (4.54 kg) of net weight in one package.
5. Fulminate of mercury in a dry condition and fulminate of all other metals in any condition except as a component of manufactured articles not hereinafter forbidden.
6. Explosive compositions that ignite spontaneously or undergo marked decomposition, rendering the products of their use more hazardous, when subjected for 48 consecutive hours or less to a temperature of 167 _ F (75 _ C).
7. New explosive materials until approved by DOTn, except that permits are allowed to be issued to educational, governmental or industrial laboratories for instructional or research purposes.

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8. Explosive materials condemned by DOTn.

9. Explosive materials containing an ammonium salt and a chlorate.

10. Explosives not packed or marked as required by DOTn 49 CFR, Parts 100-178.

Exception: Gelatin dynamite.

3301.3.2 Prohibited activities. The following activities are prohibited.

1. The manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks.

   Exceptions:

   1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.
   2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.
   3. The use of binary explosives or plosophoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or NFPA 1126.

2. The storage of explosive materials for more than 24 hours unless under permit from the Seattle Fire Department.
3. The construction of Class 1 magazines.

Section 365. Subsection 3305.1 of the 2003 International Fire Code is amended as follows:

3305.1 General. The manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks ((~~shall comply with the requirements of this section and NFPA 495 or NFPA 1124~~)) are prohibited.

Exceptions:

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1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.
2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.
3. The use of binary explosives or plosophoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or NFPA 1126.

Section 366. Subsections 3305.3, 3305.4 and 3305.5 of the 2003 International Fire Code are amended as follows:

3305.3 Intraplant separation of operating buildings. Explosives and fireworks manufacturing buildings, including those where explosive charges are assembled, manufactured, prepared or loaded utilizing Division 1.1, 1.2, 1.3, 1.4 or 1.5 explosives, shall be separated from all other buildings, including magazines, within the confines of the manufacturing plant at a distance not less than those shown in Table 3305.3, 3304.5.2 (3), or Table 3304.5.2 (4), as appropriate.

The quantity of explosives in an operating building shall be the net weight of all explosives contained therein. Distances shall be based on the hazard division requiring the greatest separation, unless the aggregate explosive weight is divided by approved walls or shields designed for that purpose. When dividing a quantity of explosives into smaller stacks, a suitable barrier or adequate separation distance shall be provided to prevent propagation from one stack to another.

When distance is used as the sole means of separation within a building, such distance shall be established by testing. Testing shall demonstrate that propagation between stacks will not result. Barriers provided to protect against explosive effects shall be designed and installed in accordance with approved standards.

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((~~**Exception:** Fireworks manufacturing buildings separated in accordance with NFPA 1124.~~))

3305.4 Separation of manufacturing buildings from inhabited buildings, rights-of-way, and magazines. When a manufacturing building on an explosive materials plant site is designed to contain explosive materials, such building shall be located away from inhabited buildings, public highways, and passenger railways in accordance with Table 3304.5.2(2), 3304.5.2(3) or 3304.5.2(4) as appropriate, based on the maximum quantity of explosive materials permitted to be in the building at one time.

((~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~))

3305.5 Buildings and equipment. Buildings or rooms that exceed the maximum allowable quantity per control area of explosive materials shall be operated in accordance with this section and constructed in accordance with the requirements of the *International Building Code* for Group H occupancies.

((~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~))

* * *

Section 367. Section 3306, title only, of the 2003 International Fire Code is amended as follows:

SECTION 3306

SMALL ARMS AMMUNITION, <u>MODEL ROCKET MOTORS AND MARINE FLARES</u>

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Section 368. Subsection 3306.1 of the 2003 International Fire Code is amended as follows:

3306.1 General. Indoor storage and display of black powder, smokeless propellants and small arms ammunition shall comply with this section and NFPA 495. Indoor display of model rocket motors and marine flares shall comply with this section.

Section 369. Subsection 3306.5 of the 2003 International Fire Code is amended as follows:

3306.5 Display and storage in Group M occupancies. The display and storage of small arms ammunition in Group M occupancies shall comply with this section.

3306.5.1 Display. Display of small arms ammunition in Group M occupancies shall comply with Sections 3306.5.1.1 through 3306.5.1.3.

3306.5.1.1 Smokeless propellant. No more than 20 pounds (9 kg) of smokeless propellants, each in containers of 1 pound (0.454 kg) or less capacity, shall be displayed in Group M occupancies.

3306.5.1.2 Black powder. No ((~~more than 1 pound (0.454 kg) of~~)) black powder shall be displayed in Group M occupancies.

3306.5.1.3 Small arms primers. No more than 10,000 small arms primers shall be displayed in Group M occupancies.

3306.5.1.4 Model rocket motors. Model rocket motors on display in Group M Occupancies shall not exceed an individual motor weight of 1 pound (.45 kg). The

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maximum aggregate motor weight on display shall not exceed 20 pounds (9.1 kg). Model rocket motors shall be located a minimum of 15 feet from exits.

3306.5.1.5 Marine flares. U.S. Coast Guard approved marine flares on display in Group M Occupancies shall not exceed an individual device weight of 2 pounds (.90 kg). The maximum aggregate device weight on display shall not exceed 40 pounds (18.2 kg). Marine flares shall be located a minimum of 15 feet from exits.

Point of Information

Device weight of U.S. Coast Guard approved marine flares shall mean the gross weight of the smokeless propellant, other chemical components and the primary casing of the flare. The device weight is not to include carrying cases, manufacturer's packaging, detachable handles or unattached activating devices that may also be present and sold with the flare as a unit.

3306.5.2 Storage. Storage of small arms ammunition shall comply with Sections 3306.5.2.1 through 3306.5.2.3.

3306.5.2.1 Smokeless propellant. Commercial stocks of smokeless propellants shall be stored as follows:

1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least 1 inch (25 mm) nominal thickness.
2. Quantities exceeding 100 pounds (45 kg), but not exceeding ((~~800~~)) 400 pounds (((~~363~~)) 181.5 kg), shall be stored in nonportable storage cabinets having walls at least 1 inch (25 mm) nominal thickness. Not more than ((~~400~~)) 200 pounds (((~~182~~)) 91 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at

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least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least 1 hour.

3. Storage of quantities exceeding ((~~800~~)) 400 pounds (((~~363~~)) 181.5 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

3.1. The warehouse or storage room is unaccessible to unauthorized personnel.

3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1 inch (25 mm) nominal thickness and having shelves with no more than 3 feet (914 mm)of separation between shelves.

3.3. No more than ((~~400~~)) 200 pounds (((~~182~~)) 91 kg) is stored in any one cabinet.

3.4. Cabinets shall be located against walls of the storage room or warehouse with at least 40 feet (12 192 mm) between cabinets.

3.5. The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall, and be constructed of steel not less than 0.25 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick, or concrete block..

3.6. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.

3.7. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

4. Smokeless propellants not stored according to Item 1, 2, or 3 above shall be stored in a Type 2 or 4 magazine in accordance with Section 3304 and NFPA 495.

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3306.5.2.2 Black powder. Commercial stocks of black powder in quantities less than 5((0)) pounds (2.3 kg) shall be allowed to be stored in Type 2 or 4 indoor or outdoor magazines. Quantities greater than 5((0)) pounds (2.3 kg) shall be stored in outdoor Type 2 or 4 magazines. When black powder and smokeless propellants are stored together in the same magazine, the total quantity shall not exceed that permitted for black powder.

3306.5.2.3 Small arms primers. Commercial stocks of small arms primers shall be stored as follows.

1. Quantities not to exceed ((~~750,000~~)) 20,000 small arms primers stored in a building shall be arranged such that not more than ((~~100,000~~)) 20,000 small arms primers are stored in any one pile and piles are at least 15 feet (4572 mm) apart.
2. Quantities exceeding ((~~750,000~~)) 20,000 small arms primers stored in a building shall comply with all of the following:
   - 2.1. The warehouse or storage building shall not be accessible to unauthorized personnel.
   - 2.2. Small arms primers shall be stored in cabinets. No more than ((~~200,000~~))20,000 small arms primers shall be stored in any one cabinet.
   - 2.3. Shelves in cabinets shall have vertical separation of at least 2 feet (610 mm).
   - 2.4. Cabinets shall be located against walls of the warehouse or storage room with at least 40 feet (12 192 mm) between cabinets.
   - 2.5. The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall be firmly attached to the wall, and shall be constructed of steel not less than 0.25 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick, or concrete block.

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2.6. Small arms primers shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.

2.7. The building shall be protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

3. Small arms primers not stored in accordance with Item 1 or 2 of this section shall be stored in a magazine meeting the requirements of Section 3304 and NFPA 495.

Section 370. Subsections 3801.1 and 3802.2 of the 2003 International Fire Code are amended as follows:

3308.1 General. The sale, possession, use or discharge of any fireworks and pyrotechnic special effects in the City of Seattle is prohibited except where authorized by fire department permit or exempted under this section.

Exceptions:

1. The use of fireworks by railroads or other transportation agencies for signaling or illumination.
2. The sale or use of blank cartridges or fireworks when approved by the fire code official for theatrics, signaling or ceremonial purposes.
3. The use of fireworks by the United States Armed Forces.

The display of fireworks, including proximate audience displays and pyrotechnic special effects in motion picture, television, theatrical, and group entertainment productions, shall comply with this chapter and NFPA 1123 or NFPA 1126.

3308.2 Permit application. ((~~Prior to issuing permits for fireworks display, plans for the display, inspections of the display site, and demonstrations of the display operations shall be~~

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~~approved.~~)) No person under eighteen years of age may apply for or receive a permit under this Section.

An application for a permit shall be made in writing to the fire code official at least 30 days in advance. At the time of permit application, the fire code official shall be consulted regarding requirements for standby fire apparatus.

* * *

Section 371. Subsection 3308.4 of the 2003 International Fire Code is amended as follows:

3308.4 Clearance. Spectators, spectator parking areas, and dwellings, buildings or structures shall not be located within the display site.

Exception((s)):

((~~1.~~)) This provision shall not apply to pyrotechnic special effects and displays using Division 1.4G materials before a proximate audience in accordance with NFPA 1126.

((~~2. This provision shall not apply to unoccupied dwellings, buildings and structures with the approval of the building owner and the fire code official.~~))

The site for outdoor water or land display shall have at least a 100-foot per inch radius of internal mortar diameter of the largest aerial shell to be fired.

The designated landing areas shall be an approved large, clear, open area. Spectators, vehicles and combustible materials shall not be allowed within the designated landing area. The designated landing area shall not be within 100 feet of tents, canopies and membrane structures.

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When the display is fired from a barge, such barge shall be of non-combustible construction or have a non-combustible surface.

The firing and storage site shall be located not less than 200 feet from any building, tent, canopy or membrane structure.

When the display is fired from a barge or vessel, a security area shall be established around the barge to prevent boats from entering the area. No boats shall be allowed within 200 feet of the firing or storage site. A boat shall be on standby to remove personnel from the barge or water in an emergency. All personnel aboard the barge shall have approved flotation devices. Additional water-filled fire extinguishers, rated 2-A minimum, shall be on the barge and so spaced that an extinguisher shall be available within 30 feet at all times.

Section 372. A new subsection 3808.8.1 is adopted to read as follows:

3308.8.1 Pyrotechnic operator. Fireworks display operations shall be under the direct supervision of a State of Washington Pyrotechnics Licensed operator. The pyrotechnic operator shall ensure that only fireworks listed in the permit are used and shall be responsible for all aspects of the display related to pyrotechnics.

Display operators and assistants shall be 18 years of age or older. The operator shall ensure that no person under the age of 18 years is allowed within 200 feet of the fire and storage site.

Section 373. A new subsection 3808.8.2 is adopted to read as follows:

3808.8.2 Monitors. The pyrotechnic operator shall employ monitors whose sole duty shall be the enforcement of crowd control around the display area and ensure that no unauthorized

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persons are allowed within 200 feet of the firing and storage site. This requirement shall be in effect from one-half hour prior to the arrival of the fireworks until all fireworks, debris, equipment and fireworks have been removed from the site. Unauthorized persons shall not be allowed to enter the discharge site until the site has been inspected after the display by the pyrotechnic operator.

Section 374. Subsection 3308.11 of the 2003 International Fire Code is amended as follows:

3308.11 Retail display and sale prohibited. Retail display and sale of fireworks is prohibited in the City of Seattle. ((~~Fireworks displayed for retail sale shall not be made readily accessible to the public. A minimum of one pressurized water portable fire extinguisher complying with Section 906 shall be located not more than 15 feet (4572 mm) and not less than10 feet (3048 mm) from the hazard. "No Smoking" signs complying with Section 310 shall be conspicuously posted in areas where fireworks are stored or displayed for retail sale.~~))

Section 375. Subsections 3401.1 and 3401.2 of the 2003 International Fire Code are amended as follows:

3401.1 Scope and application. Prevention, control and mitigation of dangerous conditions related to storage, use, dispensing, mixing and handling of flammable and combustible liquids shall be in accordance with Chapter 27 and this chapter.

Storage and use of fuel oil tanks and containers connected to oil-burning equipment shall be in accordance with Section 603. For abandonment of fuel oil tanks, this chapter applies.

3401.2 Nonapplicability. This chapter shall not apply to liquids as otherwise provided in other laws or regulations or chapters of this code, including:

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1. Specific provisions for flammable liquids in motor fuel-dispensing facilities, repair garages, airports and marinas in Chapter 22.

2. Medicines, foodstuffs, cosmetics, and commercial, institutional and industrial products in the same concentration and packaging containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solution not being flammable, and alcoholic beverages in retail or wholesale sales or storage uses when packaged in individual containers not exceeding 1.3 gallons (5 L).

((~~3. Storage and use of fuel oil tanks and containers connected to oil-burning equipment. Such storage and use shall be in accordance with Section 603. For abandonment of fuel oil tanks, this chapter applies.~~))

3((~~4~~)). Refrigerant liquids and oils in refrigeration systems (see Section 606).

4((~~5~~)). Storage and display of aerosol products complying with Chapter 28.

5((~~6~~)). Storage and use of liquids that have no fire point when tested in accordance with ASTM D 92.

6((~~7~~)). Liquids with a flash point greater than 95 ° F (35 ° C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight, which do not sustain combustion.

7((~~8~~)). Liquids without flash points that can be flammable under some conditions, such as certain halogenated hydrocarbons and mixtures containing halogenated hydrocarbons.

8((~~9~~)). The storage of distilled spirits and wines in wooden barrels and casks.

9. When the fire code official has determined that, as a matter of fire and life safety, other satisfactory regulatory safeguards or satisfactory industry standards are in place. A request for such a determination by the fire code official shall be made in writing to the fire code official. The fire code official shall provide a written response, stating the fire code official's determination and giving the reason for the determination, within a reasonable period of time. A record of such determinations shall be kept by the fire marshal's office

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and made available to the public upon request.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology.

Section 376. Subsection 3403.1 of the 2003 International Fire Code is amended as follows:

3403.1 Electrical. Electrical wiring and equipment shall be installed and maintained in accordance with the ((~~ICC~~)) *Electrical Code*.

* * *

Section 377. Subsection 3403.1.3 of the 2003 International Fire Code is amended as follows:

3403.1.3 Other applications. The fire code official is authorized to determine the extent of the Class I electrical equipment and wiring location when a condition is not specifically covered by these requirements or the ((~~ICC~~)) *Electrical Code*.

Section 378. Subsection 3403.6.5 of the 2003 International Fire Code is amended as follows:

3403.6.5 Protection from corrosion and galvanic action. Where subject to external corrosion, piping, related fluid-handling components and supports for both under-ground and above-ground applications shall be fabricated from noncorrosive materials, ((~~and~~))or coated ((~~or~~))and provided with corrosion protection. Dissimilar metallic parts that promote galvanic action shall not be joined.

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Section 379. Subsection 3404.2 of the 2003 International Fire Code is amended as follows:

3404.2 Tank storage. The provisions of this section shall apply to:

1. The storage of flammable and combustible liquids in fixed above-ground and underground tanks outside of buildings.
2. The storage of flammable and combustible liquids in fixed above-ground tanks inside of buildings or within vaults.
3. The storage of flammable and combustible liquids in portable tanks whose capacity exceeds 660 gallons (2498 L).
4. The design, construction and installation of such tanks and portable tanks.

* * *

Section 380. Subsection 3404.2.7.4 of the 2003 International Fire Code is amended as follows:

3404.2.7.4 Emergency venting.

3404.2.7.4.1 General. Stationary, above-ground tanks shall be equipped with additional venting that will relieve excessive internal pressure caused by exposure to fires. Emergency vents shall be listed and approved. ((~~Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings.~~)) This requirement shall also apply to each compartment of a compartmentalized tank, the interstitial space (annulus) of a secondary containment-type tank, and the enclosed space of tanks of closed-top dike construction. Additionally, this requirement shall apply to spaces or enclosed volumes, such as those intended for insulation, membranes, or weather shields, that can contain liquid because of a leak from the primary vessel and can inhibit venting during fire exposure. The insulation, membrane, or weather

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shield shall not interfere with emergency venting. ((~~The venting shall be installed and maintained in accordance with Section 2.2.5.2 of NFPA 30.~~))

Exception: Tanks larger than 12,000 gallons (45 420 L) in capacity storing Class IIIB liquids which are not within the diked area or the drainage path of Class I or II liquids do not require emergency relief venting.

The venting shall be installed and maintained in accordance with Section 2.2.5.2 of NFPA 30.

3404.2.7.4.2 Emergency vent pipe outlets. Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings and outlets shall be in accordance with Section 3404.2.7.3.3.

Exception: Protected aboveground tanks located inside buildings containing Class II or Class III-A liquids for emergency or standby generators installed in accordance with Administrative Rule 34.01.04 *Use of Protected Aboveground Tanks for Fuel Storage Inside Buildings* are allowed to vent inside buildings.

3404.2.7.4.3 Extension of Emergency Vent Piping. Piping to or from approved emergency vent devices for atmospheric and low-pressure tanks shall be sized to provide emergency vent flows that limit the back pressure to less than the maximum pressure permitted by the design of the tank. Piping to or from approved emergency vent devices for pressure vessels shall be sized in accordance with the ASME Boiler and Pressure Vessel Code.

Section 381. Subsection 3404.2.7.11 of the 2003 International Fire Code is amended as follows:

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3404.2.7.11 Tank lining. Steel tanks are allowed to be lined only for the purpose of protecting the interior from corrosion or providing compatibility with a material to be stored. Only those liquids tested for compatibility with the lining material are allowed to be stored in lined tanks.

Tank lining shall be conducted in accordance with the applicable provisions of NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning and Repair.*

Section 382. Subsection 3404.2.8 of the 2003 International Fire Code is amended as follows:

3404.2.8 Vaults. Vaults shall be located outside of buildings, shall be allowed to be either above or below grade and shall comply with Sections 3404.2.8.1 through 3404.2.8.18.

* * *

Section 383. Subsection 3404.2.8.12 of the 2003 International Fire Code is amended as follows:

3404.2.8.12 Liquid removal. Means shall be provided to recover liquid from the vault. Where a pump is used to meet this requirement, the pump shall not be permanently installed in the vault. Electric-powered portable pumps shall be suitable for use in Class I, Division 1 locations, as defined in the ((~~ICC~~)) *Electrical Code*.

Section 384. Subsection 3404.2.8.17 of the 2003 International Fire Code is amended as follows:

3404.2.8.17 Classified area. The interior of a vault containing a tank that stores a Class I liquid shall be designated a Class I, Division 1 location, as defined in the ((~~ICC~~)) *Electrical Code*.

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Section 385. Subsections 3404.2.9.1 of the 2003 International Fire Code amended as follows:

3404.2.9.1 Fire protection. Fire protection for above-ground tanks shall comply with this section and Sections 3404.2.9.1.1 through 3404.2.9.1.4.

Aboveground tanks located outside buildings and used for the storage of Class I flammable liquids shall be protected with an approved foam fire protection system.

Exception: Protected aboveground tanks.

Aboveground tanks located outside buildings and used for the storage of Class II combustible liquids shall be protected by an approved water-spray-system.

Exception: Protected aboveground tanks of any size and portable and stationary tanks up to 660 gallons individual capacity provided with approved portable fire extinguishers and an adequate available water supply.

Aboveground tanks located outside and used for the storage of Class III combustible liquids shall be protected in accordance with Table 2.3.2.1.1(a) of NFPA 30.

Exception: Protected aboveground tanks.

* * *

Section 386. Subsection 3404.2.9.1.1 of the 2003 International Fire Code is amended as follows:

3404.2.9.1.1 Required foam fire protection systems. When required by the fire code official, foam fire protection shall be provided for aboveground tanks, other than pressure tanks operating at or above 1 pound per square inch gauge (psig) (6.89 kPa) when such tank, or group

of tanks spaced less than 50 feet (15 240 mm) apart measured shell to shell, has a liquid surface area in excess of 1,500 square feet (139 m 2), and is in accordance with one of the following:

1. Used for the storage of Class ((~~I or~~)) II liquids.
2. Used for the storage of crude oil.
3. Used for in-process products and is located within 100 feet (30 480 mm) of a fired still, heater, related fractioning or processing apparatus or similar device at a processing plant or petroleum refinery as herein defined.
4. Considered by the fire code official as posing an unusual exposure hazard because of topographical conditions; nature of occupancy, proximity on the same or adjoining property, and height and character of liquids to be stored; degree of private fire protection to be provided; and facilities of the fire department to cope with flammable liquid fires.

Section 387. Subsection 3404.2.9.4 of the 2003 International Fire Code is amended as follows:

3404.2.9.4 Above-ground tanks inside of buildings.

3404.2.9.4.1 Overflow prevention. Tanks storing Class I, II and IIIA liquids inside buildings shall be equipped with a device or other means to prevent overflow into the building including, but not limited to: a float valve; a preset meter on the fill line; a valve actuated by the weight of the tanks contents; a low head pump which is incapable of producing overflow; or a liquid-tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to the out-side source of liquid or to an approved location.

3404.2.9.4.2 Maximum quantity allowed outside of a liquid storage room. Aboveground storage tanks storing Class I, II and III-A liquids inside buildings in quantities exceeding the maximum allowable quantity per control area set forth in Table 2703.1.1(1) shall be confined

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to a liquid storage room constructed and separated as required by the Seattle Building Code and complying with Section 3404.3.7.

3404.2.9.4.3 Maximum quantity allowed within a liquid storage room. The maximum aggregate quantity of flammable and combustible liquids in aboveground storage tanks allowed inside a building within a liquid storage room constructed and separated as required by the Seattle Building Code and complying with Section 3404.3.7 shall be limited to 20,000 gallons.

Section 388. Subsection 3404.2.9.5.1 of the 2003 International Fire Code is amended as follows:

3404.2.9.5.1 Locations where above-ground tanks are prohibited or quantity limits are established. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited within the limits established ((~~by law in the adopting ordinance as the limits of districts in which such storage is prohibited (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~))in Table 3404.2.9.5.1-A.

TABLE 3404.2.9.5.1-A

QUANTITY RESTRICTIONS FOR ABOVEGROUND

STORAGE TANKS USED FOR DISPENSING INTO EQUIPMENT

TYPE OF LIQUID	LOCATION OF TANK

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	Within Fire District	Within I-zone[1,2]	Outside I-zone[1,2]
Class I	Prohibited	Maximum primary tank capacity = 1,000 gallons	Maximum primary tank Capacity = 500 gallons
Class II for open use	660 gallons	Maximum primary tank capacity = 2,000 gallons	Maximum primary tank Capacity = 660 gallons
Combination Class I and Class II liquids in compartmentalized tanks for open use	Prohibited	3,000 gallons [3]	1,000 gallons [3]
Class II outside for closed use (e.g. emergency generators)	2,000 gallons	Maximum primary tank capacity = 4,000 gallons	Maximum primary tank Capacity = 2,000 gallons

[1]I-zone means Industrial zones identified in accordance with the City Land Use Code.

[2]Additional tanks are allowed on the same site when separated from one another by a minimum of 100 feet.

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[3]Maximum individual compartment capacities shall not exceed the maximum allowable primary tank capacity for the class of liquid.

Section 389. Subsection 3404.2.13.1 of the 2003 International Fire Code is amended as follows:

3404.2.13.1 Underground tanks. Underground tanks taken out of service shall comply with Sections 3404.2.13.1.1 through 3404.2.13.1.5. Residential heating oil tanks required by this section to be removed or decommissioned shall also comply with Administrative Rule 34.02.04 *Decommissioning Residential Heating Oil Tanks.*

* * *

Section 390. A new subsection 3404.2.15 is adopted to read as follows:

3404.2.15 Maintenance. Aboveground tanks and connected piping shall be maintained in a safe operating condition. Tanks shall be maintained in accordance with their listings.

Damage to aboveground tanks shall be repaired using materials having equal or greater strength and fire resistance or the tank shall be replaced or taken out of service.

Section 391. Subsection 3404.3.1.1 of the 2003 International Fire Code is amended as follows:

3404.3.1.1 Approved containers. Only approved containers and portable tanks shall be used.

It shall be unlawful to sell, offer for sale, or distribute any container for the storage and/or use of flammable liquids, unless such container has been approved for such purpose under applicable provisions of this code.

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Section 392. Subsection 3404.3.2.3 of the 2003 International Fire Code is hereby repealed.

Section 393. Subsection 3404.3.4.4 of the 2003 International Fire Code is amended as follows:

3404.3.4.4 Liquids for maintenance and operation of equipment. In all occupancies, quantities of flammable and combustible liquids in excess of 10 gallons (38 L) used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons (38 L) are allowed to be stored outside of a cabinet when in approved containers located in private garages or other approved locations.

In Groups A, B, E, F, I, M, R and S occupancies, quantities of flammable and combustible liquids used for demonstration, treatment and laboratory work exceeding 10 gallons (37.85 L) shall be stored in liquid storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons shall be in approved containers in approved locations.

Section 394. Subsection 3404.3.5.1 of the 2003 International Fire Code is amended as follows:

3404.3.5.1 Basement storage. Class I liquids shall not be permitted in basement areas. Class II and IIIA liquids shall be allowed to be stored in basements provided that automatic suppression and other fire protection is provided in accordance with Chapter 9.

Exception: Class I liquids stored and used in basement areas of research laboratories in accordance with Administrative Rule 34.03.04 *Flammable Liquid Storage and Use in Basement Level Laboratories.*

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Section 395. Subsection 3404.3.6.1 of the 2003 International Fire Code is amended as follows:

3404.3.6.1 Container type. Containers for Class I liquids shall be metal.

Exception: In sprinklered buildings, an aggregate quantity of 120 gallons (454 L) of water-miscible Class IB and Class IC liquids is allowed in nonmetallic containers, each having a capacity of 16 ounces (0.473 L) or less.

Plastic containers may be used for Class II and III liquids only when individual containers are:

1. stored less than 5 feet high; or
2. confined to box bins protected by automatic sprinklers within racks.

Section 396. Subsection 3404.3.7.3 of the 2003 International Fire Code is amended as follows:

3404.3.7.3 Spill control and secondary containment. Liquid storage rooms shall be provided with spill control and secondary containment in accordance with Section 2704.2.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

Section 397. Subsection 3404.3.7.5.1 of the 2003 International Fire Code is amended as follows:

3404.3.7.5.1 Fire-extinguishing systems. Liquid storage rooms shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1. In-rack sprinklers shall also comply with NFPA 13 and

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NFPA 231C. Automatic foam-water systems and automatic aqueous film-forming foam (AFFF) water sprinkler systems shall not be used except when approved. Protection criteria developed from fire modeling or full-scale fire testing conducted at an approved testing laboratory are allowed in lieu of the protection as shown in Tables 3404.3.6.3(2) through 3404.3.6.3(7) and Table 3404.3.7.5.1 when approved.

If secondary containment of nonwater-miscible flammable or combustible liquids is achieved through the use of recessed floors or liquid-tight sills as allowed for in Section 2704.2 an automatic-foam system shall be provided and must be approved by the fire code official.

Point of Information

Nonwater-miscible flammable and combustible liquids are those flammable and combustible liquids that are unable to dissolve uniformly with water. Whether a flammable or combustible liquid is soluble with water is dependent on the chemical nature of the liquid. A source of information regarding the water solubility of common flammable and combustible liquids can be found in NFPA Standard 325M.

Section 398. Subsection 3404.3.8.2 of the 2003 International Fire Code is amended as follows:

3404.3.8.2 Spill control and secondary containment. Liquid storage warehouses shall be provided with spill control and secondary containment as set forth in Section 2704.2.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

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Section 399. Subsection 3404.3.8.4 of the 2003 International Fire Code is amended as follows:

3404.3.8.4 Fire-extinguishing systems. Liquid storage warehouses shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1, or Section 4.8.2 and Tables 4.8.2(a) through (f) of NFPA 30. In-rack sprinklers shall also comply with NFPA 13 and NFPA 231C. Automatic foam water systems and automatic aqueous film-forming foam water sprinkler systems shall not be used except when approved. Protection criteria developed from fire modeling or full-scale fire testing conducted at an approved testing laboratory are allowed in lieu of the protection as shown in Tables 3404.3.6.3(2) through 3404.3.6.3(7) and Table 3404.3.7.5.1 when approved.

See Section 3404.3.7.5.1 for special fire protection requirements if secondary containment of nonwater-miscible flammable or combustible liquids is to be achieved through the use of recessed floors or liquid-tight sills allowed under Section 2704.2.

Section 400. Subsection 3405.4.1 of the 2003 International Fire Code is amended as follows:

3405.4.1 Unit with a capacity of 60 gallons or less. Solvent distillation units used to ((~~recycle~~)) process Class I, II or IIIA liquids having a distillation chamber capacity of 60 gallons (227 L) or less shall be listed, labeled and installed in accordance with Section 3405.4 and UL 2208.

Exceptions:

1. Solvent distillation units installed in dry cleaning plants in accordance with Chapter 12.
2. Solvent distillation units used in continuous throughput industrial processes where the source of heat is remotely supplied using steam, hot water, oil or other heat

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transfer fluids, the temperature of which is below the auto-ignition point of the solvent.

((~~3. Solvent distillation units listed for and used in laboratories.~~

~~4.~~))3. Custom and non-commercial solvent distillation units which are((~~A~~))approved by the fire code official for research, testing and experimental processes.

4. Solvent distillation units installed or in service prior to September 27, 1998 when in accordance with Sections 3405.4.7 through 3405.4.10.

Section 401. Subsection 3405.4.2 of the 2003 International Fire Code is amended as follows:

3405.4.2 Units with a capacity exceeding 60 gallons. Solvent distillation units used to ((~~recycle~~)) process Class I, II or IIIA liquids, having a distillation chamber capacity exceeding 60 gallons (227 L) shall be used in locations that comply with the use and mixing requirements of Section 3405 and other applicable provisions in this chapter.

Section 402. New subsections 3405.4.10 and 3405.4.11 are adopted to read as follows:

3405.4.10 Existing units.

Point of Information

Solvent distillation units installed or placed in service after September 27, 1998 shall be in accordance with Sections 3405.4.1 through 3405.4.9.

3405.4.10.1 General. Solvent distillation units installed or placed in service prior to September 27, 1998 shall be in accordance with Section 3405.4.10.

Exceptions:

1. Existing commercially produced high purity column stills with a chamber capacity of 60 gallons or less which are constructed of UL or CSA approved components and

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provided with an enclosed cabinet, mechanical ventilation and microprocessor control. Such units shall be located in a laboratory or similar controlled environment as approved by the chief, maintained at least three feet from ignition sources, and separated from exit ways by one-hour fire resistant construction.

2. Existing commercially produced solvent distillation units, including glass apparatus and electric heating mantels, with a chamber capacity of 1.5 liters or less which are used for research, testing, and experimental purpose in a laboratory setting or similar controlled environment.

3405.4.10.2. Listing. Solvent distillation units used to process Class I, II or III-A liquids shall be listed in accordance with the Electrical Code for Class 1, Division 1 or 2 hazardous locations.

Exception: When approved by the chief, existing commercially produced units having a chamber capacity of 60 gallons or less when separated from exits and exit ways by one hour fire resistant construction and located at least three feet away from ignition sources.

3405.4.10.3 Location. Solvent distillation unit shall not be used in basements. Units processing Class I, II, or III-A liquids, having a distillation capacity exceeding 60 gallons (227.1 L) shall be used in locations that comply with the use and mixing requirement of Section 3405 and other applicable provisions in Chapter 34.

3405.4.10.4 Overfill protection. A means to automatically interrupt distillation and prevent collection containers and portable tanks from overfilling, or an overfill containment pan sized to contain the entire capacity of the distillation chamber shall be provided.

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3405.4.10.5 Safety limit controls. Safety limit controls which shut off the unit in the event of a malfunction that increases the risk of fire or explosion shall be provided.

3405.4.10.6 Maximum temperature. The maximum temperature of the unit distillation chamber shall not exceed the auto-ignition temperature of the liquid being distilled.

3405.4.11 Units installed outdoors. Solvent distillation units installed outdoors shall be in accordance with Sections 3405.4.7 through 3405.4.10 and the following:

Units shall be located a minimum of 15 feet from public ways, property lines, combustible construction and openings to buildings.

Spill control is required around the unit in accordance with Section 2704.2

An attendant is required while the unit is in operation.

The unit shall be empty when unattended or shut down and the area secured in an approved manner.

Section 403. Subsection 3406.5.4 of the 2003 International Fire Code is amended as follows:

3406.5.4 Dispensing from tank vehicles and tank cars. Dispensing from tank vehicles and tank cars into the fuel tanks of motor vehicles shall be prohibited unless allowed by and conducted in accordance with Sections 3406.5.4.1 through 3406.5.4.((~~4.~~))5.

* * *

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Section 404. Subsection 3606.5.4.5 of the 2003 International Fire Code is amended as follows:

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with the following:

1. Dispensing shall occur only at sites that have been permitted to conduct mobile fueling.
2. The owner of a mobile fueling operation shall provide to the jurisdiction a written response plan which demonstrates readiness to respond to a fuel spill and carry out appropriate mitigation measures, and describes the process to dispose properly of contaminated materials.
3. A detailed site plan shall be submitted with each application for a permit. The site plan shall indicate: all buildings, structures and appurtenances on site and their use or function; all uses adjacent to the property lines of the site; the locations of all storm drain openings, adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the site property; and the scale of the site plan.

   Provisions shall be made to prevent liquids spilled during dispensing operations from flowing into buildings or off-site. Acceptable methods include, but shall not be limited to, grading driveways, raising doorsills or other approved means.
4. The fire code official is allowed to impose limits on the times and/or days during which mobile fueling operations may take place, and specific locations on a site where fueling is permitted.
5. Mobile fueling operations shall be conducted in areas not accessible to the public or shall be limited to times when the public is not present.

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6. Mobile fueling shall not take place within 15 feet (4572 mm) of buildings, property lines, ((~~or~~))combustible storage((~~,~~)) or storm drains.

Exceptions:

1. The distance to storm drains can be eliminated if an approved storm drain cover or an approved equivalent that will prevent any fuel from reaching the drain is in place prior to fueling or hose being placed within 15 feet of the drain. When placement of a storm drain cover will cause the accumulation of excessive water or difficulty in safely conducting the fueling, it shall not be used and fueling shall not take place within 15 feet of a drain.
2. The distance to storm drains can be eliminated for drains that direct intake to approved oil-water separators.

7. The tank vehicle shall comply with the requirements of NFPA 385 and local, state and federal requirements. The tank vehicle's specific functions shall include that of supplying fuel to motor vehicle fuel tanks. The vehicle and all its equipment shall be maintained in good repair.
8. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the tank vehicle or the point of fueling shall be prominently posted on three sides of the vehicle including the back and both sides.
9. A portable fire extinguisher with a minimum rating of 40:BC shall be provided on the vehicle with signage clearly indicating its location.
10. The dispensing nozzles and hoses shall be of an approved and listed type and the inside diameter of the hose shall not exceed 1-1/4 inches.
11. The dispensing hose shall not be extended from the reel more than 100 feet (30 480 mm) in length.

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All pressure hoses and couplings shall be inspected at intervals appropriate to the service. Any hose showing materials deterioration, signs of leakage or weakness in its carcass or at the couplings shall be withdrawn from service or repaired or discarded.

12. Absorbent materials, nonwater-absorbent pads capable of absorbing a minimum of 16 gallons, a 10-foot-long (3048 mm) containment boom, an approved container with lid, ((~~and~~))a nonmetallic shovel shall be provided to mitigate a minimum 5-gallon (19 L) fuel spill and a storm drain spill kit.
13. Tank vehicles shall be equipped with a "fuel limit" switch such as a count-back switch, to limit the amount of a single fueling operation to a maximum of 500 gallons (1893 L) before resetting the limit switch.

    Exception: Tank vehicles where the operator carries and can utilize a remote emergency shut-off device which, when activated, immediately causes flow of fuel from the tank vehicle to cease.
14. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak or spill. Training records shall be maintained by the dispensing company and shall be made available to the fire code official upon request.
15. Operators of tank vehicles used for mobile fueling operations shall have in their possession at all times an emergency communications device to notify the proper authorities in the event of an emergency.
16. The tank vehicle dispensing equipment shall be constantly attended and operated only by designated personnel who are trained to handle and dispense motor fuels.
17. ((~~Prior to beginning dispensing operations, precautions shall be taken to ensure ignition sources are not present.~~))Fuel dispensing is prohibited within 15 feet (4572 mm) of any source of ignition.

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18. The engines of vehicles being fueled shall be shut off during dispensing operations.

19. Nighttime fueling operations shall only take place in adequately lighted areas.

20. The tank vehicle shall be positioned with respect to vehicles being fueled to prevent traffic from driving over the delivery hose.

21. During fueling operations, tank vehicle brakes shall be set, chock blocks shall be in place and warning lights shall be in operation.

22. Motor vehicle fuel tanks shall not be topped off.

23. The dispensing hose shall be properly placed on an approved reel or in an approved compartment prior to moving the tank vehicle.

24. The fire code official and other appropriate authorities shall be notified without delay by the fuel delivery vehicle operator when a reportable spill or unauthorized discharge occurs or when any spill or accidental release, inside or outside of a building, could present a fire or life safety hazard.

25. Operators shall place a drip pan or absorbent, in good condition, under each fuel fill opening prior to and during all dispensing operations. Drip pans shall be liquid tight. The pan or absorbent shall have a capacity of at least 5 gallons. Spills retained in the drip pan or absorbent pillow need not be reported. Operators, when fueling, shall have on their persons an absorbent pad capable of capturing diesel foam overfills. Except during fueling, the nozzle shall face upwards and an absorbent pad shall be kept under the nozzle to prevent drips. Contaminated absorbent pads shall be disposed of regularly in accordance with local, state and federal requirements.

26. It shall be the responsibility of the permit applicant to ensure that all persons and parties with an interest in the property (i.e., property owner, lessor, real-estate company, property manager as well as operators of the property) have given explicit consent to allow mobile fueling to occur on the property. Managers, lessees, renters

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and other persons can not solely give permission for mobile fueling to occur on the property.

27. Fueling locations shall have a surface that will be protected by continuous pavement (cement or asphalt) which is in good repair. Good repair means that a surface has no cracks, holes or means through which a spill could reach soil.

Exception: Demonstration by the vehicle operator that the flow of fuel can be stopped from the furthest fueling location within 15 seconds.

Section 405. Subsection 3505.1.1 of the 2003 International Fire Code is amended as follows:

3501.1 Scope. The storage and use of flammable gases shall be in accordance with this chapter. Compressed gases shall also comply with Chapter 30. Gaseous hydrogen systems at consumer sites shall also comply with NFPA 50A.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied petroleum gases and natural gases regulated by Chapter 26 or Chapter 38.

Section 406. Subsection 3801.1 of the 2003 International Fire Code is amended as follows:

3801.1 Scope. Storage, handling and transportation of LP-gas and the installation of LP-gas equipment pertinent to systems for such uses shall comply with this chapter, NFPA 54, *National Fuel Gas Code* and NFPA 58, *Liquefied Petroleum Gas Code* as amended.

Exception: LP-gas used with oxygen for hot work operations shall be in accordance with Chapter 26.

Properties of LP-gases shall be determined in accordance with Appendix B of NFPA 58

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as amended.

Section 407. Subsection 3801.3 of the 2003 International Fire Code is amended as follows:

3801.3 Construction documents. Where a single container is more than ((~~2,000~~))500 gallons (((~~7570~~))1892.5 L) in water capacity or the aggregate capacity of containers is more than ((~~4,000~~))1,000 gallons (((~~15140~~)) 3785 L) in water capacity and for all mounded or underground LP-gas containers, the installer shall submit construction documents to the fire code official for approval of ((~~for~~)) such installation prior to beginning the installation. [NFPA 58 1.4.1]

Section 408. Section 3803 of the 2003 International Fire Code is amended as follows:

SECTION 3803

INSTALLATION OF EQUIPMENT

3803.1 General. Liquefied petroleum gas equipment shall be installed in accordance with ((~~the International~~)) NFPA 54, *National Fuel Gas Code* and NFPA 58 as amended, except as otherwise provided in this chapter.

SECTION 3803.2

USE OF LP-GAS INSIDE BUILDINGS

3803.2 Use of LP-gas containers in buildings. LP-gas containers shall not be used inside of buildings.

Exception: The use of LP-gas containers in buildings ((~~shall be~~)) in accordance with Sections 3803.2.1 and 3803.2.2.

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3803.2.1 Portable containers. Portable LP-gas containers, as defined in NFPA 58 as amended, shall not be used in buildings except as specified in ((~~NFPA 58 and~~)) Sections 3803.2.1.1 through 3803.2.1.7. [NFPA 58 3.4.1.1]

3803.2.1.1 Use in basement, pit or similar location. LP-gas containers shall not be used in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers shall not be used in an above-grade underfloor space or basement unless such location is provided with an approved means of ventilation.

Exception: Use with self-contained torch assemblies in accordance with Section 3803.2.1.6.

3803.2.1.2 Construction, renovation and temporary heating. Portable containers are allowed to be used in buildings or areas of buildings undergoing construction((,)) or renovation, or for temporary heating as set forth in this section and Sections 3.4.3, 3.4.4, and 3.4.7 of NFPA 58 as amended. [NFPA 58 3.4.3, 3.4.4, 3.4.7]

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed within buildings undergoing construction or renovation shall be in accordance with Table 3803.2.1.2-A.

TABLE 3803.2.1.2-A

USE OF LP-GAS INSIDE BUILDINGS UNDERGOING CONSTRUCTION or RENOVATION [1]

	Maximum	Maximum	Maximum Aggregate Quantity

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Location	**Individual Container Capacity**	**Aggregate Quantity per Floor**	**inside the Building**
Within Occupied A Occupancies	Limits established by permit issued by Special Events Section		
Within Occupied Buildings other than A Occupancies	50 lbs. water capacity (nominal 20 lb LP-gas capacity)	Number of cylinders shall not exceed the number of workers assigned to use the LP-gas.	Number of cylinders shall not exceed the number of workers assigned to use the LP-gas.
Unoccupied Buildings	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)	4410 lbs. water capacity (nominal 1800 lb LP-gas capacity)

[1] Weight of LP-gas per gallon = 4.20 lbs. See Point of Information.

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed

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within buildings for temporary heating shall be in accordance with Table 3803.2.1.2-B.

TABLE 3803.2.1.2-B

USE OF LP-GAS INSIDE BUILDINGS FOR TEMPORARY HEATING[1,2]

Location	Maximum Individual Container Capacity	Maximum Aggregate Quantity Inside the Building
Group F Occupancies	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)
All Occupancies[3] except Group F Occupancies	Established by temporary permit	Established by temporary permit

[1] Temporary heating refers to seasonal space heating that may supplement the buildings primary heat source.

[2] Weight of LP-gas per gallon = 4.20 lbs.

[3] Allowed in these occupancies only for emergency heating to prevent damage to the building or contents when the permanent heating system is temporarily out of service.

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3803.2.1.3 Group F occupancies. In Group F occupancies, portable LP-gas containers are allowed to be used to supply quantities necessary for processing, research or experimentation. ((~~Where manifolded, the aggregate water capacity of such containers shall not exceed 735 pounds (334 kg) per manifold.~~))

Temporary heating using LP-gas is also allowed inside Group F Occupancies in accordance with Section 3803.2.1.2.

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed within Group F Occupancies shall be limited in accordance with Table 3803.2.1.3.

TABLE 3803.2.1.3

USE OF LP-GAS INSIDE GROUP F OCCUPANCIES[1]

Location	Maximum Individual Container Capacity	Maximum Aggregate Container Capacity per Manifold[2]
Fire District	100 lbs. water capacity (nominal 40 lb LP-gas)	287 lbs. water capacity (nominal 120 lb LP-gas capacity)
Elsewhere	239 lbs. water capacity (nominal 100 lb LP-gas capacity)	735 lbs. water capacity (nominal 300 lb LP-gas capacity)

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[1] Weight of LP-gas per gallon = 4.20 lbs.

[2] Where multiple manifolds of such containers are present in the same room, each manifold shall be separated from other manifolds by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.5]

3803.2.1.4 Group B, E and I occupancies. In Group B, E and I laboratory occupancies portable LP-gas containers are allowed to be used for research and experimentation. Such containers shall not be used in classrooms. Such containers shall not exceed a 50-pound (23 kg) water capacity in occupancies used for educational or research purposes and shall not exceed a 12-pound (5 kg) water capacity in occupancies used for institutional purposes. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.6]

3803.2.1.5 Demonstration uses. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds (5 kg). Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm). [NFPA 58 3.4.8]

3803.2.1.6 Use with self-contained torch assemblies. Portable LP-gas containers are allowed to be used to supply approved self-contained torch assemblies or similar appliances. Such containers shall not exceed a water capacity of 2.57 pounds (1.2 kg). [NFPA 58 3.4.8.3]

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3803.2.1.7 Use for food preparation. Where approved, listed LP-gas commercial food service appliances are allowed to be used for food-preparation within restaurants and in attended commercial food-catering operations in accordance with ((~~the *International*~~)) NFPA 54, *National Fuel Gas Code,* the *International Mechanical Code* and NFPA 58 as amended. [NFPA 58 3.4.8.4]

3803.2.2 Industrial vehicles and floor maintenance machines. Containers on industrial vehicles and floor maintenance machines shall comply with ((~~NFPA 58~~,)) Sections 8.3 and 8.4 of NFPA 58 as amended. [NFPA 58 8.3, 8.4]

((~~**3803.3 Location of equipment and piping.** Equipment and piping shall not be installed in locations where such equipment and piping is prohibited by the *International Fuel Gas Code*~~.))

3803.3 Use of LP-gas containers on roofs or exterior balconies. LP-gas containers on roofs or exterior balconies shall be in accordance with Sections 3803.3.1 through 3803.3.2.

3803.3.1 LP-gas containers on roofs of buildings. LP-gas containers are prohibited on the roofs of buildings and parking garages. [NFPA 58 3.2.10.1, 3.4.1.1, 3.4.9]

Exceptions:

1. Temporary installations at construction sites in accordance with Section 3803.4.
2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill.

3803.3.2 Containers on exterior balconies. LP-gas containers with a water capacity greater than 2.7 pounds (1.2-kg) shall not be located on balconies above the first floor that are attached to a Group R-1, R-2, R-4 or LC Occupancy.

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Exception: LP-gas containers not exceeding a water capacity of 48 pounds (nominal 20 pounds LP-gas) may be used on noncombustible balconies served by outside stairways where only such stairways are used to transport the container. [NFPA 58 3.4.9.2]

A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill is allowed to be located on each noncombustible, or sprinklered combustible exterior balcony of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

3803.4 Special uses of LP-gas outside of buildings. Individual container capacities and maximum aggregate quantities of LP-gas used for outdoor cooking, fueling equipment at construction sites, fueling tar kettles, fueling hot tar tank trucks and used in conjunction with torch applied roofing operations shall be limited in accordance with Table 3803.4.

LP-gas-fired heating appliances located outdoors at permanent Group A drinking and dining establishments are allowed in accordance with Section 603.4.2.

TABLE 3803.4

SPECIAL USES OF LP-GAS OUTSIDE OF BUILDINGS

Use/Activity	Location	Maximum Individual Container Capacity	Maximum Aggregate Quantity

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Outdoor Cooking (except R-2 and R-3 where allowed)	Fire District	50 lbs. water capacity[1] (nominal 20 lbs. LP-gas capacity)	100 lbs.water capacity (nominal 40 lbs. LP-gas capacity)
	Elsewhere	50 lbs. water capacity (nominal 20 lbs. LP-gas capacity)	357 lbs. water capacity (nominal 150 lbs. LP-gas capacity)
Fueling Temporary Heating Equipment at Construction Sites	Fire District	Prohibited	Prohibited
	Elsewhere	500 gallons	500 gallons
Fueling Tar Kettles	Fire District	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)

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	Elsewhere	3024 lbs. water capacity (nominal 1260 lbs. LP-gas capacity)	3024 lbs. water capacity (nominal 1260 lbs. LP-gas capacity)
	On Roofs of Buildings	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)
Use/Activity	**Location**	**Maximum Individual Container Capacity**	**Maximum Aggregate Quantity**
Fueling Hot Tar Tank Trucks	Fire District	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)

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	Elsewhere	500 gallons	500 gallons
Fueling Roofing Torches	Occupied Buildings	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	300 lbs. water capacity (nominal 126 lbs. LP-gas capacity)
	Unoccupied Buildings	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	605 lbs. water capacity (nominal 252 lbs. LP-gas capacity)

[1] When the LP-gas is separated from the public by minimum of 30 feet, or by a noncombustible partition, the maximum allowable individual container size may be increased to 239 lbs. water capacity (nominal 100 lbs. LP-gas capacity) and the maximum allowable aggregate quantity may be increased to 1,000 lbs. water capacity (nominal 420 lbs. LP-gas capacity).

Section 409. Section 3804 of the 2003 International Fire Code is amended as follows:

SECTION 3804

LOCATION OF CONTAINERS

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3804.1 General. The storage and handling of LP-gas and the installation and maintenance of related equipment shall comply with this chapter, NFPA58 as amended and be subject to the approval of the fire code official((~~, except as provided in this chapter~~)).

3804.2 Maximum capacity within established limits. ((~~Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L) (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~

~~Exception:~~))In particular installations, ((~~this~~))the location and capacity limit of LP-gas installations ((~~shall~~))may be determined by the fire code official, after consideration of special features such as topographical conditions, nature of occupancy, and proximity to buildings, capacity of proposed containers, degree of fire protection to be provided, proximity to residential, educational and institutional occupancies and other high-risk areas and capabilities of the local fire department.

3804.3 Container location. Containers shall be located with respect to buildings, public ways, and lot lines of adjoining property that can be built upon, in accordance with Table 3804.3. [NFPA 58 3.2.2.2]

3804.3.1 Special hazards. Containers shall also be located with respect to special hazards such as above-ground flammable or combustible liquid tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as specified in ((~~NFPA 58,~~)) Section 3.2.2.6 of NFPA 58 as amended. [NFPA 58 3.2.2.6]

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Section 410. Section 3805 of the 2003 International Fire Code is amended as follows:

SECTION 3805

PROHIBITED STORAGE AND USE OF LP-GAS

3805.1 Nonapproved equipment. Liquefied petroleum 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.

3805.2 Release to the atmosphere. Liquefied petroleum gas shall not be released to the atmosphere, except through an approved liquid-level gauge or other approved device.

3805.3 Fire District restrictions. Storage and use of LP-gas containers having an individual capacity in excess of 239 pounds water capacity (nominal 100 pounds LP-gas) and all stationary installations are prohibited in the Fire District.

Exception: Containers and stationary installations up to 500 gallons LP-gas capacity west of Alaskan Way.

3805.4 Rooftop installations. LP-gas containers are prohibited on the roofs of buildings and parking garages. [NFPA 58 3.2.10.1, 3.4.1.1, 3.4.9]

Exceptions:

1. Temporary installations at construction sites in accordance with Section 3803.4.
2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.
3. A single LP-gas container having an individual water capacity not exceeding 2.7 lbs.

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(nominal 1.2 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of Group R-1, R-2, R-4 or LC Occupancies.

3805.5 Stationary installations inside buildings. Stationary installations of LP-gas containers inside buildings are prohibited. [NFPA 58 3.2.2.1]

Section 411. Subsection 3806.3 of the 2003 International Fire Code is amended as follows:

3806.3 Dispensing locations. The point of transfer of LP-gas from one container to another shall be separated from exposures as specified in NFPA 58 as amended. [NFPA 58 3.2.3]

Section 412. Sections 3807, 3808 and 3809 respectively of the 2003 International Fire Code are amended as follows:

SECTION 3807

SAFETY PRECAUTIONS AND DEVICES

3807.1 Safety devices. Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made in effective. [NFPA 58 3.3.6]

3807.2 Smoking and other sources of ignition. "No Smoking" signs complying with Section 310 shall be posted when required by the fire code official. Smoking within 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at containers or vehicles, shall be prohibited. Control of other sources of ignition shall comply with Chapter 3 and ((~~NFPA 58,~~)) Section 3.7 of NFPA 58 as amended. [NFPA 58 3.7]

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3807.3 Clearance to combustibles. Weeds, grass, brush, trash and other combustible materials shall be kept a minimum of 10 feet (3048 mm) from LP-gas tanks or containers. [NFPA 58 3.2.8.2]

3807.4 Protecting containers from vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with Section 312.

SECTION 3808
FIRE PROTECTION

3808.1 General. Fire protection shall be provided for installations having storage containers with a water capacity of more than 4,000 gallons (15 140 L), as required by Section 3-10 of NFPA 58 as amended. [NFPA 58 3.10]

3808.2 Fire extinguishers. Fire extinguishers complying with Section 906 shall be provided as specified in NFPA 58 as amended. [NFPA 58 5.5]

SECTION 3809
STORAGE OF PORTABLE LP-GAS CONTAINERS AWAITING USE OR RESALE

3809.1 General. Storage of portable containers of 1,000 pounds (454 kg) or less, whether filled, partially filled or empty, at consumer sites or distributing points, and for resale by dealers or resellers shall comply with Sections 3809.2 through 3809.15.

Exceptions:

1. Containers that have not previously been in LP-gas service.
2. Containers at distributing plants.

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3. Containers at consumer sites or distributing points, which are connected for use. [NFPA 58 5.1.1]

3809.2 Exposure hazards. Containers in storage shall be located in a manner which minimizes exposure to excessive temperature rise, physical damage or tampering. [NFPA 58 5.2.1.1]

3809.3 Position. Containers in storage having individual water capacity greater than 2.((~~5~~))7 pounds (1.2 kg) [nominal 1-pound (0.454 kg) LP-gas capacity] shall be positioned with the pressure relief valve in direct communication with the vapor space of the container. [NFPA 58 3.2.4.1, 5.2.1.2]

3809.4 Separation from means of egress. Containers stored in buildings in accordance with Sections 3809.9 and 3809.11 shall not be located near exit access doors, exits, stairways, or in areas normally used, or intended to be used, as a means of egress. [NFPA 58 5.2.1.3]

3809.5 Quantity. Empty containers that have been in LP-gas service shall be considered as full containers for the purpose of determining the maximum quantities of LP-gas allowed in Sections 3809.9 and 3809.11. [NFPA 58 5.2.1.4]

3809.6 Storage on roofs. Containers which are not connected for use shall not be stored on roofs. [NFPA 58 5.2.1.5]

3809.7 Storage in basement, pit or similar location. Liquefied petroleum gas containers shall not be stored in a basement, pit or similar location where heavier-than-air gas might collect. Liquefied petroleum gas containers shall not be stored in above-grade under floor spaces or basements unless such location is provided with an approved means of ventilation.

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Exception: Department of Transportation (DOTn) specification cylinders with a maximum water capacity of 2.((~~5~~))7 pounds (1 kg) for use in completely self-contained hand torches and similar applications. The quantity of LP-gas shall not exceed 20 pounds (9 kg).

3809.8 Protection of valves on containers in storage. Container valves shall be protected by screw-on-type caps or collars which shall be securely in place on all containers stored regardless of whether they are full, partially full or empty. Container outlet valves shall be closed or plugged. [NFPA 58 5.2.2]

3809.9 Storage within buildings accessible to the public and in residential occupancies. Storage of LP-gas within buildings accessible to the public and in residential occupancies shall be in accordance with this section.

3809.9.1 Storage within buildings accessible to the public. Department of Transportation (DOTn) specification cylinders with maximum water capacity of 2.((~~5~~))7pounds (1 kg) ((~~used in completely self-contained hand torches and similar applications~~)) are allowed to be stored or displayed in a building accessible to the public. The quantity of LP-gas shall not exceed ((~~200~~)) 25 pounds in the Fire District and 100 pounds outside the Fire District ((~~pounds (91 kg)~~)) except as provided in Section 3809.11.

Exception: Storage in restaurants and at food service locations of 10-oz (238-g) butane nonrefillable containers shall be limited to no more than 24 containers, and an additional twenty four 10-oz (238-g) butane nonrefillable containers stored in another location within the building, where constructed with at least a 2-hour fire wall construction. [NFPA 58 5.3.1.2]

3809.9.2 Storage within residential occupancies. Storage of containers within residential occupancies, including the basement or any storage area in a common basement storage area in multi-family occupancies and attached garages, shall be limited to containers having a maximum individual water capacity of 2.7 lbs. (1.2 kg) and shall not exceed 5.4-lb (2.4-kg) aggregate water capacity per living space unit. Each container shall meet DOT specifications. [NFPA 58 5.3.4]

3809.10 Storage within buildings not accessible to the public. The maximum quantity allowed in one storage location in buildings not accessible to the public, such as industrial buildings, shall not exceed a water capacity of 735 pounds (334 kg) [nominal 300 pounds (136 kg) of LP-gas]. Where additional storage locations are required on the same floor within the same building, they shall be separated by a minimum of 300 feet (91 440 mm). Storage beyond these limitations shall comply with Section 3809.11. [NFPA 58 5.3.2.]

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed to be stored within buildings not accessible to the public shall be limited in accordance with Table 3809.10.

TABLE 3809.10

STORAGE WITHIN BUILDINGS

NOT ACCESSIBLE TO THE PUBLIC[1]

Location	Max Individual Container	Maximum Aggregate

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	Capacity	Quantity
Fire District	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	144 lbs. water capacity (nominal 60 lbs. LP-gas)
Elsewhere	72 lbs. water capacity (nominal 30 lbs. LP-gas capacity)	735 lbs. water capacity (nominal 300 lbs. LP-gas capacity)

[1] Weight of LP-gas per gallon = 4.20 lbs.

3809.10.1 Quantities on equipment and vehicles. Containers carried as part of service equipment on highway mobile vehicles need not be considered in the total storage capacity in Section 3809.10, provided such vehicles are stored in private garages and do not carry more than three LP-gas containers with a total aggregate LP-gas capacity not exceeding 100 pounds (45.4 kg) per vehicle. Container valves shall be closed. [NFPA 58 5.3.2.2]

3809.11 Storage within rooms used for gas manufacturing.

Storage within buildings or rooms used for gas manufacturing, gas storage, gas-air mixing and vaporization, and compressors not associated with liquid transfer shall comply with Sections 3809.11.1 and 3809.11.2. [NFPA 58 5.3.3]

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3809.11.1 Quantity limits. The maximum quantity of LP-gas shall be 10,000 pounds (4540 kg).

3809.11.2 Construction. The construction of such buildings and rooms shall comply with requirements for Group H occupancies in the *International Building Code*; NFPA 58 as amended, Chapter 7; and both of the following:

1. Adequate vents shall be provided to the outside at both top and bottom, located at least 5 feet (1524 mm) from building openings.
2. The entire area shall be classified for the purposes of ignition source control in accordance with NFPA 58 as amended, Section 3.7.

3809.12 Location of storage outside of buildings. Storage outside of buildings, for containers awaiting use, resale or part of a cylinder exchange program shall be located not less than ((~~20~~))10 feet (6096 mm) from openings into buildings, 20 feet (6096 mm) from any motor vehicle fuel dispenser and 10 feet (3048 mm)from any combustible material and in accordance with Table 3809.12-A. [NFPA 58 5.4]

TABLE 3809.12-A

LOCATION OF CONTAINERS AWAITING USE OR RESALE

STORED OUTSIDE OF BUILDINGS

QUANTITY OF LP-GAS STORED	DISTANCES TO A BUILDING OR GROUP OF BUILDINGS, PUBLIC WAY OR LOT LINE OF PROPERTY THAT CAN BE BUILT UP (feet)
500 pounds or less	0
501 to 2,500 pounds	10[a]

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2,501 to 6000 pounds	15
6,001 to 10,000 pounds	20
Pver 10.000 pounds	25

For SI: 1 foot=304.8 mm, 1 pound=0.0454 kg.

[a.] Containers are allowed to be located a lesser distance.

Maximum aggregate quantities located outside of buildings accessible to the public shall be in accordance with Table 3809.12-B.

TABLE 3809.12-B

STORAGE OUTSIDE OF BUILDINGS

ACCESSIBLE

TO THE PUBLIC[1]

Location	Max Individual Container Capacity	Maximum Aggregate Quantity
Fire District	72 lbs. water capacity (nominal 30 lbs. LP-gas)	357 lbs. Water capacity (nominal 150 lbs. LP-gas)

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Elsewhere	72 pounds water capacity (nominal 30 lbs. LP-gas)	2592 lbs. water capacity (nominal 1080 lbs. LP-gas)[2]

[1] Weight of LP-gas per gallon = 4.20 lbs.

[2] Actual maximum quantity shall be determined on a case by case basis but shall not exceed the maximum quantity set forth here.

3809.13 Protection of containers. Containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicular protection shall be provided in accordance with Section 312 ((~~as~~)) when required by the fire code official.
[NFPA 58 3.2.4.2]

3809.14 Separation from means of egress for containers located outside of buildings. Containers located outside of buildings shall not be located within 20 feet (6096 mm) of any exit access doors, exits, stairways or in areas normally used, or intended to be used, as a means of egress.

3809.15 Alternative location and protection of storage. Where the provisions of Sections 3809.12 and 3809.13 are impractical at construction sites, or at buildings or structures

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undergoing major renovation or repairs, the storage of containers shall be as required by the fire code official.

Section 413. Subsection 3811.3 of the 2003 International Fire Code is amended as follows:

3811.3 Garaging. Garaging of LP-gas tank vehicles shall be as specified in NFPA58 as amended. Vehicles with LP-gas fuel systems are allowed to be stored or serviced in garages as specified in NFPA 58 as amended, Section 8.6.

Point of Information

The following Tables may be used to approximate container capacity conversions.

FOR PORTABLE DOT/ICC/CTC CYLINDER APPLICATIONS:

Propane Capacity		**Water Capacity**	
(lb)	**(gal)**	**(lb)**	**(gal)**
5	1.2	12	1.4
10	2.4	23.8	2.8
14	3.3	34	4.1
20	4.7	48	5.7
25	5.9	59.5	7.1
30	7.1	72	8.6

40	9.5	95	11
60	14	144	17
100	24	239	29
150	35	357	43
200	47	477	57
300	71	715	86
420	99	1,000	119

FOR STATIONARY ASTM CONTAINER APPLICATIONS:

Water Capacity (gallons)	LP-gas Capacity (gallons)*	LP-gas Capacity (pounds)
100	80	338
125	100	423
150	120	508
250	200	848
325	260	
500	400	
1,000	800	

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Based on propane specific gravity of .508 at 60 degrees Fahrenheit

Section 414. Chapter 45 of the 2003 International Fire Code is amended as follows:

CHAPTER 45

REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.6.

* * *

NFPA

National Fire Protection Association

Batterymarch Park

Quincy, MA 02269 **NFPA**

Standard reference number	Title	Referenced in code section number

* * *

58—01 Liquefied Petroleum Gas Code as amended. . . . . ((~~3801.1, 3803.1, 3803.2.1, 3803.2.1.2 ,3803.2.1.7, 3803.2.2, 3804.1, 3804.3.1, 3804.4, 3806.3, 3807.2, 3808.1, 3808.2, 3809.11.2, 3811.3~~)) Chapter 38

* * *

120-99 Coal Preparation Plants . . . . . Table 1304.1

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130—03 Fixed Guideway Transit and Passenger Rail Systems as amended 316

* * *

498-96 Safe Havens and Interchange Lots for Vehicles Transporting Explosives 3301.1.2

502—01 Road Tunnels, Bridges, and other Limited Access Highways as amended 317

* * *

UL

Underwriters Laboratories, Inc.

333 Pfingsten Road

Northbrook, IL 60062

Standard reference number	Title	Referenced in code section number

* * *

2245-99 Below-Grade Vaults for Flammable Liquid Storage Tanks 3404.2.8.1

UUFX-03 Central Station (Fire Alarms). 903.4.1

Section 415. A new Chapter 46 is adopted to read as follows:

CHAPTER 46

WATERFRONT STRUCTURES FIRE PROTECTION

SECTION 4601

GENERAL

4601.1 Scope. Piers, wharves, floats and marinas shall be in accordance with this chapter and other requirements of this code.

Exception: Approved designated facilities and shipyards in accordance with Administrative Rule 26.02.04 *Designated Hot Work Facilities and Shipyards.*

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4601.1.1 Conflicts. Where there is a conflict between this code and an ordinance or rule, this chapter shall govern unless the ordinance or rule establishes more stringent fire and life safety requirements.

4601.2 Signage. At the shore end of piers, wharves and floats conspicuous signage shall be located indicating the address and, for those structures that are designed to support vehicles, the weight limit. Numbers and letters shall be easily legible and have high contrast with the color of the sign background. Numbers and letters shall not be less than 5 inches (127 mm) in height.

4601.2.1 Labeling electrical disconnects. Electrical transformers, control panels, and breaker panels shall be readily accessible, clearly labeled and indicate the areas they service. See also Section 605.

4601.3 Fire extinguishers. One portable fire extinguisher having a minimum rating of 2A 20-BC, shall be provided within 75 feet of all portions of piers, wharves, and floats, or at each required hose station. Additional fire extinguishers, suitable for the hazards involved, shall be provided and maintained in accordance with Section 906 and NFPA Standard 10.

4601.4 Emergency Plan. Owners of piers, wharves, floats and marinas shall prepare an emergency plan for the facility. The plan shall include procedures for fire department notification, fire evacuation, and include location of portable fire extinguishers and hose cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.

Point of Information

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For examples of emergency plans, see information bulletins located at www.seattle.gov/fire titled Emergency Procedures for Public Occupancies and Fire Evacuation Planning.

SECTION 4602

DEFINITIONS

4602.1 Limited application. For the purposes of this Chapter, certain terms are defined as follows:

COVERED BOAT MOORAGE is a pier or system of floating or fixed accessways to which vessels on water may be secured, 50 percent or more of which is covered by a roof.

DESIGNATED HOT WORK FACILITY Those piers, designated by the fire code official, and by virtue of their construction, location, fire protection, emergency vehicle access and fire hydrant availability, that are suitable to permit certain repairs to vessels.

FLOAT is a floating structure normally used as a point of transfer for passengers and goods, or both, for mooring purposes.

MARINA is any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels and shall include artificially protected works, the public or private lands ashore, and structures or facilities provided within the enclosed body of water and ashore for the mooring or servicing of vessels or the servicing of their crews or passengers.

PIER is a structure, usually of greater length than width, of timber, stone, concrete or other material, having a deck and projecting from the shore into waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SHIPYARD is a pier, wharf, or series of piers and related onshore facilities, designated by the fire code official, which by virtue of the pier construction, location, emergency vehicle access, fire protection, hydrant availability and onsite safety personnel in accordance with Seattle Fire Department Administrative Rule 26.02.02, *Designated Hot Work Facilities and Shipyards* is suitable to permit repairs, including major conversions, on marine vessels of any length.

SUBSTRUCTURE is that portion of the construction below and including the deck immediately above the water.

SUPERSTRUCTURE is that portion of construction above the deck.

Exception: Covered boat moorage.

VESSEL is watercraft of any type, other than seaplanes on the water, used or capable of being used as a means of transportation.

WHARF OR QUAY is a structure of timber, stone, concrete or other material having a platform built along and parallel to waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SECTION 4603
PLANS AND APPROVALS

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4603.1 Plans. Plans for pier, wharf, float and marina fire-protection shall be approved prior to installation. The work shall be subject to final inspection and approval after installation.

SECTION 4604
ACCESS AND WATER SUPPLY

4604.1 Fire department access. Fire department apparatus access lanes, not less than 20 feet wide and capable of supporting a 50,000-pound vehicle or 24,000 pounds per axle (HS20 loading), shall be provided and so located as to provide fire department apparatus access to within 50 feet travel distance to the shore end of all piers, wharves and floats.

4604.2 Fire hydrants. At least two fire hydrants shall be provided. One hydrant shall be located within 500 feet of the closest point of fire department apparatus access to the shore end of the marina piers, wharves or floats, or to the fire department connection (FDC) for those piers, wharves or floats that are equipped with standpipes. The second fire hydrant shall be located within 1000 feet of the closest point of fire department apparatus access to the shore end of the marina piers, wharves, or floats, or to the FDC for those piers, wharves or floats that are equipped with standpipes.

All required hydrants shall be capable of delivering not less that 1,000 gpm at a minimum residual pressure of 20 psi each.

Exception: The requirements for fire hydrants may be modified when alternate arrangements are approved by the fire code official.

SECTION 4605
FIRE PROTECTION EQUIPMENT

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4605.1 Standpipe systems. Class III standpipe systems in accordance with NFPA 14 shall be provided for piers, wharves, and floats where the hose lay distance from the fire apparatus to the most remote accessible portion of the pier, wharf or float exceeds 150 feet. Piping shall be 6-inch minimum, with 4-inch minimum piping acceptable for the last 100 feet. Approved plastic pipe may be used when installed underwater, or other approved method of protection from fire is provided. Note: Separate Class I and Class II standpipes may be installed in lieu of the combined Class III type standpipe system.

4605.1.1 Hose stations. Hose stations on required standpipes shall be provided at spacing not to exceed 100 feet with the first hose station located as close as practicable to the land end of the pier. Each hose station shall have 100 feet of 1½-inch hose mounted on a reel or rack and enclosed within an approved cabinet. A valved 2½-inch fire department hose outlet shall be provided at each hose station. Outlet caps shall have a 1/8-inch predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal. Listed equipment shall be used. Hose stations shall be labeled FIRE HOSE-EMERGENCY USE ONLY.

4605.1.2 Freeze protection. Standpipe systems shall be maintained dry when subject to freezing temperatures, and always from November 1 through March 31. The 1½-inch hose stations shall be tagged out-of service when the system is drained. The main water supply control valve shall be readily accessible and clearly labeled so that the system may be quickly restored to full service during periods when the system is drained down.

Exception: Other methods of freeze protection may be provided when approved by the fire code official, such as listed freeze valves.

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4605.2 Automatic sprinkler systems.

4605.2.1 Covered boat moorage. Automatic sprinklers shall be provided for covered boat moorage exceeding 500 square feet in projected roof area per pier, wharf or float. Ref: NFPA 303

The sprinkler system shall be designed and installed in accordance with NFPA 13 for Extra Hazard Group 2 occupancy.

If sprinklers are required by this chapter, they shall be extended to any structure on the pier, wharf or float exceeding 500 square feet in projected roof area.

4605.2.2 Substructure. Automatic sprinklers shall be installed under the substructure of every new waterfront structure in accordance with NFPA 307 and as specified in Chapter 9.

Exceptions:

1. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m 2) supporting no superstructures.
2. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m 2) supporting superstructures not required to be provided with an approved automatic sprinkler system as specified in Section 421.6.9.
3. Noncombustible substructures with or without superstructures.
4. Substructures, over other than tidal water, where sprinkler heads cannot be installed with a minimum clearance of 4 feet (1219 mm) above mean high water.
5. Substructures resulting from walkways or finger piers which do not exceed l0 feet (3048 mm) in width.

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4605.2.3 Superstructure. Automatic sprinklers shall be provided in superstructures as specified in Chapter 9.

Exceptions:

1. Outside of the fire district, an automatic sprinkler system shall not be required in superstructures which are less than 8,000 square feet (743.2 m 2) in floor area or in individual superstructures less than 8,000 square feet (743.2 m 2) in floor area when separated by a substructure of a width not less than 16 feet (4877 mm) and a substructure draft stop constructed as specified in Section 421.5.2.
2. An automatic sprinkler system shall not be required in one story superstructures which do not exceed 1,000 square feet (93 m 2) in floor area or 20 feet (6096 mm) in height.
3. An automatic sprinkler system shall not be required in Group R, Division 1 and 2 Occupancies or Group B office buildings of Type IA construction, provided no one assembly room exceeds 1,000 square feet (93 m 2) in floor area and the entire substructure is of Type IA construction, unless otherwise required by Section 403.

4605.2.4 Monitoring. Sprinkler systems shall be monitored by an approved Central Station Service.

4605.3 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than a two-way 2½-inch fire department connection (FDC), which shall be readily visible and located at the fire department apparatus access. See also 4604.2 Fire hydrants.

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4605.4 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested at least annually. Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit in accordance with Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated, and are separate from fire department inspections. The person, firm or corporation performing such work shall have a certificate from the fire department. See Administrative Rule 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

Section 416. A new Chapter 90 is adopted to read as follows:

CHAPTER 90

RESIDENTIAL OCCUPANCIES

FOUR STORIES AND OVER

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 98868, effective June 6, 1970. Ordinance 98868, also known as the Ozark ordinance, applied to all existing apartment houses, apartment hotels, and hotels four stories or more in height.

SECTION 9001

GENERAL

ACTING CITY CLERK

9001.1 Definitions. For the purpose of this chapter, the following words and terms shall have the meaning specified in section 9001.1:

APARTMENT HOUSE: Any building or portion thereof, containing three (3) or more dwelling units.

APARTMENT HOTEL: A building containing both dwelling units and guest rooms.

GUEST ROOM: Any room or rooms used or intended to be used for sleeping purposes by a person hiring such room or rooms.

HOTEL: A building in which is conducted the business of lodging the public and which contains six (6) or more guest rooms.

9001.2 Exit Enclosure Required. All existing apartment houses, apartment hotels and hotels four (4) stories or more in height, shall have at least two (2) fully enclosed stairways which have a one-hour fire-resistive rating throughout. The interior corridors and egressways thereof, including all doors, transoms and other openings into corridors, shall be constructed or improved to substantially have a one-hour fire-resistive rating throughout. In buildings constructed as apartment houses in accordance with the Building Code and being operated as apartment houses, walls and ceilings of plaster on wood lath or 1/2-inch plasterboard construction, and 1-3/8-inch solid core doors or equivalent shall be sufficient to meet the requirements of this section.

9001.3 Sprinkler Alternative. In lieu of compliance with the requirements of Section 9001.2, approved automatic fire sprinkler systems may be installed in all stairways, interior corridors

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and egressways of existing apartment houses, apartment hotels, and hotels four (4) stories or more in height. Automatic sprinkler systems, if so installed, shall also be installed in all janitor rooms, storage closets, utility rooms, and other usable spaces in which combustible materials are or may be sorted or kept, unless such rooms or spaces are equipped with self-closing fire doors having a one-hour fire-resistive rating.

SECTION 9002

CONFLICTS WITH LATER ADOPTED CODES

Section 9002.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after June 6, 1970. Where conflicts exist between the requirements of this chapter and Seattle Building Codes and Seattle Fire Codes adopted after June 6, 1970, the provisions of the later adopted codes shall apply.

Section 417. A new Chapter 91 is adopted to read as follows:

CHAPTER 91

AUTOMATIC SPRINKLER SYSTEMS

IN NURSING HOMES

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 94931, effective August 5, 1966.

SECTION 9101

SCOPE

9101.1 Nursing Home Defined. For the purpose of this chapter, the term "nursing home" means any home, place, or institution which operates or maintains facilities providing

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convalescent or chronic care, or both, for a period in excess of 24 consecutive hours for three (3) or more patients not related by blood or marriage to the operator, who by reason of illness or infirmity, are unable properly to care for themselves. Convalescent and chronic care may include, but is not limited to any or all procedures commonly employed in waiting on the sick such as administration of medicines, preparation of dressings and bandages, and carrying out of treatment prescribed by a duly licensed practitioner of the healing arts. It may also include care of mentally incompetent persons if they do not require psychiatric treatment by or under the supervision of a physician specialized in the field of medicine. Nothing in this definition shall be construed to include general hospitals or other places which provide care and treatment for the acutely ill and maintain and operate facilities for major surgery or obstetrics, or both. Nothing in this definition shall be construed to include any boarding home, guest home, hotel or related institution which is held forth to the public as providing, and which is operated to give only board, room and laundry to persons not in need of medical or nursing treatment or supervision, except in the case of temporary acute illness. The mere designation by the operator of any place or institution, which does not provide care for the acutely ill or maintain and operate facilities for major surgery or obstetrics, as a hospital, sanitarium, or similar name shall not exclude such place or institution from the provisions of Section 9102.

SECTION 9102
INSTALLATION OF EQUIPMENT

9102.1 Installation Exceptions. Approved automatic fire sprinkler systems shall be installed in all usable rooms, corridors, and stairways of existing nursing homes with the following exceptions:

1. Nursing homes which are of Type I or II construction throughout, as defined in the Building Code.

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2. Nursing homes not more than one story in height which have interiors with a one-hour fire resistance rating throughout.

SECTION 9103

CONFLICTS WITH LATER ADOPTED CODES

Section 9103.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after August 5, 1966. Where conflicts exist between the requirements of this chapter and Seattle Building Codes and Seattle Fire Codes adopted after August 5, 1966, the provisions of the later adopted code shall apply providing they are not less stringent.

Section 418. A new Chapter 92 is adopted to read as follows:

CHAPTER 92

AUTOMATIC SPRINKLER SYSTEMS IN SCHOOLS

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 94931, effective August 5, 1966.

SECTION 9201

GENERAL

9201.1 School Buildings Defined. For the purpose of this chapter, the term "school building," means:

1. A public place of instruction operated by public authorities, including elementary and secondary schools.

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2. A place of instruction operated by private persons or private or religious organizations in which the course of study is similar to that in a public school, and which has been authorized by the State as an educational institution.

SECTION 9202

INSTALLATION OF EQUIPMENT

9202.1 Installation Exceptions. An approved automatic fire sprinkler system shall be installed in all usable rooms, corridors and stairways of existing school buildings, two (2) stories or more in height, with the following exceptions:

1. School buildings which are of Type I or II construction as defined in the Building Code.
2. School buildings not over three (3) stories in height which have interiors with one-hour fire resistance rating throughout, and which have egress enclosures with a one-hour fire resistance rating.
3. School buildings, not over three (3) stories in height, with interiors which substantially have a one-hour fire resistance rating, need only have egress corridors, stairways, janitor rooms, storage rooms and similar spaces equipped with approved automatic sprinkler systems. Classrooms and assembly rooms in such buildings need not be so equipped.

SECTION 9203

CONFLICTS WITH LATER ADOPTED CODES

Section 9203.1. Conflicts with Seattle Building and Seattle Fire Codes adopted after August 5, 1966. Where conflicts exist between the requirements of this chapter and Seattle

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Building Codes and Seattle Fire Codes adopted after August 5, 1966, the provisions of the later adopted code shall apply.

Section 419. A new Chapter 93 is adopted to read as follows:

CHAPTER 93

MINIMUM STANDARDS FOR HIGH-RISE BUILDINGS

Point of Information

The requirements of this Chapter originated in City of Seattle Ordinance 110299, effective January 23, 1982.

Where used in this Chapter, the term "Building Code" shall mean the 1982 Seattle Building Code. Where used in this Chapter, the terms "this Code" and "the fire code" shall mean the 1982 Seattle Fire Code.

SECTION 9301

GENERAL

9301.1 Purpose. The main purpose of this article is to improve the fire and life safety of existing high-rise buildings that do not conform to current City codes so that the health, safety and welfare of the general public is provided for and promoted. It is recognized that the application of present day fire protection techniques to some existing high-rise buildings is difficult. For this reason, this article may permit the use of alternative methods and innovative approaches and techniques to achieve its purpose, when approved by the chief and the Building Official.

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9301.2 Scope. This article shall apply to all high-rise buildings in existence at the time of its adoption, as well as to all high-rise buildings coming into existence after the adoption thereof.

9301.2.1 Hazards and design features. Whenever the chief shall find a condition in a high-rise building not specifically addressed in this chapter, which in his opinion makes fire escape or fire fighting unusually difficult, he shall declare it to be a hazard, notify the owner of such condition and order its correction in a manner consistent with these minimum safeguards.

9301.2.2 Exempt Buildings. The chief and the Director of the Department Planning and Design may exempt high-rise buildings that meet the requirements of Section 403 of the 1982 Seattle Building Code from complying with provisions of this chapter.

9301.2.3 Conflicts. Where there is a conflict between the provisions of this chapter and the provisions of an ordinance or code adopted after January 23, 1982, the provisions of the later adopted ordinance or code shall apply.

9301.3 Definitions. For the purpose of this chapter, certain words shall be construed as specified in this section.

CENTRAL STATION: A fire alarm reporting service listed by the Underwriters Laboratories or authorized by the chief to report alarms to the Seattle Fire Department Alarm Center. In lieu of connection to a central station listed by Underwriters Laboratories, the chief may approve building staff monitoring of a fire alarm annunciator panel where:

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1. Such staff are properly trained to monitor the annunciator panel and report alarm signals to the fire department alarm center via the 9-1-1 system.
2. One or more building staff is on duty 24 hours a day and, remains in the direct vicinity of the annunciator panel, e.g., a hotel desk clerk where the panel is behind the registration desk.
3. Staff persons in low income high-rise buildings whose primary duty requires them to be at the front desk are available.

DEAD-END CORRIDOR: A corridor which permits only one direction of travel from a unit or normally occupied room door to an exit, or which intersects an exit corridor on one end and does not provide an exit path on the other end. A corridor which has fire escapes directly accessible from it is not a dead-end corridor.

FLOOR USED FOR HUMAN OCCUPANCY: A floor designed and intended for occupancy by one or more persons for any part of a day, including a roof garden and an active storage area. An area that is permanently unoccupied or is occupied for the service of building equipment only is not included in this definition.

HIGH-RISE BUILDING: Buildings having floors used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access.

LOW INCOME RESIDENTIAL BUILDINGS: Are defined for this chapter as those buildings that meet the following requirements:

1. At least fifty percent (50%) of the dwelling or housing units as defined in the Housing Code (Seattle Municipal Code Ch. 22.204) are rented to non-transient persons at a rent at or

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below .9% of the current median income for all families in the Seattle area as determined by the United States Department of Housing and Urban Development; and

2. The average monthly rent for all dwelling or housing units in the building does not exceed 1.4% of the Median Income Limit.

For purposes of calculating the average monthly rent, a room which is rented on a hostel-style basis to three (3) or more non-related persons shall be considered as one room rented for $200 per month.

Monthly rent shall include all charges for shelter and provision of items normally associated with such use, but shall not include board, health care, telephone charges and other such items.

SECTION 9302

EXITS

9302.1 General. All exits in high-rise buildings shall be illuminated as required in Section 1211 of this Code and enclosed with a minimum of one-hour fire resistive construction. Every high-rise building shall have at least one such exit. Where existing exterior fire escapes are used for additional exits, they shall be tested and identified as required in Section 9302.3.

9302.2 Smokeproof enclosure. Where a high-rise building has a single, enclosed exit, the enclosure shall be continued to the exterior of the building and the exit shall be smoke-proof by mechanical ventilation in accordance with Section 3310 of the 1982 Seattle Building Code, or shall be mechanically pressurized with fresh air to 0.15 inches water column and shall have a concurrent 2500 cubic feet per minute (CFM) exhaust to atmosphere in an emergency, in accordance with the provisions of the Building Code.

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Exceptions:

1. Pressurization may be omitted when the building has an approved automatic sprinkler system, all corridor openings are self-closing, all occupied areas have access to a second means of egress or a fire escape and the omission is approved by the chief.
2. A single stair may exit through a building lobby, where the lobby is of non-combustible construction, does not contain combustible furnishings, and is separated from the rest of the building by one-hour construction. Wire-glass protected by sprinklers on both sides may be accepted as one-hour construction. Where the lobby contains no combustible materials, wire-glass need only be protected by sprinklers on the side opposite the lobby.

9302.3 Fire Escapes. Exterior fire escapes shall be accessible and structurally safe at all times. Owners of high-rise buildings shall load test fire escapes at least once every five (5) years with a weight of not less than 100 lb/sq. foot. The results of such a load test shall be submitted in writing to the chief. In lieu of such a test, the chief may accept the opinion of a structural engineer licensed by the State of Washington describing his inspection and/or tests and stating that the fire escape is structurally safe and will support a load of 100 lb/sq. foot. There shall be signs approved by the chief clearly identifying the route of access to the fire escape from every public corridor. Fire escapes which are not maintained structurally safe and not otherwise required by provisions of the Fire Code shall be removed.

Locked doors or windows are prohibited between public corridors and fire escapes.

Exceptions: Where all of the following criteria are met and approved by the chief:

1. An identified tool or device for opening the locked door or window is permanently affixed in close proximity to the locked point.
2. The area around the locked door or window is served by emergency illumination.

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3. Clearly understandable directions indicating the use of the tool and the route to the fire escape are posted at the locked door or window.

9302.4 Doors. All exit doors in the path of exit travel shall be self-closing or automatic closing in accordance with Section 713.6 of the 1982 Building Code. Doors held open by fusible links, and sliding or vertical doors are prohibited in exit-ways. Stairway doors shall be self-latching.

9302.5 Unlocking of doors. Stairway doors, including the doors between any stairway and the roof, shall not have locks or shall unlock automatically whenever a fire alarm is activated in the high-rise building. Such locks shall unlock automatically when power is off (fail safe). Where the only locked door in a stair shaft is the one that leads to the roof, it may be locked by panic hardware or approved alarm lock paddle bars.

9302.6 Egress from stairways. Enclosed stairways serving more than six (6) floors shall have two (2) means of egress from the stairway. Enclosed stairways serving ten (10) or more floors shall have re-entry into the building at approximately 5-story intervals. Re-entry signs shall be posted in the stair.

Exceptions:

1. Jails.
2. Where telephones connected to a 24-hour manned location are provided in the stairway in each 5-floor increment that does not have a means of egress.
3. Where any door serving as an entrance to the stair does not automatically lock behind a person entering the stair.
4. Where alternate means of alerting building management to persons trapped in a stairwell are approved by the Building Official.

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SECTION 9303

DEAD-END CORRIDORS

9303.1 Dead-end corridors. Dead-end corridors are limited to 75 feet in length in office occupancies and 30 feet in length in all other occupancies. Where such limits are exceeded, automatic sprinkler protection meeting the requirements of the Fire Code and the Building Code shall be provided for the entire dead-end corridor, with one head on the room side of each door opening onto the corridor. Domestic water systems may be used to supply such sprinklers when approved by the chief.

Exceptions:

1. In high-rise buildings, inactive doors leading from the dead-end corridor into spaces which are not in normal use may be covered with 5/8" type "x" gypsum board or its equivalent, in lieu of installing a sprinkler head over the door or smoke detector in the room.
2. In office occupancies, sprinkler heads on the room side of each door opening onto the corridor need not be installed.
3. In residential buildings, where corridors and each guest room are equipped with electrically supervised smoke detectors connected to the building fire alarm system, sprinkler heads, or any combination thereof. Where smoke detectors are used in rooms in lieu of sprinklers, doors must be rated at 20 minutes and must be self-closing.
4. In office occupancies, sprinkler systems are not required in a dead-end corridor where the corridor is equipped with smoke detectors and each room opening onto the corridor is equipped with at least one smoke detector. Such detector shall be electrically supervised and connected to the building fire alarm system.
5. Where there is a fire escape not directly accessible from the corridor and the exit route is protected by electrically supervised smoke detection.

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6. Corridors within residential units are exempt.

7. Corridors within private offices may have corridor only smoke detection connected to the building alarm systems.

SECTION 9304

FIRE RESISTIVE CONSTRUCTION

9304.1 Fire separation. Any space larger than 1,500 square feet shall be separated from building stair shafts, elevator shafts and air handling shafts by non-combustible smoke resistive separation (glass walls with wood stops are acceptable) and equipped with smoke detectors connected to the building fire alarm system.

Exceptions:

1. Spaces that have approved automatic sprinkler systems.

2. Building lobbies or corridors which are equipped with an approved smoke control system that includes shaft pressurization and automatic smoke removal.

3. Building lobbies or corridors of any size that do not contain combustible furnishings (other than carpet) or commercial spaces and have non-combustible interior finish throughout.

NOTE: To qualify for exception 3, all spaces adjacent to the building lobby must be separated and equipped with smoke detectors as outlined in this section, and all doors leading into the lobby must be self-closing or automatically closing upon activation of the building fire alarm system.

4. Office areas above the main lobby, including open space design areas.

NOTE: This exception does not apply to retail or wholesale stores, display rooms, restaurants, cocktail lounges and bars, banquet rooms, meeting rooms, storage rooms

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and spaces which, because of unusual fuel load or other conditions, pose an unusual hazard in the opinion of the chief.

5. Smoke detectors shall not be required in spaces which are separated by one-hour construction, with openings protected by one-hour self-closing doors.

Domestic water systems may be used to supply the sprinkler system referred to in this section when approved by the chief.

9304.2 Shaft enclosures. All openings which connect three (3) or more floors shall be enclosed with a minimum of one-hour fire resistive construction.

Exception: Openings complying with Sections 304.6 or 402 of the 1982 Seattle Building Code.

SECTION 9305
HEATING, VENTILATION AND AIR CONDITIONING SYSTEM (HVAC) SHUTDOWN

9305.1 Air moving systems. Air moving systems that serve more than the floor on which they are located shall automatically shut down on any high-rise building fire alarm, or shall be provided with a manual shutdown switch located at the fire alarm panel in the main building lobby.

Exception: Air moving systems of:

1. Less than 2,000 CFM.
2. Exhaust only systems of less than 15,000 CFM, such as toilet, range hood, kitchen, fume hood, etc.

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3. HVAC systems of less than 15,000 CFM with automatic shut-down on smoke detectors in the area served, which are connected to the building fire alarm system.

4. Life safety pressurization systems as provided in the Building Code.

5. Buildings with approved automatic smoke control pursuant to Section 1807 of the 1982 edition of the Seattle Building Code.

SECTION 9306

FIRE ALARM AND DETECTION SYSTEMS

9306.1 General. Every high-rise building, except a residential occupancy with a system installed under Ordinance 106107 as now or hereafter amended, shall have an electrically supervised fire alarm and detection system approved by the chief, as follows:

A manual pull station shall be located at every floor exit door, except in office occupancies.

The alarm system for the high-rise building shall be monitored by a central station, or other such means approved by the chief.

The alarm systems shall be electrically supervised and have battery emergency power sufficient to operate for a period of 24 hours and sound the alarm for 10 minutes at the end of that period.

9306.2 Automatic smoke detection. There shall be electrically supervised automatic smoke detection in elevator landings, public corridors, and on the corridor or floor side of each exit stairway.

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Exception: Where a corridor has an approved automatic sprinkler system, smoke detectors may be omitted from the corridor.

There shall be electrically supervised automatic smoke detectors within 50 feet of building perimeter walls and at standard spacing (approximately 30 feet) to the center of the floor.

Exceptions:

1. Interior of residential units.
2. Floors which have an approved automatic sprinkler system.
3. Parking garages.
4. Building Mechanical Spaces.
5. Any space above the top occupied floor.

9306.3 Rooms without sprinklers. There shall be electrically supervised automatic heat or smoke detection in rooms used for storage, shops, handicraft, janitor, trash and similar purposes where the fuel load may be significantly higher than the average floor fuel load and no automatic sprinkler system exists.

Exceptions:

1. Rooms with an approved automatic sprinkler system.
2. Rooms under 10 square feet opening onto exit corridors.
3. Rooms under 100 square feet not opening onto exit corridors.
4. Rooms within residential units.
5. Rooms where the storage is in closed metal containers.
6. Rooms other than those opening onto a corridor and within 30 ft. of an electrically supervised automatic smoke detector.

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9306.4 Audibility. Alarm systems shall have audible devices producing a slow "whoop" sound audible at 15 dBA above ambient sound levels with a minimum of 60 dBA throughout residential occupancies, and 10 dBA above ambient sound levels with a minimum of 55 dBA throughout other occupancies, and shall have a microphone capable of making voice announcements simultaneously to all floors.

The alarm shall sound at a minimum on the floor where the fire is occurring and the floor above, and the alarm system shall be capable of sounding a general alarm throughout the high rise building. The alarm system shall be designed so that a general alarm may be activated from two separate locations.

9306.4.1 Zones. Fire alarm systems shall be zoned per floor.

9306.4.2 Panels. There shall be an annunciator panel in the main lobby of a high rise building or in such other areas approved by the chief as an emergency control center.

9306.5 Automatic sprinklers. Where an automatic sprinkler system has been installed for fire protection, the water flow alarm shall be connected to the building fire alarm.

Exception: Where automatic smoke detectors are installed in the area and zoned, a single water flow alarm may be used

9306.6 Elevator shafts. For purposes of Section 9306, wiring for fire alarm and fire detection systems may be installed in elevator shafts, provided that:

1. Such wiring shall not interfere with the safe operation of the elevator.
2. Such wiring shall be enclosed within metal conduit and all junction boxes shall be located outside the shaft.

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3. All wiring work shall be done under applicable permit obtained from the Department of Construction and Land Use.

9306.7 Elevator recall. A fire alarm originating on a floor other than the main lobby floor shall cause all elevators to be returned to the main floor in accordance with Chapter 30 of the 1982 Seattle Building Code. Whenever new elevator controllers are installed, they shall meet provisions of the current Building and Elevator Codes. Newly installed controllers shall have the capability of selecting alternate recall floors.

Exception: Freight elevators with manually operated doors.

SECTION 9307
EMERGENCY POWER

9307.1 General. High-rise buildings not meeting the Building Code in effect at the time of the original adoption of this article shall have, as a minimum, emergency power as follows:

1. Stairway pressurization emergency power shall be provided by an on-site diesel engine generator set. Such power shall start automatically on fire alarm and the generator set shall have a two-hour fuel supply.
2. Exit signs and pathway illumination shall have emergency power by trickle charged storage batteries. Such batteries shall have a capacity to provide required illumination for 90 minutes.
3. Fire alarm emergency power shall be provided as required in Section 9306.

SECTION 9308
SIGN REQUIREMENTS

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9308.1 General. All signs in this section shall be approved by the chief and have graphic symbols where possible. In hotels, signs must have graphic symbols. Sign lettering shall follow Appendix I-C of the 1982 Seattle Fire Code.

A sign shall be posted on the room side of every hotel guest room indicating the relationship of that room to the exits and fire extinguishers, and giving basic information on what to do in the event of fire in the building.

9308.2 Stairs. Signs shall be provided on the stairway side of every stair door indicating the number of the stair, the floor that the door serves, the high-rise building re-entry points, and stair termination.

9308.3 Elevators. A sign shall be posted in every elevator lobby above each call switch noting that the elevators will be recalled to the building lobby on fire alarm. This sign shall warn persons not to use the elevator in the event of fire and direct them to use the stairway.

Where exit signs are not clearly visible from the elevator lobby, signs shall be installed to indicate the direction to stair and fire escape exits.

9308.4 Emergency illumination. Emergency illumination shall be provided at the elevator lobby sign location.

9308.5 Exit identification. "NOT AN EXIT" signs shall be installed at all doorways, passageways, or stairways which are not exits, exit accesses or exit discharges, and which may be mistaken for an exit. A sign indicating the use of the doorway, passageway, or stairway, such

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as "to basement," "storeroom," or "linen closet," is permitted in lieu of the "NOT AN EXIT" sign.

SECTION 9309

EMERGENCY PREPAREDNESS

9309.1 Emergency plan. Owners of high-rise buildings shall prepare an emergency operations plan in accordance with Section 403 of the 1982 Seattle Building Code. In addition to the requirements of Section 403 of the 1982 Seattle Building Code, the emergency operations plan shall specify the duties during a fire emergency of the building management and staff, the building fire safety directors and floor wardens as identified in Section 9309.2.

9309.2 Building staff training. Owners of high-rise buildings shall designate from existing staff a building fire safety director who shall be responsible for the operation of the building fire protection equipment. Owners of high-rise buildings and/or tenants employing over 100 persons shall designate a floor warden for each floor to be responsible for evacuating the people on their respective floor in emergencies. The names and work locations of the director and the floor wardens shall be maintained on a roster contained in the building emergency operations plan.

Exceptions:

1. Residential condominiums and apartment occupancies not employing staff.
2. Office and retail occupancies after normal business hours.

NOTE: In residential buildings employing staff, where there are not enough staff to appoint a floor warden for each floor, wardens shall be appointed to the fire floor, the floor above and as many additional floors as possible. In buildings where only one staff person is available, that person will be the Fire Safety Director.

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9309.3 Fire drills. The staff of high-rise buildings shall conduct, and the occupants thereof shall participate in, fire drills on a regular basis as established in Chapter 4 of this code.

Section 420. Subsection B103.1 of the 2003 International Fire Code is amended as follows:

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

Section 421. Subsection B103.2 of the 2003 International Fire Code is amended as follows:

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

Section 422. Subsection B105.1 of the 2003 International Fire Code is amended as follows:

B105.1 One- and two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m 2) shall be 1,000 gallons per minute (3785.4 L/min). Fire flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5 m 2) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow ((~~of 50 percent, as approved,~~)) is allowed when the building is provided with an approved automatic sprinkler system when approved by the fire code official.

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Section 423. Subsection B105.2 of the 2003 International Fire Code is amended as follows:

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,~~)) is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 ((~~or 903.3.1.2~~)) of the *International Fire Code* when approved by the fire code official. ((~~Where buildings are also of Type I or II construction and are a light hazard occupancy as defined by NFPA 13, the reduction may be up to 75 percent.~~)) The resulting fire flow shall not be less than 1,500 gallons per minute (5678 l/min) for the prescribed duration as specified in Table B 105.1.

Section 424. Subsection D101.1 of the 2003 International Fire Code is amended as follows:

D101.1 Scope. Fire apparatus access roads other than public streets shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*.

Section 425. Subsection D102.1 of the 2003 International Fire Code is amended as follows:

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed, substantially altered, or moved into or within the jurisdiction shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus ((~~weighing at least 75,000 pounds (34 050 kg)~~)). See AASHTO Highway Standard 20.

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Section 426. Section D103.1 of the 2003 International Fire Code is amended as follows:

SECTION D103

MINIMUM SPECIFICATIONS

((~~**D103.1 Access road width with a hydrant.** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). See Figure D103.1.~~))

D103.1((~~2~~)) Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire code official((~~chief~~)).

D103.2((~~3~~)) Turning radius. The minimum turning radius shall be determined by the fire code official.

D103.3((4)) Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

D103.4((~~5~~)) Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).

   Exception: Access roads serving not more than two Group R3 or Group U occupancies shall have an unobstructed gate width of not less than 12 feet (3658 mm).

2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.

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4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.

5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.

6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools.

7. Locking device specifications shall be submitted for approval by the fire code official.

Exception: Bollards are an approved alternate provided they can be readily removed by one person, and they shall not be locked with a padlock or chain unless they are capable of being opened by means of a forcible entry tool, or, approved locking device.

D103.5((6)) Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.5((6)).1 or D103.5((6)).2.

D103.5((6)).1 Roads 12((θ)) to 26 feet in width. Fire apparatus access roads 12((θ)) to 26 feet wide (((~~6096~~))3658 to 7925 mm) shall be posted on both sides as a fire lane.

D103.5((6)).2 Roads more than 26 feet in width. Fire apparatus access roads more than 26 feet wide (7925 mm) to 32 feet wide (9754 mm) shall be posted on one side of the road as a fire lane.

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Section 427. Figure D103.1 "MINIMUM CLEARANCE AROUND A FIRE HYDRANT" of the 2003 International Fire Code is hereby repealed.

Section 428. Section D104 of the 2003 International Fire Code is amended as follows:

SECTION D104

COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

((~~**D104.1 Buildings exceeding three stories or 30 feet in height.** Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall have at least three means of fire apparatus access for each structure.~~))

D104.1((~~2~~)) Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m 2) shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m 2) that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

D104.2((~~3~~)) Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Section 429. Subsection D105.1 of the 2003 International Fire Code is amended as follows:

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D105.1 Where required. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

Exception: Projects that are equipped throughout with approved automatic sprinkler systems.

Section 430. Subsection 1.4.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

1.4.1 Stationary Installations.

Plans for stationary installations utilizing storage containers of over ((~~2000~~)) 500-gal (((~~7.6~~))1.9 -m^3) individual water capacity, or with aggregate water capacity exceeding ((~~4000~~)) 1000 gal (((~~15.1~~)) 3.78 m^3), and all ((~~rooftop installations of ASME containers~~)) mounded or underground containers shall be submitted to the authority having jurisdiction by the person or company that either installs or contracts to have the containers installed before the installation is started. [See also 3.4.9.1(e).]

Section 431. Subsection 1.4.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

1.4.2 Temporary Installations. The authority having jurisdiction shall be notified of temporary (not to exceed six months) installations ((~~of the container sizes covered in 1.4.1~~)) before the installation is started.

Section 432. Subsection 2.2.5.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

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2.2.5.2 Vertical ASME containers of over 125-gal (0.5-m^3) water capacity and designed for permanent installation in stationary service shall be designed with steel supports that are designed to allow the container to be mounted on and fastened to concrete foundations or supports. Such steel supports shall be designed to make the container self-supporting without guy wires and to withstand the wind and seismic (earthquake) forces anticipated at the site. The provisions of 2.2.2.3 shall apply.

The steel supports shall be protected against fire exposure with a material having a fire resistance rating of at least 2 hours. See Seattle Fire Code Chapter 45, ASTM Standard E1529 for the performance requirements for fire-resistive assemblies.

((~~Exception: Continuous steel skirts having only one opening of 18 in. (457 m) or less in diameter shall have 2-hour fire protection applied to the outside of the skirt.~~))

Section 433. Subsection 3.2.3.1* of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.3.1* Liquid shall be transferred into containers, including containers mounted on vehicles, only outdoors or in structures specially designed for the purpose.

(a) The transfer of liquid into containers mounted on vehicles shall not take place within a building but shall be permitted to take place under a weather shelter or canopy (see 3.9.3.2)

(b) Structures housing transfer operations or converted for such use after December 31, 1972, shall comply with Chapter 7

(c) The transfer of liquid into containers on the roofs of structures shall be ((~~permitted,~~)) prohibited.((~~provided that the installation conforms to the requirements contained in 3.2.10 and 3.4.9~~))

(d) The transfer hose shall not be routed in or through any building except those specified in 3.2.3.1(b)

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Section 434. Subsection 3.2.6.3 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.6.3 Where single containers complying with Table 2.2.5.1 are installed ((~~in isolated locations~~)) with ~~nonfireproofed~~)) steel supports resting on concrete pads or footings and the outside bottom of the container shell is ((~~not~~)) more than ((~~5 ft (1.5 m)~~)) 24 inches above the ((~~ground level~~))-foundation, the ((~~approval of the authority having jurisdiction shall be obtained.~~))steel supports shall be protected against fire exposure with a material having a fire resistance rating of at least 2 hours. See Seattle Fire Code Chapter 45, ASTM Standard E1529 for the performance requirements for fire-resistive assemblies.

Section 435. Subsection 3.2.7.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.7.2 Steel supports shall be protected against fire exposure with a material that has a fire resistance rating of at least 2 hours.

((~~**Exception:** Continuous steel skirts that have only one opening that is 18 in. (457 mm) or less in diameter shall have fire protection applied to the outside of the skirts.~~))

Section 436. Subsection 3.2.10 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.2.10 Installation of Containers on Roofs of Buildings.

3.2.10.1 Installation of containers on roofs of buildings including parking garages shall be prohibited.((~~, unless approved by the authority having jurisdiction and the fire department.~~))

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((~~**3.2.10.2** Where the authority having jurisdiction and the fire department have approved an installation of a container, it shall comply with the following:~~))

(((~~(a) The building shall be of Type I, 443 or 332, or Type II, 222 construction as specified in NFPA 220, Standard on Types of Building Construction.~~

~~(b) LP-Gas containers installed on roofs shall be 2000 gal water capacity or less. The aggregate water capacity of LP-Gas containers installed on the roof or terrace of one building shall not exceed 4000 gal.~~

~~Exception: Additional installations shall be located at least 50 ft (15.2 m) apart.~~

~~(c) An ASME container installed on the roof of a building shall always be filled by two operators, one at the controls of the vehicle supplying LP-Gas and another at the controls of the container.~~

~~(d) Containers shall be installed in external locations only. Where a fill line to the container is required, it shall be located entirely outside the building. The fill connection shall be located entirely outside the building. The fill connection shall be located at least 8 ft (2.4 m) above ground level.~~

~~(e) Containers shall be installed on a level location.~~

~~(f) The container shall be secured to the building structure. The support of the container shall be designed to the same seismic criteria as the building.~~

~~(g) The roof on which the container is located shall be able to support the weight of the container filled with water, with the safety margins required by local codes.~~

~~(h) Containers shall be located in areas where there is free air circulation, at least 10 ft (3.0 m) from building openings (such as windows and doors), and at least 20 ft (6.1 m) from air intakes of air-conditioning and ventilating systems.~~

~~(i) Location shall permit access to all valves and controls and shall have enough area to permit the required maintenance.~~

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~~(j) If the installation requires the use of more than one container, the distances between containers of Table 3.2.2.2 shall apply.~~

~~(k) If the container location is higher than 23 ft (7 m) from the ground, or the filling hose cannot be observed by the operators in its entire length, the container shall have a filling line constructed to withstand liquid transfer, and it shall have the following appurtenances: filling valve with back check valve, cap, two control valves, hydrostatic relief, venting line. The liquid and vapor fill connections shall be conspicuously marked or labeled.~~

~~(l) A fire safety analysis shall be conducted in accordance with 3.10.2.2.~~))

Section 437. Subsection 3.4.1.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.1.1 This section shall apply to the installation of LP-Gas systems in buildings or structures. These systems include those utilizing cylinders inside of or on the roofs or exterior balconies of buildings and those in which the liquid is piped from outside containers into buildings or onto the roof. Cylinders in use shall mean connected for use. These systems shall be permitted in accordance with 3.4.1 and 3.4.2.

(a) The use of cylinders indoors shall be only for the purposes specified in 3.4.3 through 3.4.8. Such use shall be limited to those conditions where operational requirements make use of cylinders necessary and location outside is impractical.

(((~~(b) Installations using cylinders on roofs shall be as specified in 3.4.9.1. Such use shall be limited to those conditions where operational requirements make use of cylinders necessary and location other than on roofs of buildings or structures is impractical.~~))

(((~~(c)~~)))(b) Installations using cylinders on exterior balconies shall be as specified in 3.4.9.2.

(((~~(d)~~)))(c) Liquid LP-Gas shall be piped into buildings or structures only for the purposes specified in 3.2.13(c).

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Section 438. Subsection 3.4.2.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.2.6 Where cylinders are located on a floor((~~, roof,~~)) or balcony, cylinders shall be secured to prevent falling over the edge.

Section 439. Subsection 3.4.3.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.3.6 If heaters are connected to cylinders manifolded together for use in an unpartitioned area on the same floor, the total water capacity of cylinders manifolded together serving any one heater shall not be greater than 735 lb (333 kg) [nominal 300 lb (136 kg) LP-Gas capacity], and, if there is more than one such manifold, it shall be separated from any other by at least 20 ft (6.1 m).

Maximum individual LP-gas cylinder capacities and aggregate quantities of LP-gas allowed within buildings undergoing construction or renovation or used for temporary heating shall be in accordance with the Seattle Fire Code Section 3803.2.1.2.

Section 440. Subsection 3.4.5.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.5.1 Cylinders used in buildings housing industrial occupancies for processing, research, or experimental purposes shall comply with the following:

(a) Cylinders, equipment, and piping used shall comply with 3.4.2.

(b) If cylinders are manifolded together, the total water capacity of the connected cylinders shall be not more than 735 lb (333 kg) [nominal 300 lb (136 kg) LP-Gas capacity]. If there is more than one such manifold in a room, it shall be separated from any other by at least 20 ft (6.1 m).

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(c) The amount of LP-Gas in cylinders for research and experimental use in the building shall be limited to the smallest practical quantity and shall not exceed the quantity limits set forth in Seattle Fire Code Section 3803.2.1.3.

Section 441. Subsection 3.4.6 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.6 Buildings Housing Educational and Institutional Occupancies.

The use of cylinders in classrooms shall be prohibited. Where cylinders are used in ((~~buildings housing educational and institutional~~)) Group B, E and I laboratory occupancies for research and experimental purposes, the following shall apply:

3.4.6.1 The maximum water capacity of individual cylinders used shall be 50 lb (23 kg) [nominal 20 lb (9.1 kg) LP-Gas capacity] if used in ~~educational~~ Group B and E occupancies and 12 lb (5.4 kg) [nominal 5 lb (2 kg) LP-Gas capacity] if used in Group I ((~~institutional~~)) occupancies.

* * *

Section 442. Subsection 3.4.9.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.4.9.1 ((~~Cylinders installed permanently on roofs of buildings of fire-resistant construction or noncombustible construction having essentially noncombustible contents, or of other construction or contents that are protected with automatic sprinklers (see NFPA 220, Standard on Types of Building Construction) shall be in accordance with the following:~~

~~(a) The total water capacity of cylinders connected to any one manifold shall be not greater than 980 lb (445 kg) [nominal 400 lb (181 kg) LP-Gas capacity]. If more than one manifold is located on the roof, it shall be separated from any other by at least 50 ft (15 m).~~

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~~(b) Cylinders shall be located in areas where there is free air circulation, at least 10 ft (3.0 m) from building openings (such as windows and doors), and at least 20 ft (6.1 m) from air intakes of air conditioning and ventilating systems.~~

~~(c) Cylinders shall not be located on roofs that are entirely enclosed by parapets more than 18 in. (457 mm) high unless the parapets are breached with low-level ventilation openings no more than 20 ft (6.1 m) apart or all openings communicating with the interior of the building are at or above the top of the parapets.~~

~~(d) Piping shall be in accordance with 3.4.2.3. Hose shall not be used for connection to cylinders.~~

~~(e) The fire department shall be advised of each such installation.~~))

LP-gas containers are prohibited on the roofs of buildings including parking garages.

Exceptions: 1. Temporary installations allowed in accordance with Section 3.4.

2. A single LP-gas container having an individual water capacity not exceeding 48 lbs. (nominal 20 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of any occupancy except Group R-1, R-2, R-4 and LC Occupancies provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

3. A single LP-gas container having an individual water capacity not exceeding 2.7 lbs. (nominal 1.2 lbs. LP-gas) connected to a LP-gas grill located on a noncombustible roof of Group R-1, R-2, R-4 or LC Occupancies.

Section 443. Subsection 3.10.2.2* of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

3.10.2.2* Fire protection shall be provided for installations of ASME containers with an aggregate water capacity of more than 4000 gal (15.1 m3) ((~~and of ASME containers on roofs in accordance with 3.2.10~~)). The mode of such protection shall be determined through a written

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fire safety analysis for new installations and, for existing installations, by 3 years from the effective date of this code.

Section 444. Subsection 5.4.1.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2001 edition, is amended as follows:

5.4.1.1 Cylinders shall be located ((~~A~~))at least ((~~5 ft (1.5 m)~~)) 20 feet (6 m) from any doorway or building opening ((~~in~~)) outside of a building frequented by the public, 20 feet (6 m) from any motor vehicle fuel dispenser and 10 feet (3 m) from any combustible material. ((~~where occupants have at least two means of egress as defined by NFPA 101, Life Safety Code. For buildings, or sections of buildings, having only one means of egress, at least 10 ft (3 m) from the doorway or opening.~~))

Section 445. Subsection 4.2.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

4.2.1 The goal of this standard is to provide an environment for occupants of fixed guideway and passenger rail system elements that is safe from fire and similar to a practical extent based on the following measures:

(1) Protection of occupants not intimate with the initial fire development

(2) Maximize the survivability of occupants intimate with the initial fire development

(3) To provide safety to fire fighters and emergency responders during emergency operations.

Section 446. A new subsection 5.1.2.1.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

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5.1.2.1.1 Fixed guideway transit and passenger rail stations shall be classified as Group A, Division 3 occupancies in accordance with the 2003 Seattle Building Code and 2003 Seattle Fire Code.

Section 447. Subsection 5.2.2 of NFPA130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.2.2 Safeguards During Construction. During the course of construction or major modification of any structure, provisions of ((~~NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*~~)) Chapter 14 of the 2003 Seattle Fire Code and Chapter 33 of the Seattle Building Code shall apply.

Section 448. A new subsection 5.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.3.1 Smoke control system. A smoke control system shall be provided in underground fixed guideway transit and passenger rail stations in accordance with Section 909 of the 2003 Seattle Building Code. Smoke control shall restrict movement of smoke to the general area of fire origin and non occupied exhaust areas and maintain means of egress in a usable condition.

Section 449. Subsection 5.4.9 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.4.9((~~Power Supply for Emergency Ventilation Fans. See Chapter 7.~~))Emergency Power.

5.4.9.1 Underground fixed guideway transit and passenger rail stations shall be provided with an emergency power system complying with Section 2702 of the 2003 Seattle Building Code for emergency power loads specified in 5.4.9.2.

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5.4.9.2 The following loads are classified as emergency power loads:

1. Emergency voice/alarm communications systems.
2. Fire alarm systems.
3. Automatic fire detection systems.
4. Elevator car lighting.
5. Means of egress and exit sign illumination as required by Chapter 10 of the 2003 Seattle Building Code.
6. Smoke control systems.
7. Ventilation and automatic fire detection equipment for smokeproof enclosures.
8. Fire pumps.
9. Emergency power shall be provided for a selected elevator in each bank in accordance with Section 3016.7. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system—all elevators that respond to a single call button constitute a bank of elevators. All elevators shall be transferable to emergency power.

   Note: There is no limit on the number of cars that may be in a bank, but there may not be more than four cars within a common hoistway. See Section 3016.8 of the 2003 Seattle Building Code.

10. Emergency Ventilation Fans as required by Chapter 7.
11. Escalators where included in emergency egress capacity calculations
12. Lighting in Fire Command Center and associated mechanical equipment rooms.

Section 450. Subsection 5.5.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.1 General. The provisions for means of egress for a station shall comply with ((~~Chapter 7 and Chapter 12 of NFPA 101~~)) Chapter 10 of the 2003 Seattle Building Code, except as herein modified.

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* * *

Section 451. Subsection 5.5.2.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.2.2 The occupant load shall be based on whichever is greater:

(1) T((t))he calculated train load of trains simultaneously entering the station on all tracks in normal traffic direction during the peak 15 -minute period plus the simultaneous entraining load awaiting a train or;

(2) The number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2 of the 2003 Seattle Building Code.

Section 452. Subsection 5.5.2.4 of NFPA130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.2.4 The required egress capacity in stations shall be based on evacuation of the occupant load calculated in accordance with 5.5.2.7 and 5.5.2.8 or the number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2 of the 2003 Seattle Building Code, whichever is greater.

Section 453. Subsection 5.5.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.1 Platform Evacuation Time. There shall be sufficient egress capacity to evacuate the platform occupant load as defined in 5.5.2.8 from the station platform in 4 minutes or less, but in no case shall the required egress width be less than prescribed by Section 1005 of the 2003 Seattle Building Code.

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Section 454. Subsection 5.5.3.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.3.1 Platforms, Corridors, and Ramps of 4 Percent Slope or Less.

5.5.3.3.1.1 Exit corridors and ramps shall be a minimum of 1.73 m (5 ft 8 in.) wide.

5.5.3.3.1.2 In computing the capacity available, 304.8 mm (1 ft) shall be deducted at each side wall and 457.2 mm (1 ft 6 in.) at platform edges.

(a) Capacity shall be ((~~2.27 pim~~)). 2.08 pim

(b) Travel speed shall 61 m/min (200 fpm).

Section 455. Subsection 5.5.3.3.2.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.3.2.4 Capacities and travel speeds for stairs, stopped escalators, and ramps of over 4 percent slope shall be as follows:

(1) Up direction

(a) Capacity — ((~~0.0626 p/mm-min (1.59 pim)~~))1.31 pim (0.05 p/mm-min)

(b) Travel speed — ((~~15.24 m/min (50 fpm) (indicates vertical component of travel speed)~~)) 40 fpm (15.24 m/min)

(2) Down direction

(a) Capacity — ((~~0.0716 p/mm-min (1.82 pim)~~)) 1.41 pim (0.06 p/mm-min)

(b) Travel speed — ((~~18.3 m/min (60 fpm) (indicates vertical component of travel speed)~~)) 48 fpm (14.6 m/min)

Section 456. A new subsection 5.5.3.3.2.8 of NFPA 130 Standard for Fixed Guideway

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Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.3.2.8 Escalators in underground fixed guideway transit and passenger rail stations shall have a clear width of 32 inches (815 mm) minimum in accordance with the 2003 Seattle Building Code.

Exception: The clear width is not required in existing facilities undergoing alterations.

Section 457. A new subsection 5.5.3.5.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.5.3 Access to three or more exits shall be provided from a floor area where required by Section 1018.1 of the 2003 Seattle Building Code.

Section 458. A new subsection 5.5.3.5.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.5.3.5.4 Every required stairway serving floor levels more than 30 feet (9144 mm) below its level of exit discharge except those regularly used by passengers shall comply with the requirements for a smokeproof enclosure as provided in Section 1019.1.8 of the 2003 Seattle Building Code.

Section 459. Subsection 5.5.3.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.5.3.6 A common path of travel from the platform ends <u>to a point where a person has a choice of two paths of egress travel to two exits</u> shall not exceed 22.8m (75 ft) or one car length, whichever is greater.

Section 460. Subsection 5.6.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

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5.6.1 Stations shall be provided with a system of emergency lighting in accordance with ((~~NFPA 10,~~)) Section 1006 of the 2003 Seattle Building Code, except as otherwise noted herein.

Section 461. Subsection 5.7.3.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.7.3.1 An automatic sprinkler protection system shall be provided in all areas of enclosed fixed guideway transit and passenger rail stations ((~~used for concessions, in storage areas, in trash rooms, and in the steel truss area of all escalators and other similar areas with combustible loadings~~)), except trainways((~~.~~)), in accordance with the following:

1. The fire area exceeds 5,000 square feet (1115 m 2); or

2. The fire area has an occupant load of 100 or more.

* * *

Section 462. A new subsection 5.7.3.1.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

5.7.3.1.2 The highest level of exit discharge serving the underground portions of fixed guideway transit and passenger rail stations more than 30 feet (9144 mm) below the lowest level of exit discharge and all levels below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the 2003 Seattle Fire Code.

Section 463. Subsections 5.7.4.1 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are amended as follows:

5.7.4.1 Each underground transit station shall be equipped throughout with a Class I automatic wet or manual wet standpipe system.((~~with a standpipe system of either Class I or Class III type, as defined in NFPA 14.~~))

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5.7.4.1.1 ((~~Class of service shall be determined by the authority having jurisdiction. (SeeA.5.7.4.30)~~)) Each elevated transit station shall be equipped throughout with a Class I standpipe system where the highest platform or floor level is more than 20 feet above the lowest level of fire department access.

Section 464. Subsections 5.7.4.2 and 5.7.4.3 respectively of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are amended as follows:

5.7.4.2 ((~~The authority having jurisdiction shall be consulted as to location, spacing, and number of standpipe hose outlets and valves and shall determine the need for provision and type of hose~~)). Class I standpipe hose connections shall be provided in accordance with Section 905.4 of the 2003 Seattle Fire Code.

5.7.4.3* Fire department connections for fire department use in supplying the standpipe system shall be located ((~~as follows:~~)) in accordance with Seattle Fire Department Administrative Rule 9.03.04 *Automatic Sprinkler and Standpipe Systems.*

((~~1. within 30.5 m (100 ft)of vehicular access and~~

~~2. within operating distance of fire hydrants as determined by the local authority having jurisdiction~~)).

* * *

Section 465. Subsection 5.7.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

5.7.6* Fire Command Center. Underground transit stations shall be provided with a fire command center in accordance with NFPA 72 and Section 509 of the 2003 Seattle Fire Code.

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Section 466. Subsections 6.2.4.5, 6.2.4.5.1, 6.2.4.5.2, and 6.2.4.5.3 respectively of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, are hereby repealed.

Section 467. Subsection 6.2.7.2.4 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

6.2.7.2.4 Standpipe lines shall be ((~~a minimum~~)) sized in accordance with the following: ((~~of 101.6 mm (4 in) or sized by hydraulic calculations.~~))

(1) Standpipe lines shall be a minimum size of 152.4mm (6 in.).

(2) Standpipe lines exceeding 2,500 ft. in length between fire department connections shall be a minimum size of 203.2 mm (8 in.).

(3) Standpipe lines exceeding 15,000 ft. in length between fire department connections shall be a minimum size of 254.0 mm (10 in.).

* * *

Section 468. A new subsection 6.2.7.2.4.2 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.2.7.2.4.2 Four-way 2½ in. fire department connections shall be provided at all emergency access points.

Section 469. A new subsection 6.2.7.2.4.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.2.7.2.4.3 Standpipes shall be interconnected at all tunnel cross passageways and within the stations, with isolation valves provided for each interconnection.

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Section 470. Subsection 6.4.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

6.4.6 Egress for Passengers

6.4.6.1 The system shall incorporate a walk surface or other approved means for passengers to evacuate a train at any point along the trainway so that they can proceed to the nearest station or other point of safety.

6.4.6.2 System egress ((~~points~~)) walk surfaces shall be illuminated at a level of not less than 2.69 lx (0.25 ft-candles).

Section 471. A new subsection 6.4.7 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

6.4.7 Standpipe and Hose Systems. When the length of a fixed guideway transit or passenger rail system elevated trainway exceeds 122m (400 feet) a Class I fire standpipe system shall be provided in accordance with NFPA 14, *Standard for the Installation of Standpipe Hose Systems.*

6.4.7.1 Standpipes shall be permitted to be of the dry types with the approval of the authority having jurisdiction.

6.4.7.2 Standpipe systems shall be connected to an approved water supply capable of supplying the system demand for a minimum of 1 hour.

6.4.7.3 Acceptable water supplies shall include the following:

(a) Municipal or privately owned waterworks systems that have adequate pressure and flow rate and a level of integrity acceptable to the authority having jurisdiction.

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(b) Automatic or manually controlled fire pumps that are connected to an approved water source.

(c) Pressure-type or gravity-type storage tanks that are installed in accordance with NFPA 22, *Standard for Water Tanks for Private Fire Protection.*

Section 472. Subsection 8.2.3 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 473. Subsection 8.11 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 474. Subsection 9.21 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is amended as follows:

9.2.1 Water Supply. An adequate, reliable water supply shall be available for fire protection, including a sufficient number of properly located hydrants, in accordance with ((~~NFPA 24,*Standard for the Installation of Private Fire Service Mains and Their Appurtenances.*~~)) Section 508 of the 2003 Seattle Fire Code.

Section 475. A new subsection 10.12.6 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

10.12.6 Emergency shutoff of traction power shall be achieved by activation of remote manual-control devices, which, in turn, cause the operation of substation circuit breakers and associated trackway disconnect devices.

Section 476. A new subsection 10.12.7 of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is adopted to read as follows:

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10.12.7 Traction power disconnect devices shall allow immediate removal of power from power zones.

Section 477. Subsection A.6.2.4.5.3 of Annex A of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2003 edition, is hereby repealed.

Section 478. Subsection 9.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.1 Standpipe Systems.

9.1.1 Standpipe systems for road tunnels, bridges, depressed highways, elevated highways, roadways beneath air-right structures, and limited access highways shall be designed and installed ((~~as Class I systems~~)) in accordance with NFPA 14, *Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems* and Chapter 9 of this standard.

9.1.2 Standpipe lines shall be a minimum size of 203-mm (8-in.) and hydraulically designed to provide a minimum of 5760 L/min (1500 gpm) to any two outlets flowing simultaneously. The required flow rate for the standpipe system shall not be required to exceed 5760 L/min (1500 gpm). ((~~1920L/min (500 gpm).~~))

((~~**9.1.3** Standpipe systems shall be either wet or dry, depending on the climatic conditions, the fill times, the requirements of the authority having jurisdiction, or any combination thereof.~~))

9.1.4 Areas Subject to Freezing

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9.1.4.1 ((~~Where wet standpipes are required in areas subject to freezing conditions, the water shall be heated and circulated.~~)) Water shall be supplied to the standpipe system by the use of electrically actuated deluge valves installed in locations not subject to freezing, such as in underground vaults.

9.1.4.1.1 Access to the deluge valve vaults and manual actuation capability at the vaults shall be provided.

9.1.4.2 ((~~All piping and fittings that are exposed to freezing conditions shall be heat-traced and insulated.~~)) A deluge valve actuation switch shall be installed at each hose connection outlet location and protected from damage and weather in a box that can be opened without the use of tools or special knowledge, or with a standard hydrant wrench.

9.1.4.3 A means to indicate that the system is in a tripped condition such as a light beacon shall be provided.

9.1.5 ((~~Wet s~~)) Standpipe systems shall be provided with suitable interconnection and bypass valve arrangements to allow the isolation and repair of any segment without impairing the operation of the remainder of the system.

9.1.6* ((~~Dry s~~)) Standpipe systems shall be installed in a manner so that the water is delivered to all hose connections on the system in 10 minutes or less.

9.1.7 ((~~Dry s~~)) Standpipe systems shall have provisions for complete draining after use.

9.1.8 Combination air/relief vacuum valves shall be installed at each high point on the system.

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9.1.9 ((~~Dry s~~)) Standpipes shall be installed in a manner that provides accessibility for inspection and repair.

9.1.10 Standpipe systems shall be protected from damage by moving vehicles.

Section 479. Subsection 9.2 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.2 Water Supply.

9.2.1 ((~~Wet~~ s))Standpipe systems (((~~automatic or semiautomatic~~))) shall be connected to an approved water supply this is capable of supplying the system demand for a minimum of 1 hour.

((~~9.2.2 Dry standpipe systems shall have an approved water supply that is capable of supplying the system demand for a minimum of 1 hour.~~))

9.2.2((~~3~~)) Acceptable water supplies shall include one or more of the following:

(1) Municipal or privately owned waterworks systems that have adequate pressure and flow rate and a level of integrity acceptable to the authority having jurisdiction

(2) Automatic or manually controlled fire pumps that are connected to an approved water source

(3) Pressure-type or gravity-type storage tanks that are installed in accordance with NFPA 22, *Standard for Water Tanks for Private Fire Protection*

Section 480. Subsection 9.3.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.3.1 Fire department connections shall be of the threaded ((~~two-way or three~~)) 65-mm (2½-in.)

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four-way type. ((~~or shall consist of one 100-mm (4-in.) quick-connect coupling that is accessible to a fire department pumper.~~))

Section 481. Subsection 9.3.2 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.3.2 ((~~Each independent~~)) The standpipe system shall have a ((~~minimum of two~~)) fire department connection((~~s that are remotely located from each other~~)) installed at each deluge valve vault or at other approved locations.

Section 482. A new subsection 9.3.2.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.3.2.1 Wherever possible, fire department connection locations shall be coordinated with emergency access and response locations.

Section 483. Subsection 9.3.4 of the National Fire Protection Association Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is hereby repealed.

Section 484. Subsection 9.4 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

9.4 Hose Connections

9.4.1 ((~~Hose connections shall be spaced so that no location on the protected roadway is more than 45 m (150 ft) from the hose connection.~~)) An approved valve shall be provided for each standpipe outlet, easily operable from the roadway.

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9.4.2 ((~~Hose connection spacing shall not exceed 85 m (275 ft).~~)) The spacing between hose connection outlets on elevated roadways shall not exceed 153 m (500 ft.).

9.4.2.1 Where roadways are provided with median dividers and/or four or more traffic lanes, hose connection outlets shall be provided on each side of the elevated roadway at the required spacing and be arranged on an alternating basis; or may be installed in the median dividers at the required spacing.

9.4.3 ((~~Hose connections shall be located so that they are conspicuous and convenient but still reasonably protected from damage by errant vehicles or vandals.~~)) Hose connection outlets shall be oriented parallel to the roadway and face in the direction of oncoming traffic where installed along the guardrail or edge barrier.

9.4.3.1 Where hose connection outlets are installed in median dividers, dual outlets shall be required, facing in both directions of travel.

9.4.3.2 Hose connection outlets shall be positioned such that the centerline of each outlet is installed not more than 406-mm (16-in.) horizontally from the inside edge of the top and not less than 203-mm (8-in.) above the top of the guardrail or edge barrier, and not more than 1371-mm (54-in.) above the roadway.

Exception: When outlets are installed in median dividers that are more than 812-mm (32-in.) wide, the 406-mm (16-in.) from the inside edge requirement may be exceeded, and the outlets centered in the median divider.

9.4.4 Hose connections shall have ((~~65 mm (2 ½ in.)~~))100-mm (4-in.) outlets with external

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threads in accordance with City of Seattle Standard Plan No. 310a. ((~~NFPA 1963, *Standard for Fire Hose Connections*, and the authority having jurisdiction.~~))

9.4.5 Hose connections shall be equipped with caps that are removable with a standard hydrant wrench to protect hose threads.

9.4.5.1 Hose connection caps shall have a 3.2-mm (1/8-in.) predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal.

Section 485. A new subsection 9.6.3.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.6.3.1 The location of the deluge valve actuation switch installed at each hose connection shall be readily visible and have appropriate signage.

Section 486. A new subsection 9.7 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

9.7 Maintenance and Confidence Testing

9.7.1 Standpipe systems shall be inspected and tested at least annually.

9.7.2 Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated, and are separate from fire department inspections.

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9.7.3 The person, firm or corporation performing such work shall have a Type STP-1 certificate from the fire department. See Administrative Rules 9.01.04 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and Administrative Rule 9.02.04 *Confidence Test Requirements for Life Safety Systems*.

Section 487. Subsection 13.1 of NFPA 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is amended as follows:

13.1* General. This chapter shall apply to the transportation of hazardous materials through road tunnels as follows:

(1)Where tunnel length equals or exceeds 240 m (800 ft) and where the maximum distance from any point within the tunnel to an area of safety exceeds 120 m (400 ft).

(2)Where tunnel length equals or exceeds 300 m (1000 ft).

This chapter shall not apply to:

(1) The existing Mount Baker Tunnel (Interstate-90) and the Washington State Convention and Trade Center lid (Interstate-5) during those periods when the foam-water fire protection system(s) are fully functional and in-service.

(2) Fuel contained in the fuel system of the transporting vehicle, or in the fuel systems of vehicles and equipment being towed or carried.

13.1.1 ((~~The facility operating agency shall adopt rules and regulations that apply to the transportation of hazardous materials.~~)) Flames used for heating vehicles or loads shall be extinguished before the vehicle enters the road tunnel or its approaches.

13.1.2 ((~~A program shall be maintained for enforcing such regulations.~~)) The following classes

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of hazardous materials as defined by the U.S. Department of Transportation, whether in tank vehicles or containers, are prohibited from being transported through road tunnels:

(1) Class 1 explosives, division 1.1, 1.2, and 1.3;

(2) Class 2, division 2.3 poisonous gas;

(3) Class 4, division 4.3 dangerous when wet materials((;))

(4) Class 6, division 6.1 poisonous materials marked PG I (Inhalation Hazard), or PG III (Stow Away From Foodstuffs),

13.1.3 ((~~In developing such regulations, the following shall be addressed:~~

~~(1) Availability of a suitable alternative route(s) that meets federal requirements as prescribed in Department of Transportation, Title 49, *Code of Federal Regulations*, Part 177.825, "Routing and Training Requirements for Class 7 (Radioactive) Materials," and Department of Transportation, Title 49, *Code of Federal Regulations*, Part 397, Subpart C, "Routing of Non-Radioactive Hazardous Materials"~~

~~(2) Department of Transportation, Title 49, *Code of Federal Regulations*, Subtitle B, Parts 100 to 199~~

~~(3) Fire and accident experience of facilities similar to the facility for which rules and regulations are being adopted~~

~~(4) Previous fire and accident experience on the facility in question and adjacent roads; or, in the case of a new facility, previous fire and accident experience on roads in the area~~

~~(5) Anticipated traffic volumes in peak and off-peak periods~~

~~(6) Need for inspection of vehicles and cargo and the availability of an approved place to conduct inspections with a minimum of traffic interference~~

~~(7) Need and desirability of escort service with due consideration of the extent to which it could disrupt the orderly flow of traffic and create additional hazards~~

~~(8) Plan developed by an operating agency in a dense urban area, as referenced in *Hazardous*~~

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~~*Material Transportation Regulations at Tunnel and Bridge Facilities.* The suitability of such a plan for a given facility shall also be considered.~~))

Tank vehicles which are empty, or which have a residue, or vehicles transporting empty containers are prohibited from entering road tunnels if they previously transported a prohibited hazardous material as set forth in 49 CFR, with the following exceptions:

(1) Tank vehicles or containers that have been sufficiently cleaned of residue and purged of vapor to remove any potential hazard;

(2) Tank vehicles or containers that have been reloaded with a material not classified as a hazardous material;

13.1.4 Tank vehicles used to transport the following hazardous materials, even if empty, are prohibited from entering road tunnels.

- Class 3 flammable or combustible liquids
- Oxygen (Class 2, division 2.2)
- LPG (Class 2, division 2.1)

13.1.5 Vehicles transporting hazardous materials are restricted in road tunnels in accordance with the following:

(1)Class 2, Division 2.1 flammable gas quantities shall not exceed an aggregate of 120 gallons per vehicle and individual container capacities shall not exceed 6 gallons except for LPG. LPG quantities shall not exceed an aggregate of 120 pounds LPG capacity per vehicle and individual LPG containers shall not exceed 60 pounds LPG capacity, (141 pounds water capacity);

(2)Class 3, flammable liquid, having a flash point below 100° F quantities shall not exceed an aggregate of 120 gallons per vehicle and individual container capacities shall not exceed 6 gallons;

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(3)Class 3, combustible liquid, formaldehyde solutions shall have individual container capacities not exceeding 100 gallons;

(4)Class 4, division 4.1 flammable solid aggregate quantities shall not exceed 900 pounds per vehicle;

(5)Class 4, division 4.2 spontaneously combustible material aggregate quantities shall not exceed 900 pounds per vehicle;

(6)Class 5, division 5.1 oxidizers, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 6 gallons;

(7)Class 5, division 5.2 organic peroxides, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 6 gallons;

(8)Class 7, radioactive materials, transported in containers shall not exceed an aggregate quantity of 300 curies and the gross weight shall not exceed 500 pounds per vehicle and permission shall be obtained from the AHJ prior to entering a road tunnel;

(9)Class 8, corrosive materials, transported in containers shall not exceed an aggregate quantity of 120 gallons or 900 pounds per vehicle and individual container capacities shall not exceed 60 gallons;

(10)Class 9, miscellaneous hazardous materials, except oils, N.O.S., with a flash-point not less than 93°C/200°F transported in containers shall not exceed an aggregate quantity of 250 gallons or 2000 pounds per vehicle and individual container capacities shall not exceed 60 gallons containers.

13.1.6 Alternative-fuel vehicles powered by liquefied petroleum gas (LPG), liquefied natural gas (LNG) or compressed natural gas (CNG) shall be permitted if the:

(1) Vehicle has a dedicated alternative-fuel system installed by the manufacturer of the

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vehicle

(2) Vehicle has a fuel system which has been properly converted to an alternative fuel system.

(3) Vehicle alternative-fuel system conforms to applicable industry standards, including:

(a) NFPA 52 - Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, which is incorporated by reference; or

(b) NFPA 58 - Standard for the Storage and Handling of Liquefied Petroleum Gases (LPG), which is incorporated by reference.

(4) Vehicle alternative-fuel system conforms to applicable federal regulations.

(5) Fuel capacity of the vehicle does not exceed 300 pounds water capacity.

13.1.6.1 Alternative-fuel vehicles shall display all markings and symbols required by law to identify the alternative-fuel system.

Section 488. A new subsection A.13.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A.13.1 Hazardous Material. A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation for the United States Department of Transportation (U.S.D.O.T.) to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

Section 489. A new TABLE A.13.1.2 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

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TABLE A.13.1.2

The following classes of hazardous materials are defined in the United States Department of Transportation Regulations, 49 CFR 173, which is incorporated by reference:

Name of Class or Division	Class Number	Division Number (if any)	49 CFR Reference for Definitions
Explosives (with a mass explosion hazard)	1	1.1	173.50
Explosives (with a projection hazard)	1	1.2	173.50
Explosives (with predominantly a fire hazard)	1	1.3	173.50
Explosives (with no significant blast hazard)	1	1.4	173.50
Very insensitive explosives; blasting agents	1	1.5	173.50
Extremely insensitive detonating substances	1	1.6	173.50
Flammable gas	2	2.1	173.115
Nonflammable compressed gas	2	2.2	173.115
Poisonous gas	2	2.3	173.115
Flammable and combustible liquid	3	---	173.120

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Flammable solid	4	4.1	173.124
Spontaneously combustible materials	4	4.2	173.124
Dangerous when wet material	4	4.3	173.124
Oxidizers	5	5.1	173.127
Organic peroxides	5	5.2	173.128
Poisonous materials	6	6.1	173.132
Infectious substances (Etiological agents)	6	6.2	173.134
Radioactive materials	7	---	173.403
Corrosive materials	8	---	173.136
Miscellaneous hazardous materials	9	---	173.140
Other regulated materials: ORM-D	None	---	173.144

Section 490. A new subsection A.13.1.3 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A13.1.3 *See Table A.13.1.2*

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Section 491. A new subsection A.13.1.5 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2001 edition, is adopted to read as follows:

A13.1.5 See Table A.13.1.2

Section 492. This ordinance shall take effect and be in force thirty (30) days from and after its approval by the Mayor, but if not approved and returned by the Mayor within ten (10) days after presentation, it shall take effect as provided by Municipal Code Section 1.04.020.

Passed by the City Council the ____ day of _____, 2004, and signed by me in open session in authentication of its passage this _____ day of _____, 2004.

_____

President _____of the City Council

Approved by me this ____ day of _____, 2004.

_____

Gregory J. Nickels, Mayor

Filed by me this ____ day of _____, 2004.

_____

City Clerk

(Seal)

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STATE OF WASHINGTON – KING COUNTY

--ss.

175808 No. ORDINANCE IN FULL

CITY OF SEATTLE,CLERKS OFFICE

Affidavit of Publication

The undersigned, on oath states that he is an authorized representative of The Daily Journal of Commerce, a daily newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a daily newspaper in Seattle, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. The Daily Journal of Commerce was on the 12th day of June, 1941, approved as a legal newspaper by the Superior Court of King County.

The notice in the exact form annexed, was published in regular issues of The Daily Journal of Commerce, which was regularly distributed to its subscribers during the below stated period. The annexed notice, a

CT:121524 ORD IN FULL

was published on

8/17/2004

JENNIFER A. PATTEE NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES OCT. 24, 2007

Affidavit of Publication

Subscribed and sworn to before me on

8/17/2004

Notary public for the State of Washington,
residing in Seattle

guidance only and shall not [illegible]

* * *

duties authorized by this code, shall be subject to [illegible]

Seattle Fire Code.

City of Seattle

ORDINANCE 121524

AN ORDINANCE relating to the Seattle Fire Code; adopting the 2003 International Fire Code with some exceptions; amending and adding various provisions to that Fire Code; repealing Section 22.600.040 and amending Section 22.600.020 of the Seattle Municipal Code in connection therewith; all as regulated and allowed by the State Building Code Act, Chapter 19.27 of the Revised Code of Washington.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.600.020 of the Seattle Municipal Code adopting the 1997 the Uniform Fire Code, 1997 Edition with Appendices I-C, II-A, II-B, II-C, II-D, II-E, II-F, II-I, II-J, III-A, III-B, III-C, IV-A, IV-B, V-A, VI-A, VI-B, VI-C, VI-E, VI-F, VI-G, VI-H and VI-I thereto, and the Uniform Fire Code Standards, 1997 Edition, (Ordinance 119124 as amended by Ordinances 119125 and 120066) is hereby repealed, and a new Section 22.600.020 is adopted as follows:

22.600.020 Adoption of the International Fire Code

The following is hereby adopted and by this reference made a part of this subtitle: 2003 International Fire Code with some exceptions, with Appendixes B, D, E, F and G, as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in C.F.306763.

The Seattle Fire Code shall consist of the 2003 International Fire Code with some exceptions, together with the amendments and additions thereto adopted.

Wherever in this ordinance there is a conflict between metric units of measurement and English units, the English units shall govern.

Section 2. SMC 22.600.040 is hereby repealed

Section 3. Subsection 101.1 of the 2003 International Fire Code is amended as follows:

101.1 Title. These regulations shall be known as the *Seattle Fire Code*((~~of [NAME OF JURISDICTION]~~)), hereinafter referred to as "this code."

Section 4. Subsection 101.2 of the 2003 International Fire Code is amended as follows:

101.2 Scope. This code establishes regulations affecting or relating to structures, processes, premises, motor vehicles, marine vessels and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.

Text marked "Point of Information" or "Code Interpretation" in the Seattle Fire Code is for guidance only and shall not have the force of law.

* * *

[illegible] of the 2003 International Fire Code is hereby repealed, and

employees or agents, for any injury or damage resulting fro[m] occupier of premises, buildings or structures, or motor vehi[cle] with this code, or for any injury or damage caused by any a[ct] by its officers, employees or agents in the course of implem[enting]

Any lawsuit brought against the City, or its officers omissions in the implementation or enforcement of this or[dinance] or regulations implemented through the enforcement of t[his] enforcement agency, shall be defended by the City until fi[nal] any judgment or settlement resulting therefrom shall be s[atisfied] defense and assumption of judgment or settlement cost[s] provided by Chapter 4.64 and other relevant sections of [the]

Limited public funds are available for the implem[entation] The issuance of permits, reviews of permit applications u[nder] this code are spot checks designed to encourage compli[ance] representations, guarantees or assurances that permits w[ere] of permits, comply with any applicable codes.

Section 13. Subsection 103.4 of the 2003 Interna[tional]

Section 14. Subsection 104.3 of the 2003 Interna[tional] and a new subsection 104.3 is adopted to read as follows:

104.3 Right of entry. With the consent of the owner or a vehicle, or marine vessel or pursuant to a lawfully issued enter any building, premises, motor vehicle, or marine ve[ssel] or to perform the duties authorized by this code. If entry recourse to every remedy provided by law to secure entry.

Section 15. Subsection 104.6.2 of the 2003 Inte[rnational] follows:

104.6.2 Inspections. The fire code official shall keep a ~~including notices~~)) violations, correction letters and oth[er] disposition of each. The responsible party shall receive and orders issued.

Section 16. Subsection 104.11.2 of the 2003 In[ternational] follows:

104.11.2 Obstructing operations. No person shall in department in connection with extinguishment, ((or)) actions relative to other emergencies, or knowingly di[sobey] chief or officer of the fire department in charge of the lawful order of a police officer assisting the fire depa[rtment]

Any person who knowingly obstructs the oper[ation] with extinguishing any fire or responding to any emer[gency] duties authorized by this code, shall be subject to the Seattle Fire Code.

Section 17. A new subsection 104.12 is adde[d]