Ordinance No. 122491

Council Bill No. 116005

AN ORDINANCE relating to the Seattle Fire Code, adopting as the Seattle Fire Code the 2006 edition of the International Fire Code with some exceptions, amending and adding various provisions to that fire code; and amending Section 22.600.020 of the Seattle Municipal Code.

1 of 3 Vol I of III

CF No.

Date Introduced: 9-4-07	
Date 1st Referred: 9-4-07	To: (committee) Public Safety Governmental Relations and Arts
Date Re - Referred:	To: (committee)
Date Re - Referred:	To: (committee)
Date of Final Passage: 9-10-07	Full Council Vote: 8-0
Date Presented to Mayor: 9-11-07	Date Approved: 9-21-07
Date Returned to City Clerk: 9-21-07	Date Published: 424 T.O. ___ F.T. X
Date Vetoed by Mayor:	Date Veto Published:
Date Passed Over Veto:	Veto Sustained:

The City of Seattle - Legislative Department

Council Bill/Ordinance sponsored by: Nick Licata
Councilmember

PART 1 of 3

Committee Action:

pass ~~as amended~~ 3-0 NL, ~~[illegible]~~, PS 9/7/07 CH

9-10-07 Passed

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

Law Department

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

ORDINANCE 122491

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BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.600.020 of the Seattle Municipal Code, which Section was adopted by Ordinance 121524 and amended by Ordinances 121773 and 122059, is hereby amended 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~~)) 2006 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. 308908.

The Seattle Fire Code ((~~shall consist~~)) consists of the ((~~2003~~)) 2006 International Fire Code with some exceptions, together with the amendments and additions thereto adopted by Council by ordinance, including the standards referenced in Chapter 45 of the 2006 International Fire Code, as those standards are amended by Council by ordinance.

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

CITY CLERK

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

Section 2. Section 101 of the 2006 International Fire Code is amended as follows:

Section 101

General

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

Throughout this code, where references are made to the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code and the International Existing Building Code, those references mean the Seattle version of those codes. Where the International Code Council Electrical Code Administrative Provisions are referenced, it means the Seattle Electrical Code, which is the Seattle version of the National Electrical Code.

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.

CITY CLERK

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

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.

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, marine vessels, and 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 is discretionary, not mandatory.

((~~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 and premises and to provide safety to fire fighters and emergency responders during emergency operations.~~))

CITY CLERK

101.4 Severability. If a section, subsection, sentence, clause or phrase of this code is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

101.5 Validity. In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions hereof, which are determined to be legal; and it shall be presumed that this code would have been adopted without such illegal or invalid parts or provisions.

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

Section 3. Subsection 102.1 of the 2006 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.

EDS CITY CLERK

3. Existing structures, facilities and conditions when identified in specific sections of this code.
4. Existing structures, facilities and conditions which, in the opinion of the fire code official, constitute a distinct hazard to life or property.

Section 4. Subsections 102.3 and 102.4 of the 2006 International Fire Code are amended as follows:

102.3 Change of use or occupancy. No change shall be made in the use or occupancy of any structure that would place the structure in a different division of the same group or occupancy or in a different group of occupancies, unless such structure is made to comply with the requirements of this code and the ((~~*International*~~))*Seattle Building Code.* Subject to the approval of the fire code official, the use or occupancy of an existing structure shall be allowed to be changed and the structure is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code and the ((~~*International*~~))*Seattle Building Code* for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

102.4 Application of building code. The design and construction of new structures shall comply with the ((~~*International*~~)) *Seattle Building Code,* and any alterations, additions, changes in use or changes in structures required by this code, which are within the scope of the ((~~*International*~~)) *Seattle Building Code,* shall be made in accordance therewith.

Section 5. Section 103 of the 2006 International Fire Code is amended as follows:

Section 103

CITY CLERK

DEPARTMENT OF FIRE PREVENTION

103.1 General. The department of fire prevention is established within the jurisdiction under the direction of the fire code official. The function of the department shall be the implementation, administration and enforcement of the provisions of this code.

((~~**103.2 Appointment.** The fire code official shall be appointed by the chief appointing authority of the jurisdiction; and the fire code official shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.~~))

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.

103.3((~~(4)~~)) Liability for damages. Nothing contained in this code is intended to, nor shall be construed to, create or form the basis for any liability on the part of the city, its officers, employees or agents, for any injury or damage resulting from the failure of the owner or occupier of premises, buildings, structures, 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 fire code

CITY CLERK

official , shall be defended by the city until final termination of such lawsuit, and any judgment or settlement resulting there from shall be assumed by the city as 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 representations, guarantees or assurances that permits or work undertaken pursuant to issuance of permits comply with any applicable codes. ((~~The fire code official, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act required or permitted in the discharge of official duties.~~

~~**103.4.1 Legal defense.** Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The fire code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.~~))

Section 6. Subsection 104.3 of the 2006 International Fire Code is amended as follows:

104.3 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions

CITY CLERK

of this code, or whenever the fire code official has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, dangerous or hazardous, the fire code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the fire code official by this code. If such building or premises is occupied, the fire code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the fire code official shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, the fire code official has recourse to every remedy provided by law to secure 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.

104.3.1 Warrant. ((~~When the fire code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, a~~)) An owner or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after a warrant is presented, ((~~proper request is made as herein provided,~~)) to permit entry therein by the fire code official for the purpose of inspection and examination pursuant to this code.

Section 7. Subsection 104.6.2 of the 2006 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

BDS CITY CLERK

disposition of each. The fire code official shall serve the responsible party with a copy of violations, correction letters and orders issued.

Section 8. Subsection 104.11.2 of the 2006 International Fire Code is amended as follows:

104.11.2 Obstructing operations. No person shall 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 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 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.

Section 9. 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 (152 400 mm) 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; or

CITY CLERK

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 10. 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 that 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 is either prohibited or shall be installed or used with such additional fire safety features as are necessary to substantially reduce the life hazard.

Section 11. A new subsection 104.14 is adopted to read as follows:

104.14 Standby personnel. When, in the opinion of the fire code official, it is essential for public safety in an assembly occupancy or any other place where people congregate, due to the number of persons, or the nature of performance, exhibition, display, contest or activity, the owner, agent or lessee shall employ one or more qualified persons, as required and approved by the fire code official, to be on duty at such place. Such individual shall be subject to the fire code official's orders at all times when so employed and shall be in uniform and remain on duty during

CITY CLERK

the times such places are open to the public, or when such activity is being conducted. Such individuals shall not be required or permitted, while on duty, to perform any duties other than those specified.

Section 12. Subsection 105.1 of the 2006 International Fire Code is amended as follows:

105.1 General. Permits shall be in accordance with Sections 105.1.1 through 105.7.13.

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.

105.1.2 Types of permits. There shall be three ((~~two~~)) 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 fire code official may issue temporary permits establishing fire safety controls for:

CITY CLERK

3.1. A time-limited activity not specifically regulated, but where regulatory safeguards are necessary because of unusual circumstances; and

3.2. Interim operation of a regulated activity at reduced scope and/or with temporary fire safeguards until permanent fire prevention features are provided.

105.1.3 Permits for the same location. When more than one permit is required for the same location, the fire code official is authorized to consolidate such permits into a single permit provided that each provision is listed in the permit.

Section 13. Subsection 105.2.3 of the 2006 International Fire Code is hereby repealed.

Section 14. Subsection 105.2.4 of the 2006 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 15. Subsection 105.3 of the 2006 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

CITY CLERK

established by this code, where the fire code official 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.

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.

((~~**105.3.2 Extensions.** A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and~~

BDS CITY CLERK

~~satisfactory reasons. The fire code official is authorized to grant, in writing, one or more extensions of the time period of a permit for periods of not more than 90 days each. Such extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.~~))

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.

105.3.2((~~3~~)) Occupancy prohibited before approval. The building or structure shall not be occupied prior to approval by the fire code official ((~~issuing a permit that indicates that applicable provisions of this code have been met~~)).

105.3.3((4)) Conditional approval to occupy ((~~permits~~)). ((~~Where permits are required and upon the request of a permit applicant, t~~))The fire code official is authorized to recommend to the building code official that a Temporary Certificate of Occupancy be issued granting a conditional permit to occupy the premises or portion thereof before the entire work or operations on the premises is completed, provided that such portion or portions will be occupied safely prior to full completion or installation of equipment and operations without endangering life or public welfare. The fire code official shall notify the ((~~permit applicant~~))building code official in writing of any limitations or restrictions necessary to keep the permit area safe. The holder of a

CITY CLERK

conditional permit shall proceed only to the point for which approval has been given, at the permit holder's own risk and without assurance that approval for the occupancy or the utilization of the entire premises, equipment or operations will be granted.

105.3.4((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.

105.3.5((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.

105.3.6((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.

105.3.7 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

CITY CLERK

fire code official: 1) a "Certificate of Insurance" showing the policy effective date, limits of liability and name of the insurance company; 2) a copy of the actual policy endorsement designating THE CITY OF SEATTLE as an additional insured for governmental permitting and on a primary and non-contributory basis; and 3) the declaration page(s) showing the existing coverages and policy limits. The applicant's policy shall evidence a "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 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 permit, 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 105 of the Seattle Fire Code of the City of Seattle for the purpose of complying with the conditions and requirements of the code.

BDS CITY CLERK

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.

Section 16. Subsection 105.4.1 of the 2006 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 17. Subsection 105.4.6 of the 2006 International Fire Code is hereby repealed.

Section 18. Subsection 105.5 of the 2006 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, suspensions and denials of renewals. In accordance with applicable law, the fire code official may revoke, suspend or deny a request to renew any permit or certificate upon evidence submitted to the fire code official that conditions or

CITY CLERK

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.

The permit or certificate holder shall be notified in writing no later than five (5) business days prior to the revocation, suspension or denial of a request 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 deny a request 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.

DNS CITY CLERK

105.5.2 Emergency Revocations, suspensions and denials of requests to renew. The fire code official may revoke, suspend or deny a request 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 denial or a request 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.

The fire code official shall issue a final decision in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or deny a request 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 19. Subsection 105.6.3 of the 2006 International Fire Code is amended as follows:

CITY CLERK

105.6.3 Aviation facilities. An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.

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

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

Section 20. A new subsection 105.6.7.1 is adopted to read as follows:

105.6.7.1 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.

Section 21. Subsection 105.6.9 of the 2006 International Fire Code is amended as follows:

105.6.9.1 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.

CITY CLERK

105.6.9. 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 22. Subsection 105.6.11 of the 2006 International Fire Code is amended as follows:

105.6.11 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. 105.6.23.

Section 23. Subsection 105.6.14 of the 2006 International Fire Code is amended as follows:

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

Exception: Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with Section 3306.

CITY CLERK

Section 24. Subsection 105.6.16 of the 2006 International Fire Code is amended as follows:

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

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (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, <u>or storage of approved portable motor boat fuel containers of 6 gallons (22.7 L) or less individual capacity and 12 gallons (45.4 L) aggregate capacity,</u> unless such storage, in the opinion of the <u>fire</u> 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.

CITY CLERK

4. To remove Class I or Class II liquids from an under-ground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.

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

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

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

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

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

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

<u>11. To store, handle or use Class III-B liquids in excess of 1,000 gallons (3785 L).</u>

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

Section 25. Subsection 105.6.19 the 2006 International Fire Code is amended as follows:

ENS CITY CLERK

105.6.19 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 26. Subsection 105.6.20 of the 2006 International Fire Code is amended as follows:

105.6.20.1 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 105.6.20.

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

Section 27. Subsection 105.6.21 of the 2006 International Fire Code is amended as follows:

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

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

Section 28. Subsection 105.6.23 of the 2006 International Fire Code is amended as follows:

105.6.23 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.

2008 CITY CLERK

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 (1.13 m^3).

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.~~))

4.((~~5.~~)) 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

CITY CLERK

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 29. Subsection 105.6.27 of the 2006 International Fire Code is amended as follows:

105.6.27 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 or multiple containers with an aggregate quantity not exceeding 125 gallons (473 L), serving occupancies in Group R-3.

2. A permit is not required for LP-gas containers having a water capacity not exceeding 48 pounds [nominal 20 pounds (9 kg) LP-gas] connected to a LP-gas grill unless at a public assembly or on or serving a public way.

3. A permit is not required for storage of up to three spare forklift containers each having a maximum individual water capacity of 104 pounds (10 gallons LP-gas).

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

Section 30. Subsection 105.6.29 of the 2006 International Fire Code is amended as follows:

CITY CLERK

105.6.29 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. ((~~**Miscellaneous 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.~~))

Section 31. Subsection 105.6.31 of the 2006 International Fire Code is amended as follows:

105.6.31 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 Section 105.6.23 hot work operations.

Point of Information

See section 105.6.23, which requires a permit for all hot work.

Section 32. Subsection 105.6.32 of the 2006 International Fire Code is amended as follows:

105.6.32 Open flames and candles. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.

Point of Information

CITY CLERK

Open flame and candle permit conditions are included in assembly permits at no additional fee.

Section 33. Subsection 105.6.34 of the 2006 International Fire Code is amended as follows:

105.6.34 ((~~Places of a~~))Assembly occupancy. An operational permit is required to operate an ((~~place of~~))assembly occupancy with an occupant load of 100 or more.

105.6.34.1 Temporary assembly occupancy. Temporary alterations to the existing means of egress, character or use of any facility used as an assembly occupancy shall be under separate temporary assembly occupancy permit.

Plans shall be submitted when required by the fire code official.

Section 34. Subsection 105.6.38 of the 2006 International Fire Code is amended as follows:

105.6.38 Refrigeration equipment. ((~~An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.~~))

Section 35. Subsection 105.6.42 of the 2006 International Fire Code is amended as follows:

105.6.42 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 byproducts. An

CITY CLERK

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

Section 36. Subsection 105.6.43 of the 2006 International Fire Code is amended as follows:

105.6.43 Temporary membrane structures, tents and canopies. See 105.7.13. ((~~An operational permit is required to operate 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. 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 not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.~~

~~2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.~~))

Section 37. Subsection 105.7 of the 2006 International Fire Code is amended as follows:

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

CITY CLERK

105.7.1<u>0</u>((~~3~~)).

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 9.02.07 *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.

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.~~))

105.7.2 Battery systems. A permit is required to install stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons (189 L).

105.7.3 Compressed gases. When the compressed gases in use or storage exceed the amounts

CITY CLERK

listed in Table 105.6.8, 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.

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.

105.7.4 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.~~))

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

105.7.6 Flammable and combustible liquids. An installation ((~~construction~~)) permit is

CITY CLERK

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.

105.7.7 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 105.6.20.

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.

105.7.8 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.

CITY CLERK

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

105.7.10 Refrigeration permit. An installation permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6. ((~~**Private fire hydrants.** A construction permit is required for the installation or modification of private fire hydrants.~~))

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

105.7.12 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.~~))

105.7.13 Temporary membrane structures, tents and canopies. An ((~~construction~~)) installation 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).~~

CITY CLERK

~~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.~~))

Section 38. Subsection 106.3 of the 2006 International Fire Code is amended as follows:

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 is the duty of both 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 39. A new subsection 106.5 is adopted to read as follows:

106.5 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 to accept their inspection, plan review and evaluation of specialized fire protection equipment or systems.

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

CITY CLERK

such inspections, permits and certificates are substantially in accord with the fire safety requirements of this code.

Section 40. Subsection 107.6 of the 2006 International Fire Code is amended as follows:

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

Section 41. Section 108 of the 2006 International Fire Code is amended as follows:

SECTION 108

((~~BOARD OF~~))APPEALS

Point of Information

For information on appeals procedures, see Seattle Fire Department Information Bulletin *Requesting a Review by the Seattle Fire Code Appeals Board* at http://www.seattle.gov/fire/FMO/firecode/infobulletins/fmoBulletins.htm

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

CITY CLERK

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. ((~~**Board of appeals established.** In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The fire code official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the fire code official.~~

~~**108.2 Limitations on authority.** An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive requirements of this code.~~

~~**108.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or fire protection systems and are not employees of the jurisdiction.~~))

Section 42. Subsection 109.1 of the 2006 International Fire Code is amended as follows:

109.1 Unlawful acts. It shall be unlawful for a person ((~~, firm or corporation~~)) to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premises or system regulated by

CITY CLERK

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 to fail to comply with the Seattle Fire Code or with any order issued by the Fire Code Official.

Section 43. Subsection 109.2 of the 2006 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((~~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 44. Subsection 109.3 of the 2006 International Fire Code is amended as follows:

109.3 ((~~Violation p~~))Penalties.

109.3.1 Alternative civil penalties. Any person((~~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.

CITY CLERK

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.~~))

109.3.2 Alternative criminal penalty. Any person 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. 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.

((~~**109.3.1Abatement 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~~

CITY CLERK

~~structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.~~))

Section 45. A new subsection 109.4 is adopted to read as follows:

109.4 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.

Section 46. Section 110 of the 2006 International Fire Code is amended as follows:

SECTION 110

UNSAFE BUILDINGS, PREMISES,

MOTOR VEHICLES AND MARINE VESSELS

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 of the occupants, or the occupants of neighboring premises, buildings, motor vehicles, marine vessels, or the public or fire department personnel ((~~constitutes a clear and inimical threat to human life, safety or health,~~)) the fire code official shall issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section.((~~and shall~~))The fire code official may refer ((~~the~~)) any unsafe premises or building to the ((~~building department~~))Department of Planning and Development for any repairs, alterations, remodeling,

CITY CLERK

removing or demolition required.

110.1.1 Unsafe conditions. Structures, premises or existing equipment that are or hereafter become unsafe, or deficient, because of inadequate means of egress or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or which involve illegal or improper occupancy or inadequate maintenance, which are otherwise dangerous to human life or public welfare, shall be deemed an unsafe condition. A vacant structure which is not secured against unauthorized entry as required by Section 311 shall be deemed unsafe.

110.1.2 Structural hazards. When an apparent structural hazard is caused by the faulty installation, operation or malfunction of any of the items or devices governed by this code, the fire code official ((~~shall~~))is authorized to immediately notify the building code official in accordance with Section 110.1.

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, premises, motor vehicle or marine vessel 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 47. Section 111 of the 2006 International Fire Code is amended as follows:

EMS CITY CLERK

SECTION 111

STOP WORK OR USE ORDER

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.

111.4 Failure to comply. It is 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 48. Subsection 201.3 of the 2006 International Fire Code is amended as follows:

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*

CITY CLERK

Code or ((~~*International*~~)) *Seattle Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

Section 49. 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. Whenever the *International Code Council Electrical Code Administrative Provisions* are referenced it shall mean the Seattle edition of that code, which is the *National Electrical Code* with Seattle amendments.

Section 50. Section 202 of the 2006 International Fire Code is amended by amending the definitions of the following terms under "Occupancy Classification:" Educational Group E; Institutional Group I and Residential Group R, as follows:

[W] [B] 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 places of religious worship in accordance with Section 508.3.1 of the *International Building Code* and have occupant loads of less than 100, shall be classified as Group A-3 occupancies.

CITY CLERK

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.

* * *

[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

CITY CLERK

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*~~)) *Seattle Residential Code* in accordance with Section 101.2 of the ((~~*International*~~))*Seattle Building Code*. ((~~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 the *Seattle Building Code* Section 310.1 regulated by either the Washington State Department of Health or the Department of Social and Health Services shall be classified as Group R-2.

[W] [B] 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.

CITY CLERK

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

A facility such as the above providing licensed care to clients in one of the categories listed in *Seattle Building Code* Section 310.1 regulated by either the Washington State Department of Health or the Washington State Department of Social and Health Services shall be classified as Group R-2.

A child care facility that 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.

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 below:

Condition 1. This occupancy condition shall include buildings in which free movement is

CITY CLERK

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.

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

BNS CITY CLERK

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:

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.

CITY CLERK

* * *

[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 classified as an Institutional Group I or when not regulated by the *International Residential Code* in accordance with Section 101.2 of the *International Building Code.* Residential occupancies shall include the following:

R-1 Residential occupancies containing sleeping units 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)

Boarding homes licensed by the Department of Social and Health Services under Chapter 388-78A WAC

Convents

Dormitories

Fraternities and sororities

BDS CITY CLERK

Hotels (nontransient)

Monasteries

Motels (nontransient)

Residential treatment facilities licensed by the Department of Health under Chapter 246-337 WAC

Vacation timeshare properties

Congregate living facilities with 16 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2((~~, R-4~~)) or I, and where buildings do not contain more than two dwelling units including adult family homes and family child day care homes for the care of twelve or fewer children, licensed by the Washington State Department of Social and Health Services, or adult and child care facilities that provide accommodation for five or fewer persons of any age for less than 24 hours. Adult family homes and family child day care homes, or adult and child care facilities that are within a single-family home are permitted to comply with the *Seattle Residential* Code in accordance with *Seattle Building Code* Section 101.2.

Foster Family Care Homes for six or fewer children including those of the resident family that are licensed by the Washington State Department of Social and Health Services shall be permitted, as an accessory use to a dwelling.

((~~including:~~

CITY CLERK

~~Buildings that do not contain more than two dwelling units~~

~~Adult care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours~~

~~Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours~~

~~Congregate living facilities with 16 or fewer persons.~~

~~Adult and child care facilities that are within a single-family home are permitted to comply with the *Inter-national Residential Code*.~~

~~**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, excluding staff.~~

~~Group R-4 occupancies shall meet the requirements for construction as defined in the *International Building Code* for Group R-3, except as otherwise provided for in that code, or shall comply with the *International Residential Code*.~~))

* * *

Section 51. Section 202 of the 2006 International Fire Code is amended by adopting thereto definitions of ADULT FAMILY HOME; CHILD DAY CARE; BERTH; BOATHOUSE; COVERED BOAT MOORAGE; DESIGNATED HOTWORK FACILITY; ELECTRICAL CODE; EMERGENCY POWER SYSTEM; EXIT PLACARD; EXIT SIGN; FAMILY CHILD DAY CARE HOME; FIRE DETECTION SYSTEM; FIRE DISTRICT; FLOAT; GRAVITY-OPERATED DROP OUT VENTS; HIGH-RISE BUILDING; MARINA; MARINE MOTOR

bns CITY CLERK

FUEL-DISPENSING FACILITY; MOTOR VEHICLE; MOTOR VEHICLE, UNATTENDED; NIGHTCLUB; OIL-BURNING EQUIPMENT; PATIO FIREPLACE; PERSON; P_F DEVICE; PIER; PORTABLE SCHOOL CLASSROOM; POWER TAP; SHIPYARD; SLIP; STANDBY POWER SYSTEM; SUBSTRUCTURE; SUPERSTRUCTURE; VAULT; VESSEL; WHARF or QUAY 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.

* * *

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

* * *

BERTH. See Section 9402.1.

* * *

BOATHOUSE. See Section 9402.1.

* * *

COVERED BOAT MOORAGE. See Sections 4602.1 and 9402.1.

* * *

DESIGNATED HOT WORK FACILITY. See Section 4602.1.

CITY CLERK

* * *

[W] ELECTRICAL CODE is the National Fire Protection Association 70, National Electrical Code, as adopted and amended by this jurisdiction.

[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 DETECTION SYSTEM. See Section 902.1.

* * *

[B] FIRE DISTRICT. See Section 2202.1.

* * *

FLOAT. See Sections 4602.1 and 9402.1.

* * *

CITY CLERK

GRAVITY-OPERATED DROP OUT VENTS. See Section 9402.1.

* * *

HIGH-RISE BUILDING. See Section 902.1.

* * *

MARINA. See Sections 4602.1 and 9402.1.

* * *

MARINE MOTOR FUEL-DISPENSING FACILITY. See Section 9402.1.

* * *

MOTOR VEHICLE. See Section 2202.1.

* * *

MOTOR VEHICLE, UNATTENDED. See Section 2202.1.

* * *

[W] NIGHTCLUB. See Section 902.1.

* * *

OIL-BURNING EQUIPMENT. See Section 602.1.

* * *

PATIO FIREPLACE. See Section 302.1.

P_F DEVICE. See Section 2602.1.

EDS CITY CLERK

* * *

PERSON. An individual, receiver, administrator, executor, assignee, trustee in bankruptcy, trust estate, firm, partnership, joint venture, club, company, joint stock company, business trust, municipal corporation, political subdivision of the State of Washington, corporation, limited liability company, association, society or any group of individuals acting as a unit, whether mutual, cooperative, fraternal, nonprofit or otherwise, and the United States or any instrumentality thereof.

* * *

PIER. See Sections 4602.1 and 9402.1.

* * *

[W] PORTABLE SCHOOL CLASSROOM. See 902.1.

* * *

POWER TAP. See Section 602.1.

* * *

SHIPYARD. See Sections 4602.1 and 9402.1.

* * *

SLIP. See Section 9402.1.

* * *

[B] STANDBY POWER SYSTEM. See Section 602.1.

CITY CLERK

* * *

SUBSTRUCTURE. See 4602.1.

SUPERSTRUCTURE. See 4602.1.

* * *

VAULT. See Section 3402.1.

VESSEL. See Sections 4602.1 and 9402.1

* * *

WHARF or QUAY. See Section 9402.1

* * *

Section 52. Subsection 302.1 of the 2006 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 <u>or recreational</u> purposes <u>and exceeding the size of a recreational fire</u>.

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 <u>use of</u> road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames<u>, bonfires</u> or recreational fires <u>or portable outdoor fireplaces</u>. For the purpose of this definition, a chamber

CITY CLERK

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.

PORTABLE OUTDOOR FIREPLACE. An outdoor, solid-fuel-burning fireplace that may be constructed of steel, concrete, clay or other noncombustible material. A portable outdoor fireplace may be open in design, or may be equipped with a small hearth opening and a short chimney or chimney opening in the top.

* * *

Section 53. Subsection 303.2 of the 2006 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 (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 roof top kettles shall require a temporary permit.

Section 54. A new subsection 303.10 is adopted to read as follows:

DIS CITY CLERK

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 55. Subsection 304.3.2 of the 2006 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 City's 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 56. Subsection 306.1 of the 2006 International Fire Code is amended as follows:

306.1 Motion picture projection rooms. Electric arc, xenon or other light source projection equipment which develops hazardous gases, dust or radiation and the projection of ribbon-type cellulose nitrate film, regardless of the light source used in projection, shall be operated within a motion picture projection room complying with Section 409 of the ((~~International~~))*Seattle Building Code*.

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 57. Section 307 of the 2006 International Fire Code is amended as follows:

2008 CITY CLERK

SECTION 307

BONFIRES, OPEN BURNING, PORTABLE OUTDOOR FIREPLACES AND RECREATIONAL FIRES

307.1 General. Open burning is prohibited in the City of Seattle. Bonfires, recreational fires and use of portable outdoor fireplaces shall be in accordance with Section 307. ((~~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.~~

~~**307.1.1 Prohibited open burning.** Open burning that is offensive or objectionable because of smoke or odor emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.~~))

307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

307.2.1 Authorization. Where required by state or local law or regulations, open burning shall only be permitted with prior approval from the state or local air and water quality management authority, provided that all conditions specified in the authorization are followed.

307.3 Extinguishment authority. The fire code official is authorized to order the extinguishment by the permit holder, another person responsible or the fire department of open burning that creates or adds to a hazardous or objectionable situation.

CITY CLERK

((~~**307.4 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.~~))

307.4((~~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.~~))

307.5((~~4.2~~)) Recreational fires. Recreational fires shall not be conducted within 25 feet (7620 mm) of a structure or combustible material or vegetation. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

307.6 Portable outdoor fireplaces. Portable outdoor fireplaces may not be operated within 15 feet (3048 mm) of a structure or combustible material.

Exception: Portable outdoor fireplaces may be used in accordance with manufacturer's directions at one-and two-family dwellings.

307.7 General burning prohibitions Trash, yard waste, rubbish and paper are prohibited as fuel for bonfires, recreational fires and fires in patio fireplaces. Smoke or odor emissions from bonfires, recreational fires and portable outdoor fireplaces that make such fires hazardous are

CITY CLERK

prohibited. The fire code official is authorized to order the extinguishment of a bonfire, recreational fire or fire in a portable outdoor fireplace that creates or adds to a hazardous situation.

Point of Information

Hazards from bonfires, recreational fires, and fires in portable outdoor fireplaces may include but are not limited to smoke or odor emissions causing potential for false alarms, medical alarms, and hazards to health, and exposure to other structures from fire.

When conducting a bonfire or a recreational fire or when using a patio fireplace, fire extinguishing equipment in accordance with SFC 307.8 shall be available for immediate use. For additional regulations and information pertaining to outdoor fires and burning, see RCW 70.94. Go to www.pscleanair.org for information on how to register an air quality complaint with the Puget Sound Clean Air Agency.

307.8((~~.5~~)) Attendance. ((~~Open burning,~~)) Bonfires, fires in portable outdoor fireplaces ((~~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

CITY CLERK

Puget Sound Clean Air Agency as referenced in the above Point of Iinformation.

Section 58. Subsection 308.1 of the 2006 International Fire Code is amended as follows:

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

Exception: Bonfires, recreational fires and use of patio fireplaces shall be in accordance with Section 307.

Section 59. Subsection 308.3.1 of the 2006 International Fire Code is amended as follows:

308.3.1 Open-flame cooking devices. ((~~Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction.~~

~~**Exceptions:**~~

~~1. One- and two-family dwellings.~~

~~2. Where buildings, balconies and decks are protected by an automatic sprinkler system.~~

~~**308.3.1.1 Liquefied-petroleum-gas-fueled cooking devices.** LP-gas burners having an LP-gas container with a water capacity greater than 2.5 pounds [nominal 1 pound (0.454 kg) LP-gas capacity] shall not be located on combustible balconies or within 10 feet (3048 mm) of combustible construction.~~

~~**Exception:** One- and two-family dwellings.))~~

CITY CLERK

Section 60. Subsection 308.3.5 of the 2006 International Fire Code is amended as follows:

308.3.5 Religious ceremonies. Nothing in this code prevents participants in religious ceremonies from carrying hand-held candles [Ref. RCW 19.27.031(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 (4572 mm) of the child carrying a hand-held candle at all times, unless an alternative equivalent safety standard is approved. ((~~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~~.))

Section 61. Subsection 308.3.7 of the 2006 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.

CITY CLERK

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

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

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

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

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

Section 62. Subsection 310.3 of the 2006 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 63. Subsection 311.1.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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~~)) may be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the ((~~*International Property Maintenance Code* and the *International*~~)) *Seattle Building Code* and in accordance with applicable law.

Section 64. Subsection 311.3 of the 2006 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*~~)) *Seattle Building Code,* where waste is controlled and removed as required by Section 304.

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

Section 65. Subsection 311.5 of the 2006 International Fire Code is amended as follows:

CITY CLERK

311.5 Placards. If ((~~A~~))any building or structure is determined to be unsafe pursuant to Section 110 of this code, the fire code official is authorized to require ((~~shall be marked~~)) marking as required by Sections 311.5.1 through 311.5.5.

311.5.1 Placard location. Placards shall be ((~~applied on the front of the structure and be~~)) visible from the street. Additional placards may ((~~shall~~)) be applied to the side of each entrance to the structure and on penthouses.

311.5.2 Placard size and color. Placards may ((~~shall~~)) be 24 inches by 24 inches (610 mm by 610 mm) in size with a red back-ground, white reflective stripes and a white reflective border. The stripes and border may ((~~shall~~)) have a 2-inch (51 mm) stroke.

311.5.3 Placard date. Placards may ((~~shall~~)) bear the date of their application to the building and the date of the most recent inspection.

311.5.4 Placard symbols. The design of the placards may ((~~shall~~)) use the following symbols:

1. ❑ This symbol shall mean that the structure had normal structural conditions at the time of marking.
2. ☑ This symbol shall mean that structural or interior hazards exist and interior fire-fighting or rescue operations should be conducted with extreme caution.
3. ☒ This symbol shall mean that structural or interior hazards exist to a degree that consideration should be given to limit fire fighting to exterior operations only, with entry only occurring for known life hazards.

311.5.5 Informational use. The use of these symbols shall be informational only and shall not

CITY CLERK

in any way limit the discretion of the on-scene incident commander.

Section 66. Section 313 of the 2006 International Fire Code is amended as follows:

SECTION 313

FUELED EQUIPMENT

313.1 General. 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*~~)) *Seattle Building Code.*
2. If a temporary permit for such use at exhibits, trade shows, or special events has been issued in accordance with section 105.6.13.((~~Where allowed by Section 314.~~))
3. Storage of equipment utilized for maintenance purposes is allowed in approved locations when the aggregate fuel capacity of the stored equipment does not exceed 10 gallons (38 L) and the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

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:

CITY CLERK

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 Section 105.6.13 .

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, motor vehicles or watercraft 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.

Section 67. A new subsection 315.2.2.1 is adopted to read as follows:

315.2.2.1 Combustible storage under stairways. Combustible storage is prohibited under exit stairways.

Exception: Exit stairways that comply with Section 1009.5.3

Section 68. A new subsection 315.2.5 is adopted to read as follows:

315.2.5 Block pile storage arrangements. Storage shall be within 20 feet (6096 mm) of two aisles each at least 44 inches (13 411 mm) wide. No block pile shall exceed 40 feet by 40 feet (12 192 mm by 12 192 mm) unless approved by the fire code official. No dead-end aisle shall be longer than 10 times the width. All storage in unsprinklered areas shall be within 150 feet (45 720 mm) traveling by aisle of fire department exterior access openings. Storage shall not

CITY CLERK

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 69. 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.

Point of Information

See preface for information on NFPA amendments.

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 70. Subsection 401.3 of the 2006 International Fire Code is amended as follows:

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.

CITY CLERK

401.3.1 Making false report. It shall be unlawful for a person to give, signal, or transmit a false alarm of a fire or other emergency.

401.3.2 Alarm activations. Upon activation of a fire or emergency alarm signal, employees or 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 or the carrying out of an emergency evacuation drill in accordance with the provisions of Section 405.

Section 71. 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 makes 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 makes evacuation unsafe.

Section 72. Section 404 of the 2006 International Fire Code is amended as follows:

SECTION 404

Ens CITY CLERK

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

404.1 General. Fire safety and evacuation plans and high-rise emergency operations plans shall comply with the requirements of this section.

404.2 Where required. ((~~An approved~~ ~~f~~))Fire safety and evacuation plans and high-rise emergency operation 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 buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
3. Group E.
4. Group H.
5. Group I.
6. Group R-1.
7. Group R-2 college and university buildings.

((~~8. Group R-4.~~))

8((~~9~~)). High-rise buildings (see section 404.3.2).

9((~~10~~)). 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.

10((~~1~~)). Covered malls exceeding 50,000 square feet (4645 m^2) in aggregate floor area.

11((~~2~~)). Underground buildings.

CITY CLERK

12((~~3~~)). Buildings with an atrium and having an occupancy in Group A, E or M.

404.2.1 Approval required. Where required by the fire code official, fire safety and evacuation plans must obtain the fire code official's approval of the plan.

Point of Information

See the Seattle Fire Department web page at www.seatle.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.

404.3.1 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 who can be contacted for further information or explanation of duties under the plan.

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 is complete.

7. Floor plans indicating the following:

7.1 Occupancy assembly point.

EDS CITY CLERK

7.2 Exits.

7.3 Primary and Secondary evacuation routes.

7.4 Accessible egress routes.

7.5 Areas of refuge.

7.6 Location of manual fire alarm boxes.

7.7 Location of portable fire extinguishers.

7.8 Location of occupant-use hose stations.

7.9 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.~~

~~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.~~

Ens CITY CLERK

~~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.~~))

404.3.2 High-rise emergency operations plan required. A high-rise emergency operations plan approved by the fire code official is required for all high-rise buildings. The plan shall be

Ens CITY CLERK

prepared as specified in the Seattle Fire Department *High-rise Emergency Handbook* and shall include the following sections:

Section 1. Responsibilities.

Section 2. Fire Reporting.

Section 3 Evacuation.

Section 4. Fire Control Procedures.

Section 5 Post-Fire Operations.

Section 6. Confidence Testing.

Section 7. High Value List.

Section 8. Shutoff Valve List.

Section 9. Floor Plans.

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

404.5 Availability. Fire safety and evacuation plans shall be available in the work place for reference and review by employees, and copies shall be furnished to the fire code official for review upon request. High-rise emergency operation plans shall be posted in the high-rise fire command center and one copy shall be furnished to the fire code official.

Section 73. Table 405.2 of the 2006 International Fire Code is amended as follows:

EMERGENCY PLANNING AND PREPAREDNESS

LDS CITY CLERK

TABLE 405.2

FIRE AND EVACUATION DRILL

FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	**FREQUENCY**	**PARTICIPATION**
Group A	Quarterly	Employees
Group B[c]	Annually	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-2[d]	Four annually	All occupants
((~~Group R-4~~))	((~~Quarterly on each shift~~))	((~~Employees[b]~~))
High-rise buildings	Annually	((~~Employees~~))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.~~))**Exception:** Jail inmates, hospital patients, hotel guests and

CITY CLERK

occupants of apartment or residential condominium units, unless such occupant is also a member of the high-rise building staff.

c. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.

d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3.

Section 74. Subsection 405.4 of the 2006 International Fire Code is hereby repealed.

Section 75. Subsections 405.5, 405.6, 405.7,405.8 and 405.9 of the 2006 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.
5. Number of occupants evacuated.
6. Special conditions simulated.
7. Problems encountered.

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

8.((~~9~~))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.

CITY CLERK

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 party responsible 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 76. Subsection 408.5.5 of the 2006 International Fire Code is amended as follows:

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

Section 77. Subsection 408.10.3 of the 2006 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~~

EDS CITY CLERK

~~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 78. Subsection 408.10.5 of the 2006 International Fire Code is amended as follows:

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 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 79. Subsection 501.1 of the 2006 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 80. Section 502 of the 2006 International Fire Code is amended as follows:

* * *

CITY CLERK

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 81. Subsection 503.2 of the 2006 International Fire Code is amended as follows:

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.7.

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 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.

CITY CLERK

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

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

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be ((~~determined by the fire code official~~)) 25 feet (7620 mm) minimum inside curb and 50 feet (15 240 mm) outside curb.

Exception: Turnarounds in accordance with Appendix D.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus. (See Appendix D.)

503.2.6 Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with ((~~AASHTO HB-17~~))the City of Seattle *Right-of- Way Improvements Manual* (ROWIM). Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official.

503.2.7 Grade. The grade of the fire apparatus access road shall be in accordance with

CITY CLERK

Appendix D.((~~within the limits established by the fire code official based on the fire department's apparatus.~~))

Section 82. Subsection 503.6 of the 2006 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~~)) must obtain the approval of 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 83. Section 505 of the 2006 International Fire Code is amended as follows:

SECTION 505

PREMISES IDENTIFICATION

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 of 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 0.05 inches (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

bns CITY CLERK

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 owners for private property.

Section 84. Subsection 506.1 of the 2006 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.

With approval of the fire code official, the building owner may decline to install a key box with the understanding that forcible entry, if required, may result in damage to the building or premises.

506.1.1 Locks. An approved lock shall be installed on gates or similar barriers when required by the fire code official.

Section 85. A new subsection 506.3 is adopted to read as follows:

CITY CLERK

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 - 8 inches (203 mm) high, 6 inches (152 mm) wide and 1 inch (25 mm) deep.
2. Material - 16 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 1-inch (25 mm) 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 6 feet (1829 mm) nominal above the floor. Other locations may be approved by the building official upon request, with notification to the fire code official.

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;

EDS CITY CLERK

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 listed in Section 506.3.1.

Section 86. Subsection 508.3 of the 2006 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>

<u>1. Provide a minimum of 1,000 gpm (63 L/s) at 20 psi (138 kPa) flowing independently,</u>

<u>2. Provide a minimum of 500 gpm (34 L/s) at 20 psi (138kPa) flowing simultaneously,</u>

<u>3. Are located within 500 feet (152 400 mm) of the building as measured by an approved route.</u>

BDS CITY CLERK

Point of Information

Specific fire flow requirements are set forth for shipyards, designated marine hot work facilities, new and existing covered marinas and vessel refueling facilities in accordance with Administrative Rules adopted by the fire code official, Chapter 46 and Chapter 94.

Section 87. Subsection 508.5.1 of the 2006 International Fire Code is amended as follows:

508.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than ((~~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.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

2. The fire code official is authorized to increase the 600 feet (183 m) for Group R-3 and Group U occupancies where the building is equipped 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~~))3. For buildings other than Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement from a hydrant shall be 600 feet (183 m).

CITY CLERK

Section 88. Subsection 508.5.6 of the 2006 International Fire Code is amended as follows:

508.5.6 Physical protection. Where fire hydrants are subject to impact by a motor vehicle, guard posts or other approved means shall comply with Section 312. Any horizontal, lateral or diagonal elements that are a part of the protection for hydrants shall not interfere with the ability to freely access and safely operate the hydrant.

Section 89. A new subsection 508.5.7 is adopted to read as follows:

508.5.7 Hydrant marking. Hydrants shall be marked in a manner approved bySeattle Public Utilities.

Section 90. Subsection 509.1 of the 2006 International Fire Code is amended as follows:

509.1 Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of 96 square feet (9 m2) with a minimum dimension of 8 feet (2438 mm). A layout of the fire command center and all features required by this section to be contained therein shall be

CITY CLERK

submitted for approval prior to installation. The fire command center shall comply with NFPA72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
13. Work table.
14. Generator supervision devices, manual start and load transfer capabilities and procedures((~~features~~)).
15. Public address system, where specifically required by other sections of this code.
16. On site water tank fill valve control switch.

CITY CLERK

Section 91. Subsection 601.2 of the 2006 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 Sections 105.6 and 105.7.

Section 92. Subsection 602.1 of the 2006 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.

* * *

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

* * *

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.

* * *

CITY CLERK

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.

Section 93. Subsection 603.1 of the 2006 International Fire Code is amended as follows:

603.1 Installation. The installation of nonportable fuel gas appliances and systems shall comply with the *International Fuel Gas Code*. The installation of all other fuel-fired appliances, other than internal combustion engines, oil lamps and portable devices such as blow torches, melting pots and weed burners, shall comply with this section and the *International Mechanical Code*.

603.1.1 Manufacturer's instructions. The installation shall be made in accordance with the manufacturer's instructions and applicable federal, state, and local rules and regulations. Where it becomes necessary to change, modify, or alter a manufacturer's instructions in any way, written approval shall first be obtained from the manufacturer.

603.1.2 Approval. The design, construction and installation of fuel-fired appliances shall be in accordance with the *International Fuel Gas Code* and the *International Mechanical Code*.

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~~)) *Seattle Electrical Code*.

CITY CLERK

603.1.4 Fuel oil. The grade of fuel oil used in a burner shall be that for which the burner is approved and as stipulated by the burner manufacturer. Oil containing gasoline shall not be used. Waste crankcase oil shall be an acceptable fuel in Group F, M and S occupancies, when utilized in equipment listed for use with waste oil and when such equipment is installed in accordance with the manufacturer's instructions and the terms of its listing.

603.1.5 Access. The installation shall be readily accessible for cleaning hot surfaces; removing burners; replacing motors, controls, air filters, chimney connectors, draft regulators, and other working parts; and for adjusting, cleaning and lubricating parts.

603.1.6 Testing, diagrams and instructions. After installation of the fuel-fired appliance((~~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 appliance((~~oil-burning equipment~~)) and another at an approved location that will be accessible in case of emergency.

603.1.6.2 Instructions. After completing the installation, the installer shall instruct the owner or operator in the proper operation of the equipment. The installer shall also furnish the owner or operator with the name and telephone number of persons to contact for technical information or assistance and routine or emergency services.

CITY CLERK

603.1.7 Clearances. Working clearances between oil-fired appliances and electrical panel boards and equipment shall be in accordance with the ((~~ICC~~))*Seattle Electrical Code*. ((~~Clearances between oil-fired equipment and oil-supply tanks shall be in accordance with NFPA 31.~~)) A minimum 5-foot (1524 mm) separation shall be maintained between oil-fired appliances and equipment and fuel-oil supply tanks.

Section 94. Subsection 603.3 of the 2006 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*~~)) *Seattle Mechanical Code*.

~~((**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.~~))

Section 95. Subsection 603.4 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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, and 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 frequented by the public shall be in accordance with this section.

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 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 the Group A occupancy structure when connected to the fuel gas container,

2. On tabletops, and

3. Inside tents, canopies and membrane structures.

603.4.2.1.2 Buildings. Portable gas-fired heating appliances shall be located at least 5 feet (1524 mm) from buildings.

DIS CITY CLERK

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 (1524 mm) 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 portable gas-fired heating appliances utilizing a gas container that is integral to the appliance shall be used.

603.4.2.2.2 Installation and maintenance. Portable gas-fired 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. Portable gas-fired 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 15 degrees from vertical.

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.

CITY CLERK

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 a portable gas-fired 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 (9 kg).

603.4.2.3.4.2 Maximum storage quantity. The maximum aggregate quantity of gas containers on site awaiting use shall not exceed 100 pounds (45 kg) [5 x 20-pound (2.3 x 9 kg) containers] and shall be stored outside in accordance with Section 603.4.2.3.4.

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

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 (6096 mm) from exits, building openings, public ways and designated smoking areas.

Exception: When the storage locker is located remote to the Group A Occupancy, it shall be located in accordance with Table 3809.12.

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

CITY CLERK

603.4.2.3.4.7 Vehicle protection. Ventilated metal storage lockers for gas containers shall be protected from vehicular impact in accordance with Section 312 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 (1524 mm) 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 (1524mm) above grade. Travel distance to the extinguisher shall not exceed 50 feet (15 240 mm).

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 96. Subsection 604.2.2 of the 2006 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.

CITY CLERK

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

Section 97. Subsection 604.2.14 of the 2006 International Fire Code is amended as follows:

604.2.14 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 98. Subsection 604.2.15 of the 2006 International Fire Code is amended as follows:

604.2.15 High-rise buildings. ((~~Standby p~~))Power, light and emergency systems in high-rise buildings shall comply with the requirements of Sections 604.2.15.1 through 604.2.15.3.

604.2.15.1 ((~~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 barriers or horizontal assemblies constructed in accordance with the *International Building Code*, or both. System supervision with manual start and transfer features shall be provided at the fire command center.

Exception: A generator set with a fuel tank system not exceeding 660 gallons (2498.3 L) is not required to be located in a rated room when installed in a sprinklered parking garage of type I or II construction, unless a 1-hour separation is required to separate control areas in accordance with Table 2703.1.1(1).

CITY CLERK

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

((~~**Exception:** When approved, the system shall be allowed to be supplied by natural gas pipelines.~~))

604.2.15.1.2 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.

604.2.15.1.3 Emergency power loads. The following are classified as emergency power loads:((~~**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.~~))

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.

BDS CITY CLERK

9. Ventilation and automatic fire detection equipment for smoke proof 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.

604.2.15.2 Separate circuits and luminaires. Separate lighting circuits and luminaires 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 that are clearly a part of the escape route.

((~~**604.2.15.2.1 Other circuits.** Circuits supplying lighting for the fire command center and mechanical equipment rooms shall be transferable to the standby source.~~

~~**604.2.15.3 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 99. Subsection 604.2.16 of the 2006 International Fire Code is amended as follows:

CITY CLERK

604.2.16 Underground buildings. Emergency and standby power systems in underground buildings covered in Chapter 4 of the *International Building Code* shall comply with Section((s)) 604.2.16.1((~~and 604.2.16.2~~)).

604.2.16.1 ((~~Standby~~))Emergency power. An emergency((~~standby~~)) power system complying with the ((~~ICC~~))*Seattle Electrical Code* shall be provided for ((~~standby~~))emergency power loads as specified in Section 604.2.16.1.1.

[B] 604.2.16.1.1 ((~~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 smoke-proof enclosures.
3. Fire pumps.
4. ((~~Standby~~)) Emergency power shall be provided for elevators in accordance with Section 3003 of the ((~~*International*~~))*Seattle Building Code* and escalators in accordance with NFPA 130.
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] 604.2.16.1.2 Pickup time.** The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

~~**604.2.16.2 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.~~

EMS CITY CLERK

~~**604.2.16.2.1 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 100. Subsection 604.2.19 of the 2006 International Fire Code is amended as follows:

604.2.19 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 604.2.19.1 through 604.2.19.4 and the *Seattle Building Code* Section 3016.7.

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

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

604.2.19.3 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

CITY CLERK

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.

604.2.19.4 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 101. A new subsection 604.2.20 is adopted to read as follows:

604.2.20 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 102. Subsection 604.3.2 of the 2006 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~~))shall be submitted to the fire code official in accordance with Administrative Rule 9.02.07 *Confidence Test Requirements for Life Safety Systems*.

Section 103. Subsection 605.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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~~)) *Seattle 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 104. Subsection 605.3 of the 2006 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 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~~))*Seattle 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 105. Subsection 606.8 of the 2006 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

CITY CLERK

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~~))*Seattle 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 *Seattle Mechanical Code* Section 1105.6.4 for emergency conditions.

Detectors and alarms shall be placed in approved locations.

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.

CITY CLERK

Section 106. A new subsection 606.17 is adopted to read as follows:

606.17 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 *Seattle Electrical Code.*

Section 107. Subsection 607.1 of the 2006 International Fire Code is amended as follows:

607.1 Required. Existing elevators with a travel distance of 25 feet (7620 mm) or more above or below the main floor or other 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.

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

Section 108. Subsection 608.4 of the 2006 International Fire Code is amended as follows:

608.4 Room design and construction. Enclosure of stationary battery systems shall comply with the ((~~*International*~~)) *Seattle Building Code.* See *Seattle Building Code* Section 307.1 to consider the battery room as an accessory space. Battery systems shall be allowed to be in the same room with the equipment they support.

* * *

Section 109. A new subsection 608.6.3 is adopted to read as follows:

CITY CLERK

608.6.3 Supervision. Ventilation systems required by Section 608.6.1 and 608.6.2 shall be supervised by an approved central proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.

Section 110. Subsection 609.2 of the 2006 International Fire Code is amended as follows:

[M] 609.2 Where required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors, when required by the *Seattle Mechanical Code*.

Section 111. Table 704.1 of the 2006 International Fire Code is amended as follows:

TABLE 704.1

VERTICAL OPENING PROTECTION REQUIRED

OCCUPANCY CLASSIFICATION	CONDITIONS	PROTECTION REQUIRED
Group I	Vertical openings connecting two or more stories	1-hour protection
All, other than Group I	Vertical openings connecting two stories	No protection required[a,b]
All, other than Group I	Vertical openings connecting three to five stories	1-hour protection or automatic sprinklers throughout[a,b]
All, other than Group I	Vertical openings connecting more than five stories	1-hour protection[a,b]

CITY CLERK

All	Mezzanines open to the floor below	No protection required[a,b]
All, other than Group I	Atriums and covered mall buildings	1-hour protection or automatic sprinklers throughout
All, other than Groups B and M	Escalator openings connecting four or less stories in a sprinklered building <u>or stairs that are not a portion of the means of egress constructed in accordance with *Seattle Building Code* 707.2.</u> Openings must be protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13	No protection required
Group B and M	Escalator openings in a sprinklered building protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. <u>Stairs that are not a portion of the means of egress constructed in accordance with *Seattle Building Code* 707.2.</u>	No protection required

a. Vertical opening protection is not required for Group R-3 occupancies.

2005 CITY CLERK

b. Vertical opening protection is not required for open parking garages and ramps.

Section 112. Subsection 801.1 of the 2006 International Fire Code is amended as follows:

[W]**801.1 Scope.** The provisions of this chapter shall govern interior finish, interior trim, furniture, furnishings, decorative materials and decorative vegetation in buildings. Sections 803 through 809 of this code shall be applicable to existing buildings. Section 803 of the International Building Code and Sections 804 through 809((~~808~~)) of this code shall be applicable to new ((~~and existing~~)) buildings.

Section 113. Subsection 806.1.1 of the 2006 International Fire Code is amended as follows:

[W]**806.1.1 Restricted occupancies.** Natural cut trees shall be prohibited in Group ((~~A, E,~~)) 1-1, 1-2, 1-3, 1-4, ((~~M, R-1,~~)) and R-2((~~and R-4~~)) occupancies((~~.~~)) providing licensed care to clients in one of the categories listed in IBC section 310.1 regulated by either the Washington Department of Health or the Department of Social and Health Services.

((~~**Exceptions:**~~

~~1. 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.~~

~~2. Trees shall be allowed within dwelling units in Group R-2 occupancies.~~))

Section 114. Subsection 806.1.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

[W]**806.1.2 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 ((~~two-day~~)) supply of water in accordance with Table 806.1.2

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 806.1.2—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

Section 115. Subsection 806.1.3 of the 2006 International Fire Code is amended as follows:

806.1.3 Dryness. The tree shall be removed from the building whenever the tree needles or leaves fall off readily when a tree branch is shaken or if the needles are brittle and break when

CITY CLERK

bent between the thumb and index finger or whenever determined necessary by the fire code official. The tree shall be checked daily for dryness.

Section 116. A new section 809 is adopted to read as follows:

SECTION 809

DECORATIVE MATERIALS USED IN TEMPORARY ASSEMBLY OCCUPANCIES

809.1 General. Combustible decorative materials used in temporary assembly occupancies shall be flame resistant as determined by the fire code official.

Exceptions:

1. The display of salable goods.
2. Educational materials and product brochures that are stored, distributed and maintained in an approved manner.
3. Live vegetation of an approved type.

Section 117. Subsection 901.4 of the 2006 International Fire Code is amended as follows:

901.4 Installation. Individuals who install, inspect, test or maintain life safety systems and equipment shall obtain the proper certificate from the fire code official in accordance with Administrative Rule 9.01.07 *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.

CITY CLERK

* * *

Section 118. Subsection 901.5 of the 2006 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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

* * *

Section 119. Subsection 901.6 of the 2006 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, other than NFPA 13D sprinkler systems, shall be confidence tested in accordance with Administrative Rule 9.02.07 *Confidence Test Requirements for Life Safety Systems.* Non-required fire protection systems and equipment shall be inspected, tested and maintained or removed when approved by the code official.

* * *

EMS CITY CLERK

Section 120. Subsection 901.6.2 of the 2006 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 three years and shall be copied 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 9.02.07 *Confidence Test Requirements for Life Safety Systems.*

* * *

Section 121. Subsection 901.7 of the 2006 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 9.06.07 *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 122. Subsection 902.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

902.1 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.

ALARM NOTIFICATION APPLIANCE. A fire alarm system component such as a bell, horn, speaker, light, or text display that provides audible, tactile, or visible outputs, or any combination thereof.

* * *

FIRE DETECTOR, AUTOMATIC. A device designed to detect the presence of a fire signature and to initiate action.

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

FIRE PROTECTION SYSTEM. Approved devices, equipment and systems or combinations of systems used to detect a fire, activate an alarm, extinguish or control a fire, control or manage smoke and products of a fire or any combination thereof.

* * *

HALOGENATED EXTINGUISHING SYSTEM. A fire-extinguishing system using one or more atoms of an element from the halogen chemical series: fluorine, chlorine, bromine and iodine.

HIGH-RISE BUILDING. Buildings having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

IMPAIRMENT COORDINATOR. The person responsible for the maintenance of a particular fire protection system.

CITY CLERK

* * *

MULTIPLE-STATION SMOKE ALARM. Two or more single-station alarm devices that are capable of interconnection such that actuation of one causes all integral or separate audible alarms to operate.

[W] NIGHTCLUB. An A-2 occupancy use under the 2006 *Seattle Building Code* in which the aggregate area of concentrated use of unfixed chairs and standing space that is specifically designated and primarily used for dancing or viewing performers exceeds three hundred fifty square feet, excluding adjacent lobby areas. "Nightclub" does not include theaters with fixed seating, banquet halls, or lodge halls.

NUISANCE ALARM. An alarm caused by mechanical failure, malfunction, improper installation, or lack of proper maintenance, or an alarm activated by a cause that cannot be determined.

[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.

RECORD DRAWINGS. Drawings ("as builts") that document the location of all devices, appliances, wiring, sequences, wiring methods, and connections of the components of a fire alarm system as installed.

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CITY CLERK

Section 123. Subsection 903.2.1 of the 2006 International Fire Code is amended as follows:

903.2.1 Group A. An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1, A-2, A-3, and A-4 occupancies, the automatic sprinkler system shall be provided throughout the floor area where the Group A-1, A-2, A-3 or A-4 occupancy is located, and in all floors between the Group A occupancy and the level of exit discharge, <u>including the level of exit discharge</u>. For Group A-5 occupancies, the automatic sprinkler system shall be provided in the spaces indicated in Section 903.2.1.5.

903.2.1.1 Group A-1. An automatic sprinkler system shall be provided for Group A-1 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m2);
2. The fire area has an occupant load of 300 or more;
3. The fire area is located on a floor other than the level of exit discharge; or
4. The fire area contains a multitheater complex.

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 (465 m2);
2. The fire area has an occupant load of 100 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

CITY CLERK

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 124. A new subsection 903.2.1.6 is adopted to read as follows:

903.2.1.6 Nightclub. An automatic sprinkler system shall be provided in accordance with 903.3.1.1 throughout an occupancy with a nightclub. Existing nightclubs shall be provided with automatic sprinklers not later than December 1, 2009.

Section 125. Subsection 903.2.2 of the 2006 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 m2) 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.~~))

Exceptions:

1. Portable school classrooms, provided the aggregate area of any cluster 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.*

CITY CLERK

2. Group E occupancies with an occupant load of 50 or less.

Section 126. Subsection 903.2.7 of the 2006 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 *Seattle Residential Code* and Chapter 5 of this code are not required to be sprinklered.

Section 127. 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 128. A new subsection 903.2.10.4 is 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:

CITY CLERK

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 all of 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.

Section 129. Subsection 903.3.1.1 of the 2006 International Fire Code is amended as follows:

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 <u>and in accordance with Administrative Rule 9.03.07, *Automatic Sprinklers and Standpipes,*</u> 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

CITY CLERK

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.

903.3.1.1.2 High-rise building sprinkler system design. In high-rise buildings combination standpipe/sprinkler risers using 6 in. pipe minimum, shall be used with the sprinkler system connected between 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 serving the combination system shall be provided on separate streets well separated from each other. At least one of the fire department connections shall be connected to the riser above a riser isolation valve.

When a mid-level fire pump is required by NFPA 14 two pumps with the same rating shall be installed.

CITY CLERK

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

Section 130. Subsection 903.3.1.3 of the 2006 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 shall be installed throughout in accordance with NFPA 13D. A NFPA 13D sprinkler system may be installed in townhouses when approved by the fire code official if each unit has its own water service, each unit exits to a public way, no unit is located over another unit or common space, and each unit and contiguous attic and crawl spaces are separated from other units by at least a 1-hour fire partition.

Section 131. Subsection 903.3.3 of the 2006 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.~~))Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width and depth, and for all multi-level exhibit booths. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

CITY CLERK

Exceptions:

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

2. Temporary single-level covered booths, kiosks, or concession stands less than 300 sq. ft. (28 m^2) in area that are in spaces operating under a temporary place of assembly permit.

Section 132. Subsection 903.3.5.1.2 of the 2006 International Fire Code is amended as follows:

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

Section 133. Subsection 903.3.5.2 of the 2006 International Fire Code is amended as follows:

903.3.5.2 Secondary water supply. A secondary on-site water supply providing a minimum net volume of 33,000 (124 918 L) gallons shall be provided for high-rise buildings. A lesser amount equal to the hydraulically calculated sprinkler demand, including the hose stream requirement((~~,~~)) in NFPA 13, shall be allowed. ((~~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 of not less than 30 minutes for buildings with light hazard occupancies only and a 60 minute duration for buildings with ordinary hazard occupancies as defined by NFPA. ((~~as determined by the occupancy hazard classification in accordance with NFPA 13.~~))

Exception: Existing buildings including those undergoing substantial renovation.

EMS CITY CLERK

Section 134. Subsection 903.4 of the 2006 International Fire Code is amended as follows:

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. Automatic sprinkler systems protecting one- and two-family dwellings, and townhouses.
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.

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.

CITY CLERK

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 Service Company or as a Fire Alarm Service – Local Company that 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 or underground vaults 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.

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Section 135. A new subsection 903.6.2 is adopted to read as follows:

Ens CITY CLERK

[W] 903.6.2 Nightclub. All nightclubs shall be equipped with an approved automatic fire extinguishing system in accordance with 903.3.1.1 throughout the occupancy by December 1, 2009.

Section 136. Subsection 904.3 of the 2006 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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.

* * *

Section 137. Subsection 904.5 of the 2006 International Fire Code is amended as follows:

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 9.01.07 *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 9.01.07 *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.

CITY CLERK

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 9.02.07 *Confidence Test Requirements for Life Safety System.*

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Section 138. Subsection 904.6 of the 2006 International Fire Code is amended as follows:

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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 17 and their listing.

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 9.02.07 *Confidence Test Requirements for Life Safety System.*

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Section 139. Subsection 904.7 of the 2006 International Fire Code is amended as follows:

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 9.01.07 *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 9.02.07 *Confidence Test Requirements for Life Safety System.*

Section 140. Subsection 904.8 of the 2006 International Fire Code is amended as follows:

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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12 and their listing.

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 9.02.07 *Confidence Test Requirements for Life Safety System.*

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CITY CLERK

Section 141. Subsection 904.9 of the 2006 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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 12A and their listing.

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 9.02.07 *Confidence Test Requirements for Life Safety System.*

* * *

Section 142. Subsection 904.10 of the 2006 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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* in accordance with NFPA 2001 and their listing.

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 9.02.07 *Confidence Test Requirements for Life Safety System.*

CITY CLERK

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Section 143. Subsection 904.11 of the 2006 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. Pre-engineered 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 shall be installed by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.07 *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.

CITY CLERK

Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 710B and listed, labeled and installed in accordance with Section 304.1 of the *International Mechanical Code*.

* * *

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 9.01.07 *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 9.02.07 *Confidence Test Requirements for Life Safety System*.

* * *

Section 144. Subsection 905.2 of the 2006 International Fire Code is amended as follows:

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14, and Administrative Rule 9.03.07, *Automatic Sprinklers and Standpipes*.

Section 145. Subsection 905.3.1 of the 2006 International Fire Code is amended as follows:

905.3.1 Building height. Class III standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the

CITY CLERK

lowest level of the fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.

Exceptions:

1. Class I standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.
3. Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.
4. Class I standpipes are allowed in basements equipped throughout with an automatic sprinkler system.
5. In determining the lowest level of fire department vehicle access, it shall not be required to consider:

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

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

6. <u>Standpipe systems are not required in townhouses.</u>

Section 146. Subsection 905.3.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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.

Exceptions:

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 147. Subsection 905.3.3 of the 2006 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 automatic or manual standpipe system with ((~~where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to a system sized to deliver water at 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.

Section 148. Subsection 905.3.7 of the 2006 International Fire Code is amended as follows:

BMS CITY CLERK

905.3.7 Marinas and boatyards. New marinas and boatyards shall be equipped throughout with standpipe systems in accordance with ((~~NFPA 303~~))Chapter 46.

Section 149. A new subsection 905.3.8 is adopted to read as follows:

905.3.8 High-rise building standpipes. Standpipe risers in high-rise buildings shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 inches (152 mm). Two 2½ -inch (64 mm) hose connections shall be provided on every 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 (19 L/s) at a minimum pressure of 150 psi (1034 kPa) [maximum 205 psi (1379 kPa)] at each standpipe connection, in addition to the flow and pressure requirements contained in NFPA 14.

Section 150. Subsection 905.4 of the 2006 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((,)) or the floor landing, but must be consistent throughout the building, unless otherwise approved by the fire code official.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.

   Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to

CITY CLERK

100 feet (30 480 mm) of hose, a hose connection shall not be required at the horizontal exit.

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

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall and at each 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 2 ½ inch (64 mm) hose connection located ((~~either~~))on the roof at least 10 feet (3048 mm) from the roof edge, skylight, light well or other opening, unless protected by a 42-inch-high (1067 mm) guardrail or equivalent. Additional roof connections shall be provided so that all portions of the roof are within 200 feet (60 960 mm) of hose travel distance from a standpipe hose connection. 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 a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) of hose travel distance from a hose connection or the most remote portion of a

BNS CITY CLERK

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. The protected enclosure shall be a corridor constructed as a smoke barrier from the exit enclosure to the standpipe connection. Additional hose connections in parking garages are not required to be accessed through or located in protected enclosures.((~~the fire code official is authorized to require that additional hose connections be provided in approved locations.~~))

Section 151. Subsection 905.9 of the 2006 International Fire Code is amended as follows:

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 152. Subsection 906.1 of the 2006 International Fire Code is amended as follows:

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

1. In new and existing Group A, B, E, F, H, I , M, R-1, R-2, ((~~R-4~~)) and S occupancies.

DIS CITY CLERK

((~~**Exception:** In new and existing Group A, B and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.~~))

2. Within 30 feet (9144 mm) of commercial cooking equipment.

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

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

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

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

Section 153. Subsection 906.2 of the 2006 International Fire Code is amended as follows:

906.2 General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.

2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every ((~~three~~)) year((s)) for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met:

CITY CLERK

2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.

2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.

2.3. The extinguishers shall be installed inside of a building or cabinet in a non-corrosive environment.

2.4. Electronic monitoring devices and supervisory circuits shall be tested every ((~~three~~)) year((s)) when extinguisher maintenance is performed.

2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to ensure that hydrostatic tests are conducted at the frequency required by NFPA10.

Section 154. Subsection 907.1 of the 2006 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 comply with Section 907 of the *Seattle Fire Code.* For the purposes of this section, fire walls not located on a property line shall not constitute a separate building.

CITY CLERK

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 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:

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 system's annunciator panel (or main panel) is also provided with annunciator panels with reset capability for every other system in the building.

* * *

Section 155. Subsection 907.2.7.1 of the 2006 International Fire Code is hereby repealed.

Section 156. Subsections 907.2.8. of the 2006 International Fire Code is amended as follows:

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

Exceptions:

CITY CLERK

1. A manual and automatic fire alarm system is not required in buildings not more than two stories in height where all individual 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 individual 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:~~

~~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.~~))

907.2.8.2 Automatic detection((~~fire alarm system~~)). ((~~An a~~))Automatic ((~~fire alarm system~~))smoke detectors shall be installed throughout all interior corridors serving sleeping units. Automatic heat detectors shall be provided in any unsprinklered interior areas outside guestrooms other than attics and crawl spaces.

Exception: ((~~An a~~))Automatic ((~~fire detection system~~))smoke detection is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exterior exit access that leads directly to an exit.

* * *

Section 157. Subsection 907.2.9 of the 2006 International Fire Code is amended as follows:

CITY CLERK

907.2.9 Group R-2. Except in townhouses meeting the requirements of Section 907.2.9.2 ((~~A~~))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:~~

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

~~2.2. The notification appliances will activate upon sprinkler flow.~~

~~3~~))2. 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 Section 903.3.1.1 or 903.3.1.2, provided that dwelling units

CITY CLERK

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 1023.6, Exception 4.

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.

907.2.9.2 Townhouses. Where a fire alarm system is required in accordance with Section 907.2.9, a fire alarm system is not required for townhouse structures meeting all of the following criteria:

1. Each unit has its own exit to a public way.
2. No unit is located above any other unit or common space.
3. Each unit and contiguous attic and crawl spaces are separated from other units by at least a one-hour fire partition.
4. Each unit is provided with an interconnected smoke alarm system that includes heat detectors in the garage.
5. The sprinkler waterflow switch activates the interconnected smoke alarm and heat detection system within the affected unit.

Section 158. Subsection 907.2.12 of the 2006 International Fire Code is amended as follows:

907.2.12 High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be

CITY CLERK

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*.
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 503.1.1 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*.~~))

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

1. In each ((~~mechanical equipment,~~))electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, elevator machine rooms, and in elevator lobbies.

CITY CLERK

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 (2.4m^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 that are pressurized stairways.

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 for a general or staged evacuation on a minimum of the alarming floor, the floor above, and ((~~the~~))two floors below in accordance with the building's fire safety and evacuation plans required by Section 404. For the purpose of this section a floor means all floors interconnected without automatic opening protectives. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Each exit stairway((s)).
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.

CITY CLERK

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.

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

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

907.2.12.2.3 Standard. The emergency voice/alarm communication system shall be designed and installed in accordance with NFPA 72.

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, 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 159. Subsection 907.2.18.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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 that are pressurized stairways.

Section 160. Subsection 907.4.1 of the 2006 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).

Section 161. Subsection 907.7 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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 smoke detectors and smoke alarms located inside dwelling units and sleeping units.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Any other fire suppression system installed within the building.

Section 162. Subsection 907.9.1 of the 2006 International Fire Code is amended as follows:

907.9.1 ((~~Zoning indicator panel~~))Annunciator panel. ((~~A zoning indicator panel and the associated controls shall be provided in an approved location.~~)) All fire alarm systems shall include either an annunciator or the main control panel located inside the building at the main building entrance. The fire code official may approve exterior annunciator panels designed specifically for the 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.

CITY CLERK

Section 163. Subsection 907.10.1 of the 2006 International Fire Code is amended as follows:

907.10.1 Visible alarms. Visible alarm notification appliances shall be provided in accordance with Sections 907.10.1.1 through 907.10.1.4.

Exceptions:

1. Visible alarm notification appliances are not required in alterations, except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed in accordance with Administrative Rule 9.09.07 *Visible Alarm Notification Devices*.
2. Visible alarm notification appliances shall not be required in exits as defined in Section 1002.1.

* * *

Section 164. Subsection 907.10.2 of the 2006 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.

CITY CLERK

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 shall be provided in accordance with NFPA72 and audible alarm notification appliances shall not be required. In assembly facilities with high sound levels such as nightclubs and bars an interface shall be provided between the fire alarm system and noise source to eliminate the noise source.

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. Private mode signaling in accordance with NFPA 72 shall be allowed in areas of Group I-2 occupancies where patients are not expected to self-evacuate.
2. Audibility is not required for fire detection systems monitored by an approved central station in buildings in which a fire alarm is not required by this section.

907.10.2.1 Audible alarms in existing buildings. Required fire alarms 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 165. Subsection 907.12 of the 2006 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 smoke detectors shall not activate a fire alarm signal. Activation of a duct smoke detector shall initiate a

CITY CLERK

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.

Exception((s)):

((~~1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the building's alarm notification appliances.~~

~~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 166. Subsection 907.15 of the 2006 International Fire Code is amended as follows:

907.15 Monitoring. Fire alarm systems required by this chapter or by the *International Building Code* shall be monitored by an approved supervising station in accordance with NFPA72.

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. Automatic sprinkler systems in one- and two-family dwellings <u>and townhouses.</u>

Section 167. Subsection 907.17 of the 2006 International Fire Code is amended as follows:

907.17 Acceptance tests. Upon completion of the installation of the fire alarm system, <u>and after the electrical inspector has signed off on the installation,</u> alarm notification appliances and

CITY CLERK

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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment*.

Section 168. Subsection 907.20 of the 2006 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 10 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 9.01.07 *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 9.02.07 *Confidence Test Requirements for Life Safety Systems.*

Section 169. 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.

CITY CLERK

Section 170. Subsection 909.11 of the 2006 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 from the normal building power system. Secondary power shall be from an approved ((~~standby~~)) emergency 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 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 this code ((~~or~~)) and the ((~~ICC~~)) *Seattle Electrical Code.*

909.11.1 Power sources and power surges. Elements of the smoke management system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span a 15-minute primary power interruption. Elements of the smoke management system susceptible to power surges shall be suitably protected by conditioners, suppressors or other approved means.

909.11.2 Wiring. In addition to meeting requirements of the *Seattle Electrical Code,* all wiring regardless of voltage, shall have fire-resistance-rated protection of at least two hours or as required in rules promulgated by the building official.

Exception: Subject to the approval of the building official, fire-resistance-rating is not required for wiring located in a parking garage.

CITY CLERK

Section 171. Subsection 909.12.1 of the 2006 International Fire Code is amended as follows:

909.12.1 Wiring. ((~~In addition to meeting requirements of the ICC *Electrical Code*, all wiring regardless of voltage, shall be fully enclosed within continuous raceways.~~)) See Section 909.11.2.

Section 172 . Subsection 909.12.3 of the 2006 International Fire Code is amended as follows:

909.12.3 Automatic control. Where completely automatic control is required or used, the automatic-control sequences shall be initiated from an appropriately zoned automatic sprinkler system complying with Section 903.3.1.1, manual controls that are readily accessible to the fire department and any smoke detectors ((~~required by engineering analysis~~)).

Section 173. Subsection 909.16 of the 2006 International Fire Code is amended as follows:

909.16 Fire-fighter's smoke control panel. A fire-fighter's smoke control panel for fire department emergency response purposes only shall be provided and shall include manual control or override of automatic control for mechanical smoke control systems. The panel shall be located in a fire command center complying with Section 911 in high-rise buildings or buildings with smoke-protected assembly seating. In all other buildings, the fire-fighter's smoke control panel shall be installed in an approved location adjacent to the fire alarm control panel. The fire-fighter's smoke control panel shall comply with Sections 909.16.1 through 909.16.3.

909.16.1 Smoke control systems. Fans within the building shall be shown on the fire-fighter's control panel. A clear indication of the direction of airflow and the relationship of components

CITY CLERK

shall be displayed. Status indicators shall be provided for all smoke control fans ((~~equipment, annunciated by fan and zone, and by pilot-lamp-type indicators~~)) as follows:

1. Fans((~~, dampers and other operating equipment~~)) in their normal status—WHITE.
2. Fans((~~, dampers and other operating equipment~~)) in their off ((~~or closed~~)) status—RED.
3. Fans((~~, dampers and other operating equipment~~)) in their on ((~~or open~~)) status—GREEN.
4. Fans((~~, dampers and other operating equipment~~)) in a fault status—YELLOW/AMBER.

909.16.2 Smoke control panel. The fire-fighter's control panel shall provide control capability over the complete smoke-control system equipment within the building as follows:

1. ON-AUTO-OFF control over each shaft pressurization fan. ((~~individual piece of operating smoke control equipment that can also be controlled from other sources within the building. This includes stairway pressurization fans; smoke exhaust fans; supply, return and exhaust fans; elevator shaft fans and other operating equipment used or intended for smoke control purposes.~~))
2. ((~~OPEN-AUTO-CLOSE control over individual dampers relating to smoke control and that are also controlled from other sources within the building.~~)) AUTO-OFF-POSITIVE PRESSURE-NEGATIVE PRESSURE control over each smoke control zone designed with such features. Individual control of each damper and fan used to achieve the positive or negative pressure condition is not required.
3. ((~~ON-OFF or OPEN-CLOSE control over smoke control and other critical equipment associated with a fire or smoke emergency and that can only be controlled from the fire-fighter's control panel.~~)) AUTO-EXHAUST-OFF control over each smoke control

CITY CLERK

zone using the exhaust method of smoke control. Individual control of each damper and fan used to exhaust is not required.

Exception((s)):

((~~1.~~))Complex exhaust systems using multiple exhaust fans and/or zones may require individual fan control when required by the fire code official. ((~~Complex systems, where approved, where the controls and indicators are combined to control and indicate all elements of a single smoke zone as a unit.~~

~~2. Complex systems, where approved, where the control is accomplished by computer interface using approved, plain English commands.~~))

909.16.3 Control action and priorities. The fire-fighter's control panel actions shall be as follows:

1. ON-OFF and OPEN-CLOSE control actions shall have the highest priority of any control point within the building. Once issued from the fire-fighter's control panel, no automatic or manual control from any other control point within the building shall contradict the control action. Where automatic means are provided to interrupt normal, nonemergency equipment operation or produce a specific result to safeguard the building or equipment (i.e., duct freezestats, duct smoke detectors, high-temperature cutouts, temperature-actuated linkage and similar devices), such means shall be capable of being overridden by the fire-fighter's control panel. The last control action as indicated by each fire-fighter's control panel switch position shall prevail. In no case shall control actions require the smoke control system to assume more than one configuration at any one time.

CITY CLERK

Exception: Power disconnects required by the ((~~ICC~~)) *Seattle Electrical Code.*

* * *

Section 174. Subsection 909.18.8 of the 2006 International Fire Code is amended as follows:

909.18.8 Special inspections for smoke control. Smoke control systems shall be tested by a special inspector for compliance with the approved plans.

909.18.8.1 Scope of testing. Special inspections shall be conducted in accordance with the following:

((~~1. During erection of ductwork and prior to concealment for the purposes of leakage testing and recording of device location.~~

~~2.~~))Prior to occupancy and after sufficient completion for the purposes of pressure-difference testing, flow measurements, and detection and control verification.

* * *

Section 175. Subsection 909.20.4 of the 2006 International Fire Code is amended as follows:

909.20.4 ((~~Dedicated s~~)) Smoke control systems.

909.20.4.1 Dedicated smoke control systems. Dedicated smoke control systems shall be operated for each control sequence semi-annually. The system shall also be tested under standby power conditions.

909.20.4.2 Nondedicated smoke control systems. Nondedicated smoke control systems

CITY CLERK

shall be operated for each control sequence annually. The system shall also be tested under standby power conditions.

Section 176. Subsection 909.20.5 of the 2006 International Fire Code is repealed, and a new subsection 909.20.5 is adopted to read as follows:

909.20.5 Stair pressurization Exit stairways shall be pressurized to a minimum of 0.15 inch of water (37 Pa) and a maximum of 0.35 inch of water (87 Pa) in the shaft relative to the building measured with all stairway doors closed under maximum anticipated stack pressures. The pressure differential shall be measured between the smokeproof enclosure and the adjacent area. In residential buildings, the pressure differential is permitted to be measured between the smokeproof enclosure and the dwelling units.

Exception: The pressure differential is permitted to be measured relative to outdoor atmosphere on floors other than the following:

1. the fire floor,
2. the two floors immediately below the fire floor, and
3. the floor immediately above the fire floor.

909.20.5.1 Supply Air. Air for stairway pressurization shall be supplied at intervals sufficient to maintain the required pressure throughout the shaft.

Note: The performance goal for Section 909.20.5.1 is compliance with minimum and maximum pressures at all levels of the shaft, and to ensure upward flow of air and smoke.

909.20.5.2 Air intake. Supply air shall be taken directly from an outside, uncontaminated source at least 20 feet (6096 mm) from any air exhaust system or outlet. Air intakes shall be

CITY CLERK

located at the exterior of the building. The intake shall be continuous to the exterior of the building. Two smoke detectors shall be located in the duct in accordance with NFPA 72 arranged to automatically shut down the fan system only when both smoke detectors activate. The detectors shall be located upstream of the fan and shall be connected to the fire alarm as a supervisory signal.

909.20.5.3 Dampered relief opening. The exit enclosure shall be equipped with a barometric dampered relief opening at the top, and a motorized damper as required by the *Washington State Energy Code with Seattle Amendments*. The motorized damper shall be of the normally open type (open with the power off). Activation of the damper shall be initiated by the building fire alarm system and by actuation of the automatic sprinkler system.

The pressurization system shall be capable of maintaining the pressure required by Section 909.20.5 while 2,500 cubic feet per minute of air is being discharged through the relief opening.

Supply ducts between the exterior of the building and the exit enclosure shall be enclosed in construction at least equivalent to that of the exit enclosure.

Section 177. A new subsection 909.20.6 is adopted to read as follows:

909.20.6 Pressurization equipment. The pressurization equipment required by Section 909.20.5 shall be activated by a fire alarm signal originating anywhere in the building. Smoke detectors shall be installed in accordance with Section 907.10.

909.20.6.1 Pressurization systems. Smokeproof enclosure pressurization systems shall be independent of other building ventilation systems.

CITY CLERK

Exception: Ventilation systems other than smokeproof enclosure supply air systems are permitted to be used to exhaust air from adjacent space when necessary to maintain pressure relationships. Ventilation systems used to achieve smokeproof enclosure pressurization are not required to comply with Section 909.

The equipment and ductwork shall comply with any one of the following:

1. Equipment and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by 2-hour fire barriers.
2. Equipment and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by 2-hour fire barriers.
3. Equipment and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by 2-hour fire barriers.

Interpretation I909.20: Dampers other than motorized dampers required by the *Washington State Energy Code with Seattle Amendments* are not permitted in smokeproof enclosure system air supply unless approved by the building official.

909.20.6.2 Emergency power. Mechanical stair shaft pressurization systems and automatic fire detection systems shall be powered by an approved emergency power system conforming to Section 403.11 and Chapter 27 of the *Seattle Building Code*.

CITY CLERK

909.20.6.3 Acceptance and testing. Before the mechanical equipment is approved, the system shall be tested to confirm that the system is operating in compliance with these requirements. Mechanical stair shaft pressurization systems shall comply with Sections 909.18 through 909.19.

Section 178. Section 1002 of the 2006 International Fire Code is amended as follows:

1002.1 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.

* * *

EXIT PASSAGEWAY. An exit component that is separated from all other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.

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.

* * *

Section 179. Subsection 1003.2 of the 2006 International Fire Code is amended as follows:

1003.2 Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

CITY CLERK

Exceptions:

1. ((~~Sloped ceilings~~)) Ceilings in accordance with Section 1208.2 of the *International Building Code*.

2. ((~~Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2~~))Parking garages in accordance with Section 406 of the *International Building Code*.

3. Allowable projections in accordance with Section 1003.3.

4. Stair headroom in accordance with Section 1009.2.

5. Door height in accordance with Section 1008.1.1.

Section 180. Table 1004.1.1 of the 2006 International Fire Code is amended as follows:

TABLE 1004.1.1

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT
Accessory storage areas, mechanical equipment room[1]	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	20 gross
Baggage claim	300 gross
Baggage handling	100 gross

CITY CLERK

Concourse 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) 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 without sprinkler protection with sprinkler protection	 100 gross 130 gross
Commercial laboratories	100 gross
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational Classroom area Shops, laboratories and other vocational room	20 net 50 net

CITY CLERK

areas	
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	240 gross
Inpatient treatment areas	100 gross
Outpatient areas	120 gross
Sleeping areas	
Kitchens, commercial	200 gross
Library	50 net
Reading rooms	100 gross
Stack area	
Locker rooms	50 gross
Mercantile	60 gross
Areas on other floors	30 gross
Basement and grade floor areas	300 gross
Storage, stock, shipping areas	
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	50 gross
Rink and pool	15 gross

CITY CLERK

Decks	
Stages and platforms	15 net
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m^2.

1. For electrical equipment areas, see also Sections 110.26, 110.32 and 110-33 of the *Seattle Electrical Code.*

Section 181. Subsection 1006.2 of the 2006 International Fire Code is amended as follows:

1006.2 Illumination level. Illumination shall be provided at every point in ((F))the means of egress. The illumination level shall not be less than 1 foot-candle (11 lux) at the walking surface level. Luminaries shall be installed whenever exit signs are required as specified in Section 1011.

Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface 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 premises' 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 Section 1006.3.

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

CITY CLERK

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:

1.1 Interior and exterior stairways and landings and outside building exit	At least one per landing
1.2 Corridors and halls and designated means of egress paths in parking garages	At least one for each 40 lineal feet
1.3 Lobbies, vestibules, foyers, elevator cars and other similar areas as required	At least one for each 250 square feet
1.4 Warehouses	See Item 2 below.

These fixtures are permitted to 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. Installations using incandescent lamps shall have a minimum wattage of at least 3 times the fluorescent requirements. Use of other light sources is subject to the approval of the building official.

Exceptions:

1. In warehouses, the allowable minimum illumination is permitted to be 0.1 watt per square foot (0.03 watts for fluorescent) provided fixtures are placed either:

EDMS CITY CLERK

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 is permitted to 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 premises 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 is permitted to 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 is permitted to 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 battery operated fixtures shall provide the same level of illumination required for hard-wired fixtures.

CITY CLERK

Section 182. Subsection 1006.3 of the 2006 International Fire Code is amended as follows:

1006.3 Illumination ((~~emergency~~)) power supply. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate the following areas:

1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
2. Corridors, exit enclosures and exit passageways 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 1024.1, in buildings required to have two or more exits.
5. Exterior landings, as required by Section 1008.1.5, for 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 *International Building Code*.

CITY CLERK

Section 183. Subsection 1007.2 of the 2006 International Fire Code is amended as follows:

1007.2 Continuity and components. Each required accessible means of egress shall be continuous to a public way and shall consist of one or more of the following components:

1. Accessible routes complying with Section 1104 of the *International Building Code*.
2. Stairways within vertical exit enclosures complying with Sections 1007.3 and 1020.
3. Exterior exit stairways complying with Sections 1007.3 and 1023.
4. Elevators complying with Section 1007.4.

Interpretation I1007.2a: An exit passageway is not required on the level of exit discharge to connect the elevator with the exterior exit door.

5. Platform lifts complying with Section 1007.5.
6. Horizontal exits complying with Section 1022.
7. Ramps complying with Section 1010.
8. Areas of refuge complying with Section 1007.6.

Exceptions:

1. Where the exit discharge is not accessible, an exterior area for assisted rescue must be provided in accordance with Section 1007.8.
2. Where the exit stairway is open to the exterior, the accessible means of egress shall include either an area of refuge in accordance with Section 1007.6 or an exterior area for assisted rescue in accordance with Section 1007.8.

CITY CLERK

1007.2.1 Elevators required. In buildings where a required accessible floor is four or more stories above or below a level of exit discharge, at least one required accessible means of egress shall be an elevator complying with Section 1007.4.

Interpretation I1007.2b: The level of exit discharge is counted when determining whether an accessible floor is four stories above or below a level of exit discharge.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a horizontal exit and located at or above the level of exit discharge.
2. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a ramp conforming to the provisions of Section 1010.

Interpretation I1007.2c: In exception 2, the ramp shall be part of an accessible means of egress.

Section 184. Subsection 1007.4 of the 2006 International Fire Code is amended as follows:

1007.4 Elevators. In order to be considered part of an accessible means of egress, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. ((~~Standby~~)) Legally required standby power shall be provided in accordance with Section 604.2.5 of this code and Section 2702((~~3003~~)) of the *International Building Code and*

CITY CLERK

the Seattle Electrical Code. The elevator shall be accessed from either an area of refuge complying with Section 1007.6 or a horizontal exit.

Exception: Elevators are not required to be accessed from an area of refuge or horizontal exit in open parking garages.

Section 185. Subsection 1008.1 of the 2006 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 1018.2. Doors provided for egress purposes in numbers greater than required by this code shall meet the requirements of this section. See Section 3201 of the *International Building Code* 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.

1008.1.1 Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The

CITY CLERK

maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41.5 inches (1054 mm). The height of doors shall not be less than 80 inches (2032 mm).

Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies.
2. Door openings to resident sleeping units in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.
4. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited.
5. Door openings within a dwelling unit or sleeping unit shall not be less than 78 inches (1981 mm) in height.
6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.
7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit, Type A unit or Type B unit.
8. Door openings required to be accessible within Type B units shall have a minimum clear width of 31.75 inches (806 mm).

CITY CLERK

1008.1.1.1 Projections into clear width. There shall not be projections into the required clear width lower than 34 inches (864 mm) above the floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the floor or ground shall not exceed 4 inches (102 mm).

1008.1.2 Door swing. Egress doors shall be side-hinged <u>or pivoted</u> 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. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.
6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.
7. Power-operated doors in accordance with Section 1008.1.3.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.

<u>[W] 9. In other than Group 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.</u>

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-

LMS CITY CLERK

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.

1008.1.3 Special doors. Special doors and security grilles shall comply with the requirements of Sections 1008.1.3.1 through 1008.1.3.5.

1008.1.3.1 Revolving doors. Revolving doors shall comply with the following:

1. Each revolving door shall be capable of collapsing into a bookfold position with parallel egress paths providing an aggregate width of 36 inches (914 mm).
2. A revolving door shall not be located within 10 feet (3048 mm) of the foot of or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the revolving doors.
3. The revolutions per minute (rpm) for a revolving door shall not exceed those shown in Table 1008.1.3.1.
4. Each revolving door shall have a side-hinged swinging door which complies with Section 1008.1 in the same wall and within 10 feet (3048 mm) of the revolving door.

TABLE 1008.1.3.1

REVOLVING DOOR SPEEDS

INSIDE DIAMETER (feet-inches)	POWER-DRIVEN-TYPE SPEED CONTROL (rpm)	MANUAL-TYPE SPEED CONTROL (rpm)
6-6	11	12

CITY CLERK

7-0	10	11
7-6	9	11
8-0	9	10
8-6	8	9
9-0	8	9
9-6	7	8
10-0	7	8

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

1008.1.3.1.1 Egress component. A revolving door used as a component of a means of egress shall comply with Section 1008.1.3.1 and the following three conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.
2. Each revolving door shall be credited with no more than a 50-person capacity.
3. Each revolving door shall be capable of being collapsed when a force of not more than 130 pounds (572) is applied within 3 inches (76 mm) of the outer edge of a wing.

1008.1.3.1.2 Other than egress component. A revolving door used as other than a component of a means of egress shall comply with Section 1008.1.3.1. The collapsing force of a revolving door not used as a component of a means of egress shall not be more than 180 pounds (801 N).

CITY CLERK

Exception: A collapsing force in excess of 180 pounds (801 N) is permitted if the collapsing force is reduced to not more than 130 pounds (572) when at least one of the following conditions is satisfied:

1. There is a power failure or power is removed to the device holding the door wings in position.
2. There is an actuation of the automatic sprinkler system where such system is provided.
3. There is an actuation of a smoke detection system which is installed in accordance with Section 907 to provide coverage in areas within the building which are within 75 feet (22 860 mm) of the revolving doors.
4. There is an actuation of a manual control switch, in an approved location and clearly defined, which reduces the holding force to below the 130-pound (572) force level.

1008.1.3.2 Power-operated doors. Where means of egress doors are operated by power, such as doors with a photoelectric-actuated mechanism to open the door upon the approach of a person, or doors with power-assisted manual operation, the design shall be such that in the event of power failure, the door is capable of being opened manually to permit means of egress travel or closed where necessary to safeguard means of egress. The forces required to open these doors manually shall not exceed those specified in Section 1008.1.2, except that the force to set the door in motion shall not exceed 50 pounds (220 N). The door shall be capable of swinging from any position to the full width of the opening in which such door is installed when a force is applied to the door on the side from which egress is made. Full-

CITY CLERK

power-operated doors shall comply with BHMA A156.10. Power-assisted and low-energy doors shall comply with BHMA A156.19.

Exceptions:

1. Occupancies in Group I-3.
2. Horizontal sliding doors complying with Section 1008.1.3.3.
3. For a biparting door in the emergency breakout mode, a door leaf located within a multiple-leaf opening shall be exempt from the minimum 32-inch (813 mm) single-leaf requirement of Section 1008.1.1, provided a minimum 32-inch (813 mm) clear opening is provided when the two biparting leaves meeting in the center are broken out.

1008.1.3.3 Horizontal sliding doors. In other than Group H occupancies, horizontal sliding doors permitted to be a component of a means of egress in accordance with Exception 6 to Section 1008.1.2 shall comply with all of the following criteria:

1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.
2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.

CITY CLERK

4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable fire protection rating and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 715.4.7.3, shall be installed in accordance with NFPA 80 and shall comply with Section 715.
6. The door assembly shall have an integrated standby power supply.
7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

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 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

CITY CLERK

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: To be approved, components must bear a "recognized component" mark from an approved agency.

1008.1.3.5 Security grilles. In Groups B, F, M and S, horizontal sliding or vertical security grilles are permitted at the main exit and shall be openable from the inside without the use of a key or special knowledge or effort during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more means of egress are required, not more than one-half of the exits or exit access doorways shall be equipped with horizontal sliding or vertical security grilles.

BDS CITY CLERK

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 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 1018.2, which are not on an accessible route.

3. In Group R-3 occupancies not required to be Accessible units, Type A units or Type B units, the landing at an exterior doorway shall not be more than 7.75 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, 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.

DHS CITY CLERK

1008.1.5 Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required 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 Groups R-3 and U and within individual units of Group R-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), 1008.1.5(2) and 1008.1.5(3) for illustrations of the requirements of this section.

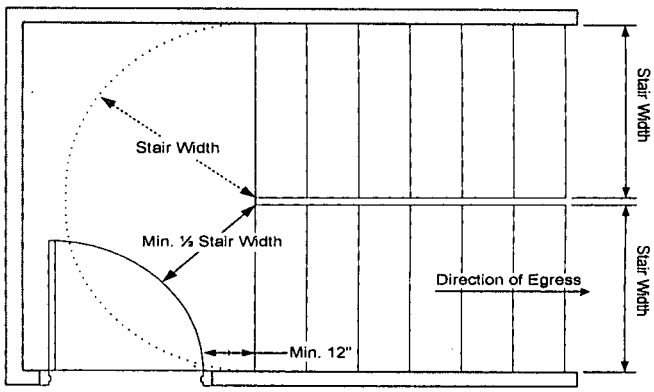

Figure 1008.1.5(2)
(Landing Dimensions Only)

CITY CLERK

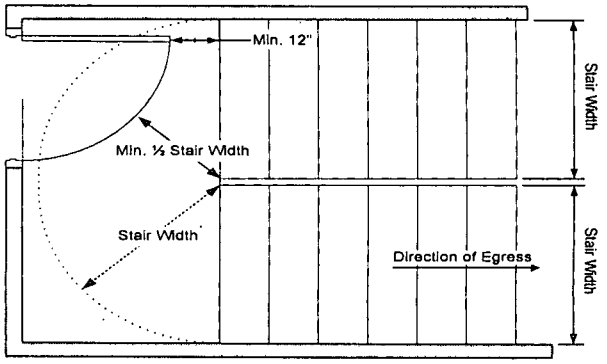

Figure 1008.1.5(3)
(Landing Dimensions Only)

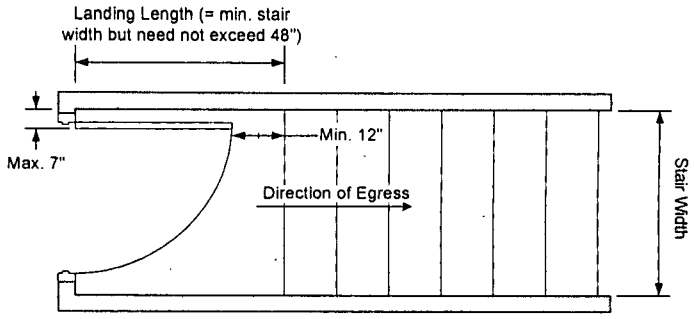

Figure 1008.1.5(1)
(Landing Dimensions Only)

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1008.1.6 Thresholds. Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: The threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the landing or step; and the doorway is not on an accessible route as required by Chapter 11 of the *International Building Code* and is not part of an Accessible unit, Type A unit or Type B unit.

1008.1.7 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3 other than within Type A dwelling units.

1008.1.8 Door operations. Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

CITY CLERK

1008.1.8.1 Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the *International Building Code* shall not require tight grasping, tight pinching or twisting of the wrist to operate.

1008.1.8.2 Hardware height. Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

Exception: Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

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 places of religious worship, 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~~

CITY CLERK

~~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.

5. Doors from elevator lobbies providing access to exits are permitted to be locked during or after business hours where items 5.1 through 5.5 are satisfied.

5.1. The lobby doors shall unlock automatically upon fire alarm.

5.2. The lobby doors shall unlock automatically upon power loss.

5.3. The alarm system shall include smoke detection in the elevator lobby and at least two detectors on the tenant side within 15 feet of the door;

5.4. Access through the tenant portion of the building to both exits shall be unobstructed; and

5.5. The building shall have an automatic sprinkler system throughout in accordance with Section 903.3.1.1 or 903.3.1.2.

CITY CLERK

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.

1008.1.8.5 Unlatching. The unlatching of any door or leaf shall not require more than one operation.

Exceptions:

1. Places of detention or restraint.
2. Where manually operated bolt locks are permitted by Section 1008.1.8.4.
3. Doors with automatic flush bolts as permitted by Section 1008.1.8.3, Exception 3.
4. Doors from individual dwelling units and sleeping units of Group R occupancies as permitted by Section 1008.1.8.3, Exception 4.

1008.1.8.6 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 in both Group A and E occupancies in locations other than at main exit doors, and in Group E day care occupancies.

CITY CLERK

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.

1008.1.8.7 Stairway doors. Interior stairway means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:

1. Stairway discharge doors shall be openable from the egress side and shall only be locked from the opposite side.

CITY CLERK

2. This section shall not apply to doors arranged in accordance with Section 403.12 of the *International Building Code*.

3. In stairways serving not more than four stories, doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building.

1008.1.9 Panic and fire exit hardware. Where panic and fire exit hardware is installed, it shall comply with the following:

1. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.

2. The maximum unlatching force shall not exceed 15 pounds (67 N).

Each door in a means of egress from a Group A or E occupancy having an occupant load of 50 or more and any Group H occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.

Exception: A main exit of a Group A occupancy in compliance with Section 1008.1.8.3, Item 2.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with exit access doors must be equipped with panic hard-ware and doors must swing in the direction of egress.

EMS CITY CLERK

If balanced doors are used and panic hardware is required, the panic hardware shall be the push-pad type and the pad shall not extend more then one-half the width of the door measured from the latch side.

Section 186. Subsection 1009.1 of the 2006 International Fire Code is amended as follows:

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 less than 50 shall have a width of not less than 36 inches (914 mm).
2. Spiral stairways as provided for in Section 1009.8.
3. Aisle stairs complying with Section 1025.
4. Where an incline platform lift or stairway chairlift is installed on stairways serving occupancies in Group R-3, or within dwelling units in occupancies in Group R-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. <u>Stairways that are neither part of a required means of egress nor an accessible route.</u>

Section 187. Subsection 1009.3 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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 tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. 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 are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. 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 1025.11.2.
4. In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 7.75 inches (197 mm); 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).
5. See the Section 1027.10 for the replacement of existing stairways.

CITY CLERK

1009.3.1 Winder treads. Winder treads are not permitted in means of egress stairways except within a dwelling unit.

Exceptions:

1. Curved stairways in accordance with Section 1009.7.
2. Spiral stairways in accordance with Section 1009.8.

1009.3.2 Dimensional uniformity. Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch (9.5 mm) in any flight of stairs. 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) measured at a right angle to the tread's leading edge.

Exceptions:

1. Nonuniform riser dimensions of aisle stairs complying with Section 1025.11.2.
2. Consistently shaped winders, complying with Section 1009.3, 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~~

CITY CLERK

~~slip resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).~~))

1009.3.3 Profile. The radius of curvature at the leading edge of the tread shall be not greater than 0.5 inch (12.7 mm). Beveling of nosings shall not exceed 0.5 inch (12.7 mm). Risers shall be solid and vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.52 rad) from the vertical. The leading edge (nosings) of treads shall project not more than 1.25 inches (32 mm) beyond the tread below and all projections of the leading edges shall be of uniform size, including the leading edge of the floor at the top of a flight.

Exceptions:

1. Solid risers are not required for stairways that are not required to comply with Section 1007.3, provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).
2. Solid risers are not required for occupancies in Group I-3.

Section 188. Subsection 1009.6 of the 2006 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 1025.
2. Stairways that are not part of a required means of egress.

CITY CLERK

Section 189. Subsection 1009.11 of the 2006 International Fire Code is amended as follows:

1009.11 Stairway to roof. In buildings located four or more stories in height above grade plane, at least one stairway shall extend to the roof surface through a penthouse complying with Section 1509.2 of the *International 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).
3. A stairway to the roof is not required in residential buildings that do not contain a stairway shared by more than one unit.

1009.11.1 Roof access. Where a stairway is provided to ((~~a roof, access to the roof shall be provided through a penthouse complying with Section 1509.2 of the *International Building Code*.~~)) the 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 for provisions for high-rise buildings.

EMS CITY CLERK

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).~~))

1009.11.2 Protection at roof hatch openings. Where the roof hatch opening providing the required access is located within 10 feet (3049 mm) of the roof edge, such roof access or roof edge shall be protected by guards installed in accordance with the provisions of Section 1013.

Section 190. A new subsection 1009.12 is adopted to read as follows:

[W] 1009.12 Ladders. Stairs or ladders within individual dwelling units used for access to areas of 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 1009.

Section 191. Subsection 1011.1 of the 2006 International Fire Code is amended as follows:

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 a 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.

BDS CITY CLERK

Exceptions:

1. Exit signs are not required in rooms or areas that require only one exit or exit access other than in buildings designed with a single exit stairway according to Section 1019.2 exception 4.
2. Main exterior exit doors or gates that are obviously and clearly 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 on exterior stairways serving exterior exit balconies.

Interpretation I1011.1: Exit placards are permitted to be used to identify exits in occupancies where exit signs are not required.

Section 192. Subsection 1011.5 of the 2006 International Fire Code is amended as follows:

1011.5 Externally illuminated exit signs. Externally illuminated exit signs shall comply with Sections 1011.5.1 through 1011.5.3.

EMS CITY CLERK

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 means of exit sign illumination is or is not energized. If a chevron directional indicator is provided as part of the exit sign or placard, the construction shall be such that the direction of the chevron directional indicator cannot be readily changed.

Exception: Existing exit signs or placards with letters at least 5 inches (127 mm) in height are permitted to be reused. * * *

Section 193. A new subsection 1011.6 is adopted to read as follows:

1011.6 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 194. Subsection 1012.4 of the 2006 International Fire Code is amended as follows:

EMS CITY CLERK

1012.4 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 or ramp 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 obstructions. For each 0.5 inch (12.7 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. <u>Handrails on stairways that are not part of a required means of egress need not be continuous.</u>

Section 195. Subsection 1012.5 of the 2006 International Fire Code is amended as follows:

1012.5 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 or ramp run. At stairways 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

CITY CLERK

bottom riser. At ramps where handrails are not continuous between runs, the handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs.

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 1025.13.
3. Handrail extensions are not required on handrails on stairways that are not part of a required means of egress.

Section 196. Subsection 1014.2 of the 2006 International Fire Code is amended as follows:

1014.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

1. 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.

   Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy when the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

2. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

CITY CLERK

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 stockrooms in Group M occupancies when all of the following are met:
   2.1. The stock is of the same hazard classification as that found in the main retail area;
   2.2. Not more than 50 percent of the exit access is through the stockroom;
   2.3. The stockroom is not subject to locking from the egress side; and
   2.4. There is a demarcated, minimum 44-inch-wide (1118 mm) aisle defined by full or partial height fixed walls or similar construction that will maintain the required width and lead directly from the retail area to the exit without obstructions.
3. An exit access shall not pass through a room that can be locked to prevent egress.
4. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

3. Unless approved by the building official, where two or more exits are required, exit travel shall not pass through an exit enclosure as the only way to reach another exit.

1014.2.1 Multiple tenants. Where more than one tenant occupies any one floor of a building or structure, each tenant space, dwelling unit and sleeping unit shall be provided with access to the required exits without passing through adjacent tenant spaces, dwelling units and sleeping units.

CITY CLERK

Exception: Means of egress shall not be prohibited through adjoining tenant space where such rooms or spaces occupy less than 10 percent of the area of the tenant space through which they pass; are the same or similar occupancy group; a discernable path of egress travel to an exit is provided; and the means of egress into the adjoining space is not subject to locking from the egress side. A required means of egress serving the larger tenant space shall not pass through the smaller tenant space or spaces.

[W] 1014.2.2 Group I-2. Habitable rooms or suites in Group I-2 occupancies shall have an exit access door leading directly to a corridor.

Exception((**s**)): ((~~1.~~)) Rooms with exit doors opening directly to the outside at ground level.

((~~2. Patient sleeping rooms are permitted to have one intervening room if the intervening room is not used as an exit access for more than eight patient beds.~~

~~3. Special nursing suites are permitted to have one intervening room where the arrangement allows for direct and constant visual supervision by nursing personnel.~~

~~4. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through one intervening room where the travel distance to the exit access door is not greater than 100 feet (30,480 mm).~~

~~5. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 50 feet (15,240 mm).~~))

~~Suites of sleeping rooms shall not exceed 5,000 square feet (465 m2). Suites of rooms other than patient sleeping rooms shall not exceed 10,000 square feet (929 m2). Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93m2) shall~~

CITY CLERK

~~have at least two exit access doors remotely located from each other. Any room or suite of rooms other than patient sleeping rooms of more than 2,500 square feet (232 m2) shall have at least two access doors remotely located from each other. The travel distance between any point in a Group I-2 Occupancy and an exit access door in the room shall not exceed 50 feet (15 240 mm). The travel distance between any point in a suite of sleeping rooms and an exit access door of that suite shall not exceed 100 feet (30 480 mm).~~))

1014.2.2.1 Definition. For the purposes of this section, a suite is a cluster of rooms or spaces sharing common circulation. Partitions within a suite are not required to have smoke or fire-resistance-rated construction unless required by another section of this code.

1014.2.3 Suites in patient sleeping areas. Patient sleeping areas in Group I-2 occupancies shall be permitted to be divided into suites if one of the following conditions is met:

1. The intervening room within the suite is not used as an exit access for more than eight patient beds.
2. The arrangement of the suite allows for direct and constant visual supervision by nursing personnel.

1014.2.3.1 Area. Suites of sleeping rooms shall not exceed 5,000 square feet (465 m^2).

1014.2.3.2 Exit access. Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93m^2) shall have at least two exit access doors remotely located from each other.

1014.2.3.3 Travel distance. The travel distance between any point in a suite of sleeping rooms and an exit access door of that suite shall not exceed 100 feet (30 480 mm).

EMS CITY CLERK

1014.2.4 Suites in areas other than patient sleeping areas. Areas other than patient sleeping areas in Group I-2 Occupancies shall be permitted to be divided into suites.

1014.2.4.1 Area. Suites of rooms, other than patient sleeping rooms, shall not exceed 10,000 square feet (929 m^2).

1014.2.4.2 Exit access. Any room or suite of rooms, other than patient sleeping rooms, of more than 2,500 square feet (232 m^2) shall have at least two exit access doors remotely located from each other.

1014.2.4.3 One intervening room. For rooms other than patient sleeping rooms, suites of rooms are permitted to have one intervening room if the travel distance within the suite is not greater than 100 feet (30 480 mm).

1014.2.4.4 Two intervening rooms. For rooms other than patient sleeping rooms located within a suite, exit access travel from within the suite shall be permitted through two intervening rooms where the travel distance to the exit access door is not greater than 50 feet (15 240 mm).

1014.2.5 Travel distance. The travel distance between any point in a Group I-2 occupancy patient room and an exit access door in that room shall not exceed 50 feet (15 240 mm).

1014.2.6 Separation. Suites in Group I-2 occupancies shall be separated from other portions of the building by a smoke partition complying with Section 710 of the *International Building Code.*

Section 197. Subsection 1014.5 of the 2006 International Fire Code is amended as follows:

Ens CITY CLERK

1014.5 Egress balconies. Balconies used for egress purposes shall conform to the same requirements as corridors for width, headroom, dead ends and projections.

1014.5.1 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.

1014.5.2 Openness. The long side of an egress balcony shall be at least 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

Section 198. Subsection 1015.1 of the 2006 International Fire Code is amended as follows:

[W] 1015.1 Exit or exit access doorways ((~~required~~)) from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds one of the values in Table 1015.1.

   Exception: One means of egress is permitted within and from dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

CITY CLERK

2. The common path of egress travel exceeds one of the limitations of Section 1014.3.

3. Where required by Sections 1015.3, 1015.4, ((~~and~~)) 1015.5, 1015.6, or 1015.6.1.

Exception: Group I-2 occupancies shall comply with Section 1014.2.2.

Note: See Section 1008.1.8.3 for conditions in which exit access doors from elevator lobbies are permitted to be locked.

TABLE 1015.1

SPACES WITH ONE MEANS OF EGRESS

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E[a], F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-3, I-4, R	10
S	29

a. Day care maximum occupant load is 10.

[W] 1015.1.1 Three or more exits or exit access doorways. ((~~Access to three or more~~)) Three exits or exit access doorways shall be provided from ((~~a floor area where required by Section 1019.1~~)) any space with an occupant load of 501-1,000. Four exits or exit access doorways shall be provided from any space with an occupant load greater than 1,000.

Section 199. Subsection 1015.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

1015.2 Exit or exit access doorway arrangement. Required exits shall be located in a manner that makes their availability obvious. Exits shall be unobstructed at all times. Exit and exit access doorways shall be arranged in accordance with Sections 1015.2.1 and 1015.2.2.

1015.2.1 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 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 1017, the required exit separation shall be measured along the shortest direct line of travel within the corridor.

Interpretation I1015.2: Exception 1 applies only where corridors have a one-hour fire-resistance-rating even where Section 1017 would allow non-rated corridors.

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.

CITY CLERK

3. Where it is not practical to separate exits by one-half the diagonal dimension, exits from retail and office tenant spaces in Group B and M occupancies and within dwelling units shall be as far apart as reasonably practicable, as determined by the building official.

1015.2.2 Three or more exits or exit access doorways. Where access to three or more exits is required, at least two exit doors or exit access doorways shall be arranged in accordance with the provisions of Section 1015.2.1.

Section 200. Subsection 1016.1 of the 2006 International Fire Code is amended as follows:

1016.1 Travel distance limitations. Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distances given in Table 1016.1.

Where the path of exit access includes unenclosed stairways or ramps within the exit access or includes unenclosed exit ramps or stairways as permitted in Section 1020.1, the distance of travel on such means of egress components shall also be included in the travel distance measurement. The measurement along stairways shall be made on a plane parallel and tangent to the stair tread nosings in the center of the stairway.

Exceptions:

1. Travel distance in open parking garages is permitted to be measured to the closest riser of open stairs.

CITY CLERK

2. In outdoor facilities with open exit access components and open exterior stairs or ramps, travel distance is permitted to be measured to the closest riser of a stair or the closest slope of the ramp.

3. Where an exit stair is permitted to be unenclosed in accordance with Exception 8 or 9 of Section 1020.1, the travel distance shall be measured from the most remote point within a building to an exit discharge.

TABLE 1016.1

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[c]
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]

CITY CLERK

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 of the *International Building Code*: For the distance limitation in malls.

Section 404 of the *International Building Code*: For the distance limitation through an atrium space.

Section 1016.2 For increased limitations in Groups F-1 and S-1.

Section 1025.7: For increased limitation in assembly seating.

Section 1025.7: For increased limitation for assembly open-air seating.

Section 1019.2: For buildings with one exit.

Chapter 31 of the *International Building Code*: 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 automatic sprinkler systems in accordance with 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: Additional exit enclosures or corridors constructed as smoke barriers may be required for standpipe hose connections. See Section 905.4

CITY CLERK

Section 201. Subsection 1017.1 of the 2006 International Fire Code is amended as follows:

1017.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1017.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for fire partitions.

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 1015.1.

<u>[W] 5. In Group R-2 boarding homes and residential treatment facilities licensed by Washington State, rest areas constructed as required for corridors shall be allowed to be open to the corridor provided:</u>

<u>5.1 The area does not exceed 150 square feet (13.9 m^2), excluding the corridor width;</u>

CITY CLERK

5.2 The floor is separated into at least two compartments complying with Section 407.4;

5.3 Combustible furnishings located within the rest area shall be in accordance with *International Fire Code* Section 805; and

5.4 Emergency means of egress lighting is provided as required by Section 1006 to illuminate the area.

6. In office areas located in buildings of Types IA or IB construction, corridor walls need not be of fire-resistance-rated 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.

7. 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 is permitted to be used in other construction types when the floor on which the assembly room is located is equipped with an automatic sprinkler system.

TABLE 1017.1

CORRIDOR FIRE-RESISTANCE RATING

		REQUIRED FIRE-RESISTANCE RATING (hours)

CITY CLERK

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	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	Not Permitted	((~~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 202. Subsection 1017.3 of the 2006 International Fire Code is amended as follows:

1017.3 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 more than ((~~20 feet (6096 mm) in length.~~)) 25 feet 7620 mm) in length.

CITY CLERK

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 308.4), 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.

4. Dead ends are permitted to be 75 feet (22 860 mm) in length in areas containing Group B offices in buildings of Types IA and IB construction, where the cumulative occupant load does not exceed 50 for all areas for which the dead end serves as the only means of egress.

Section 203. Subsection 1017.4 of the 2006 International Fire Code is amended as follows:

1017.4 Air movement in corridors. Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts or plenums except as allowed by 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.~~

CITY CLERK

~~3. Where located within tenant spaces of 1,000 square feet (93 m²) or less in area, utilization of corridors for conveying return air is permitted.~~))

1017.4.1 Corridor ceiling. Use of the space between the corridor ceiling and the floor or roof structure above as a return air plenum is permitted for one or more of the following conditions:

1. The corridor is not required to be of fire-resistance-rated construction;
2. The corridor is separated from the plenum by fire-resistance-rated construction;
3. The air-handling system serving the corridor is shut down upon activation of the air-handling unit smoke detectors required by the *International Mechanical Code*.
4. The air-handling system serving the corridor is shut down upon detection of sprinkler waterflow where the building is equipped throughout with an automatic sprinkler system; or
5. The space between the corridor ceiling and the floor or roof structure above the corridor is used as a component of an approved engineered smoke control system.

Section 204. A new subsection 1017.6 is adopted to read as follows:

[W] 1017.6 Subdivision of building spaces — smoke barriers. Smoke barriers complying with Section 709 shall be installed on floors other than the level of exit discharge of a Group R-2 boarding home or residential treatment facility licensed by Washington State, where a fire-resistance rated corridor is required by Table 1017.1. The smoke barrier shall subdivide the floor into at least two compartments complying with Section 407.4 of the *International Building Code*.

Section 205. Subsection 1018.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

1018.2 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.

1018.2.1 Detailed requirements. Exterior exit doors shall comply with the applicable requirements of Section 1008.1.

1018.2.2 Arrangement. Exterior exit doors shall lead directly to the exit discharge or the public way.

Section 206. Subsection 1019.1 of the 2006 International Fire Code is amended as follows:

[W] 1019.1 ((~~Minimum number of exits~~)) Exits from stories. All ((~~rooms and~~)) spaces within each story shall ((~~be provided with and~~)) have access to the minimum number of ((~~approved independent~~)) exits ((~~required by~~)) as specified in Table 1019.1 based on the occupant load of the story, except as modified in Section ((~~1015.1 or~~)) 1019.2. 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, including basements, ((~~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 are permitted to 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

CITY CLERK

2.3 The floor contains only storage rooms, laundry rooms, and maintenance offices.

3. Spaces meeting the requirements of Section 1015 for a single exit are permitted to be provided with one exit where the exit for the space discharges directly to the public way or an exit court.

[W] 4. One means of egress is permitted within and from dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

* * *

Section 207. Subsection 1019.2 of the 2006 International Fire Code is amended as follows:

[W] 1019.2 Buildings with one exit. Only one exit shall be required in buildings as ((~~described~~)) specified below:

1. Buildings ((~~described in~~)) meeting the limitations of Table 1019.2, 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 spaces at the level of exit discharge provided ((~~that the story or~~)) each space complies with Section 1015.1 as a space with one ((~~means of egress~~)) exit or exit access doorway.

4. Not more than 5 stories of Group R-2 occupancy in buildings not over 6 stories are permitted to be served by a single exit under the following conditions:

4.1. There shall be no more than four dwelling units on any floor.

CITY CLERK

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. 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 909.21. 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 are permitted to 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 are permitted to open directly into an exterior stairway.

4.6. There shall be no more than 20 feet (6096 mm) of travel to the exit stairway from the entry/exit door of any dwelling unit.

4.7. Travel distance measured in accordance with Section 1016.1 shall not exceed 125 feet.

4.8 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.

4.9. Elevators shall be pressurized in accordance with Section 707.14.2 of the *International Building Code* or shall open into elevator lobbies. Elevator lobbies shall be

CITY CLERK

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 is permitted to be substituted for pressurization where the ventilation would prevent the accumulation of smoke or toxic gases.

4.10. Other occupancies are permitted in the same building provided they comply with all the requirements of this code. Other occupancies shall not communicate with the Group R occupancy portion of the building or with the single-exit stairway.

Exception: Parking garages accessory to the Group R occupancy are permitted to communicate with the exit stairway.

4.11. The exit serving the Group R occupancy shall not discharge through any other occupancy, including an accessory parking garage; and

4.12. 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 208. Subsection 1020.1 of the 2006 International Fire Code is amended as follows:

1020.1 Enclosures required. Interior exit stairways and interior exit ramps shall be enclosed with fire barriers constructed in accordance with Section 706 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both. 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

CITY CLERK

1 hour where connecting ((~~less than~~)) four stories and less. The number of stories connected by the exit 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.

Exceptions:

1. In all occupancies, other than Group H and I occupancies, a stairway is not required to be enclosed when the stairway serves an occupant load of less than 10 and the stairway complies with either Item 1.1 or 1.2. In all cases, the maximum number of connecting open stories shall not exceed two.
   1.1. The stairway is open to not more than one story above the story at the level of exit discharge, or
   1.2. The stairway is open to not more than one story below the story at the level of exit discharge.
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 Group R-1, R-2 or R-3 occupancies 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 stair-ways comply with Section 707.2 of the *International Building Code.*
5. Stairways in open parking structures that serve only the parking structure are not

CITY CLERK

required to be enclosed.

6. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6 of the *International Building Code*, are not required to be enclosed.

7. Means of egress stairways as required by Section 410.5.3 of the *International Building Code* are not required to be enclosed.

8. In other than Group H and I occupancies, 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. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.

9. In other than Group H and I occupancies, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such inter-connected stories shall not be open to other stories. Unenclosed exit stairways shall be remotely located as required in Section 1015.2.

1020.1.1 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 unprotected exterior openings shall be limited to those necessary

CITY CLERK

for exit access to the enclosure from normally occupied spaces and for egress from the 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 assembly conforming to the requirements in Section 715.4 of the *International Building Code*.

Fire door assemblies in exit enclosures shall comply with Section 715.4.4 of the *International Building Code*.

Elevators shall not open into an exit enclosure.

Interpretation I1020.1: Accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into an exit enclosure.

1020.1.2 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 systems 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 for freeze protection of fire protection

CITY CLERK

equipment are permitted to penetrate one membrane. The conduit serving the heater is permitted to penetrate both membranes. There shall be no penetrations or communication openings, whether protected or not, between adjacent exit enclosures.

1020.1.3 Ventilation. Equipment and ductwork for exit enclosure ventilation as permitted by Section 1020.1.2 shall comply with one of the following items:

1. Such equipment and ductwork shall be located exterior to the building and shall be directly connected to the exit enclosure by ductwork enclosed in construction as required for shafts.
2. Where such equipment and ductwork is located within the exit enclosure, the intake air shall be taken directly from the outdoors and the exhaust air shall be discharged directly to the outdoors, or such air shall be conveyed through ducts enclosed in construction as required for shafts.
3. Where located within the building, such equipment and ductwork shall be separated from the remainder of the building, including other mechanical equipment, with construction as required for shafts.

In each case, openings into the fire-resistance-rated construction shall be limited to those needed for maintenance and operation and shall be protected by opening protectives in accordance with Section 715 of the *International Building Code* for shaft enclosures.

Exit enclosure ventilation systems shall be independent of other building ventilation systems.

EDS CITY CLERK

1020.1.4 Exit enclosure exterior walls. Exterior walls of an exit enclosure shall comply with the requirements of Section 704 of the *International Building Code* for exterior walls. Where nonrated walls or unprotected openings enclose the exterior of the stairway and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than $^3/_4$ hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the top-most landing of the stairway or to the roof line, whichever is lower.

1020.1.5 Discharge identification barrier. A stairway in an exit enclosure shall not continue below the level of exit discharge unless an approved barrier is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1011.

1020.1.6 Stairway ((~~floor number~~)) signs. A sign shall be provided at each floor landing in interior 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 access is accessed by roof hatch. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the

CITY CLERK

doors are in the open and closed positions.

1020.1.7 Smokeproof enclosures. In buildings required to comply with Section 403 or 405 of the *International Building Code*, 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.

1020.1.7.1 Enclosure exit. A smokeproof enclosure or pressurized stairway shall exit into a public way or into an exit passageway, yard or open space having direct access to a public way. The exit passageway shall be without other openings and shall be separated from the remainder of the building by 2-hour fire-resistance-rated construction.

Exceptions:

1. Openings in the exit passageway serving a smokeproof enclosure are permitted where the exit passageway is protected and pressurized in the same manner as the smokeproof enclosure, and openings are protected as required for access from other floors.
2. Openings in the exit passageway serving a pressurized stairway are permitted where the exit passageway is protected and pressurized in the same manner as the pressurized stairway.
3. A smokeproof enclosure or pressurized stair-way shall be permitted to egress

CITY CLERK

through areas on the level of discharge or vestibules as permitted by Section 1024.

1020.1.7.2 Enclosure access. Access to the stairway within a smokeproof enclosure shall be by way of a vestibule or an open exterior balcony.

Exception: Access is not required by way of a vestibule or exterior balcony for stairways using the pressurization alternative complying with Section 909.20.5.

Section 209. A new subsection 1020.1.8 is adopted to read as follows:

1020.1.8 Equipment in exit enclosures. Equipment is prohibited in exit enclosures except for equipment necessary for independent pressurization, lighting of the exit enclosure, sprinkler piping, standpipes, electrical equipment for fire department communication and sprinkler monitoring, and unit heaters required to protect fire protection equipment from freezing.

Section 210. Subsection 1021.1 of the 2006 International Fire Code is amended as follows:

1021.1 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.

Section 211. Subsection 1021.4 of the 2006 International Fire Code is amended as follows:

1021.4 Openings and penetrations. Exit passageway opening protectives shall be in accordance with the requirements of Section 715 of the *International Building Code.*

CITY CLERK

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.

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 715.4 of the *International Building Code*. Fire door assemblies in exit passageways shall comply with Section 715.4.4 of the *International Building Code*.

Elevators shall not open into an exit passageway.

Interpretation I1021.4: Accessory rooms such as restrooms, storage closets, laundry rooms, electrical, communication closets and similar spaces shall not open into exit passageways.

Code Alternate CA1021.4: An elevator is permitted to open into an exit passageway when the following conditions are met:

1. A lobby separates the elevator from the exit passageway. This is allowed at only one location in the building. The lobby is required whether the elevator hoistway is pressurized or not.

2. The separation shall be constructed as a fire barrier having a fire-resistive rating and opening protectives as for the exit passageway. The door between the lobby and the exit passageway shall also comply with Section 715.4.3 of the *International Building Code*. The door shall have listed gaskets installed at head, jambs and meeting edges.

CITY CLERK

This only applies to the walls common with the exit passageway.

3. The lobby shall have a minimum depth of 36 inches. (Note that areas of refuge may require a larger dimension).

4. An elevator lobby constructed as a smoke partition shall be provided at every floor below the level of the exit passageway served by the elevator. Hoistway pressurization is permitted to be used in lieu of the lobbies on floors below the level of the exit passageway.

5. A door as required by Section 1020.1.1 between a vertical exit enclosure and the exit passageway shall be provided.

6. An automatic sprinkler system in accordance with Section 903.3.1.1 shall be provided throughout the floor on which the exit passageway is located.

This alternate does not apply to vertical exit enclosures.

Section 212. Subsection 1021.5 of the 2006 International Fire Code is amended as follows:

1021.5 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

CITY CLERK

be no penetrations or communicating openings, whether protected or not, between adjacent exit passageways.

Exception: Unfired unit heaters allowed by Section 1020.1.8 to be installed in exit enclosures are permitted to penetrate one membrane. The conduit serving the heater is permitted to penetrate both membranes.

Section 213. Subsection 1023.3 of the 2006 International Fire Code is amended as follows:

1023.3 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 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.~~)) The open area shall be distributed to prevent accumulation of smoke or toxic gases.

Section 214. Subsection 1024.1 of the 2006 International Fire Code is amended as follows:

1024.1 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:

CITY CLERK

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.

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. Parking garage ramps are permitted to penetrate the floor of the level of discharge.

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.

CITY CLERK

3. Stairways in open parking garages complying with Section 1020.1, Exception 5, are permitted to egress through the open parking garage at the level of exit discharge.

Section 215. Subsection 1024.5 of the 2006 International Fire Code is amended as follows:

1024.5 Egress courts. Egress courts serving as a portion of the exit discharge in the means of egress system shall comply with the requirements of Section 1024.

1024.5.1 Width. The width of egress courts shall be determined as specified in Section 1005.1, but such width shall not be less than 44 inches (1118 mm), except as specified herein. Egress courts serving Group R-3 and U occupancies shall not be less than 36 inches (914 mm) in width.

The required width of egress courts shall be unobstructed to a height of 7 feet (2134 mm).

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) from each side.

Where an egress court exceeds the minimum required width and the width of such egress court is then reduced along the path of exit travel, the reduction in width shall be gradual. The transition in width shall be affected by a guard not less than 36 inches (914 mm) in height and shall not create an angle of more than 30 degrees (0.52 rad) with respect to the axis of the egress court along the path of egress travel. In no case shall the width of the egress court be less than the required minimum.

Ens CITY CLERK

1024.5.2 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 have not less than 1-hour fire-resistance-rated construction for a distance of 10 feet (3048 mm) above the floor of the court. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than $^3/_4$ hour.

Exceptions:

1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving Group R-3.
3. In buildings other than those which have a single means of egress under Section 1019.2 exception 4, opening protection need not be provided where it is possible to exit in two directions from the court.

Section 216. Subsection 1025.13.2 of the 2006 International Fire Code is hereby repealed.

Section 217. Subsection 1106.5.1 of the 2006 International Fire Code is amended as follows:

[W]**1106.5.1 Positioning of aircraft fuel-servicing vehicles.** Aircraft-fueling vehicles shall not be located, parked or permitted to stand in a position where such unit would obstruct egress from an aircraft should a fire occur during fuel-transfer operations. Tank vehicles shall not be located, parked or permitted to stand under any portion of an aircraft except during refueling.

Section 218. Subsection 1207.3 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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, aboveground.

Exceptions:

1. As provided in NFPA 32 for inside storage of ((~~or~~)) treatment tanks.

2. Solvent tanks located within approved rooms or buildings in accordance with Section 3405.3.7 for use, mixing and dispensing of flammable and combustible liquids.

Section 219. A new subsection 1303.1.1 is adopted to read as follows:

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 220. Subsection 1404.5 of the 2006 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 9.06.07 *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 221. Subsection 1404.6 of the 2006 International Fire Code is amended as follows:

CITY CLERK

1404.6 ((~~Cutting and~~ welding))Hot work. Hot work ((~~O~~))operations ((~~involving the use of cutting and welding~~))shall be ((~~done~~))conducted in accordance with Chapter 26.

Section 222. Subsection 1410.1 of the 2006 International Fire Code is amended as follows:

1410.1 Required access. Approved vehicle access for fire fighting shall be provided to within 100 feet (30 480 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 223. Subsection 1411.3 of the 2006 International Fire Code is amended as follows:

[B] 1411.3 Stairway floor number signs. Temporary stairway floor number signs shall be provided in accordance with the requirements of Section ((~~1012.1.7~~))1020.1.6.

Section 224. Subsection 1413.1 of the 2006 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 (12192 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

CITY CLERK

standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

Section 225. Subsection 1414.1 of the 2006 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 9.06.07 *Partial/Phased Occupancy, Occupancy During Construction and Temporary Certificates of Occupancy*.

Section 226. Subsection 1504.2 of the 2006 International Fire Code is amended as follows:

1504.2 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 spraying space approved for such use.

Exceptions:

1. Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt

CITY CLERK

from the provisions of Section 1504 when approved and where utilizing Class IIIA or IIIB combustible liquids.

2. In buildings other than Group A, E, I or R occupancies, approved limited spraying space in accordance with Section 1504.9.

3. Resin application areas used for manufacturing of reinforced plastics complying with Section 1509 shall not be required to be located in a spray room, spray booth or spraying space.

Spray-finishing operations shall not be conducted in basements.

Section 227. Subsection 1504.7 of the 2006 International Fire Code is amended as follows:

1504.7 Ventilation. Mechanical ventilation of flammable vapor areas shall be provided in accordance with Sections 502.7 and 510 of the *International Mechanical Code*.

Section 228. Subsection 1504.7.8.5 of the 2006 International Fire Code is amended as follows:

1504.7.8.5 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.

Section 229. Subsection 1504.9 of the 2006 International Fire Code is amended as follows:

1504.9 Limited spraying spaces. Limited spraying spaces shall comply with Sections 1504.9.1 through 1504.9.4.

DNS CITY CLERK

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 230. Subsection 1703.2.1 of the 2006 International Fire Code is amended as follows:

1703.2.1 Electricity. Electricity shall be shut off.

Exception: Circulating fans that have been specifically designed for utilization in hazardous atmospheres and installed in accordance with the ((~~ICC~~))*Seattle Electrical Code* and temporary remote control power leads with control switches located outside the fumigant space for powering such fans.

Section 231. Subsection 2201.1 of the 2006 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*, *City of Seattle Stormwater, Grading & Drainage Control Code and DPD Director's Rule 17-2000*, *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.

EMS CITY CLERK

Section 232. Subsection 2202.1 of the 2006 International Fire Code is amended as follows:

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. 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 southeasterly 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

CITY CLERK

line of Alaskan Way; then southeasterly along the center line of Alaskan Way to the point of beginning.

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 2005).

CITY CLERK

MOTOR VEHICLE, UNATTENDED A motor vehicle where the driver is located such that the driver cannot see the motor vehicle or hear noises in or near the motor vehicle.

Exceptions:

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 233. Subsection 2203.2 of the 2006 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 1/2 inch (12.7 mm) in stroke.

Section 234. Subsection 2204.4 of the 2006 International Fire Code is amended as follows:

2204.4 Dispensing into portable containers. The dispensing of flammable or combustible liquids into portable approved containers shall comply with Sections 2204.4.1 through 2204.4.3.

EDS CITY CLERK

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 under applicable provisions of this code.

* * *

Section 235. Subsection 2205.1 of the 2006 International Fire Code is amended as follows:

2205.1 Tank filling operations for Class I, II, ((~~or~~))IIIA, or III-B liquids. Delivery operations to tanks for Class I, II, ((~~or~~))IIIA, or III-B liquids shall comply with Sections 2205.1.1 through 2205.1.3 and the applicable requirements of Chapter 34.

2205.1.1 Delivery vehicle location. Where liquid delivery to above-ground storage tanks is accomplished by positive- pressure operation, tank vehicles shall be positioned a minimum of 25 feet (7620 mm) from tanks receiving Class I liquids and 15 feet (4572 mm) from tanks receiving Class II and IIIA liquids.

2205.1.2 Tank capacity calculation. The driver, operator or attendant of a tank vehicle shall, before making delivery to a tank, manually gauge the tank to determine the unfilled, available capacity of such tank ((~~by an approved gauging device~~)).

* * *

CITY CLERK

Section 236. Subsection 2206.2 of the 2006 International Fire Code is amended as follows:

2206.2 Method of storage. Approved methods of storage for Class I, II, ((~~and~~))IIIA and IIIB liquid fuels at motor fuel-dispensing facilities shall be in accordance with Sections 2206.2.1 through 2206.2.5.

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.

2206.2.1.1 Inventory control for underground tanks. Accurate daily inventory records shall be maintained and reconciled on underground fuel storage tanks for indication of possible leakage from tanks and piping. The records shall be kept at the premises or made available for inspection by the fire code official within 24 hours of a written or verbal request and shall include records for each product showing daily reconciliation between sales, use, receipts and inventory on hand. Where there is more than one system consisting of tanks serving separate pumps or dispensers for a product, the reconciliation shall be ascertained separately for each tank system. A consistent or accidental loss of product shall be immediately reported to the fire code official.

2206.2.2 Above-ground tanks located inside buildings. Above-ground tanks for the storage of Class I, II, ((~~and~~))IIIA, and IIIB liquid fuels are allowed to be located in buildings. Such

CITY CLERK

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:

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 (454 L) are not required to be located in special enclosures or in a liquid storage room or warehouse.
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 660 gallons (2498 L)) are not required to be located in special enclosures or in a liquid storage room or warehouse.
3. Aboveground tanks for Class III-B liquids not exceeding a maximum individual capacity of 13,200 gallons (49 967 L) in unsprinklered buildings.
4. Aboveground tanks for Class III-B liquids in sprinklered buildings.

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, or IIIB liquid motor 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.

CITY CLERK

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 shall 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*.

5.((~~3.~~)) Tanks containing Class I 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 IIIA liquid fuels shall not exceed 12,000 gallons (45 420 L) 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 above-ground storage tanks on site shall not exceed 48,000 gallons (181 680 L). Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30 480 mm).

6.((~~4.~~)) Tanks located at farms, construction projects, or rural areas shall comply with Section 3406.2.

7. Above-ground tanks used for outside, above-grade storage of Class IIIB liquid motor fuels shall be listed and labeled as protected aboveground tanks or listed and labeled in accordance with UL 142, *Standard for Steel Aboveground Tanks.*

CITY CLERK

2206.2.4 Above-ground tanks located in above-grade vaults or below-grade vaults. Above-ground tanks used for storage of Class I, II or IIIA liquid motor fuels are allowed to be installed in vaults located above grade or below grade in accordance with Section 3404.2.8 and shall comply with Sections 2206.2.4.1 and 2206.2.4.2. Tanks in above-grade vaults shall also comply with Table 2206.2.3.

2206.2.4.1 Tank capacity limits. Tanks storing Class I liquids shall be limited to 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 Class IIIA 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).

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 237. Subsection 2206.2.5 of the 2006 International Fire Code is amended as follows:

2206.2.5 Portable tanks. Where approved by the fire code official, portable tanks are allowed to be temporarily used in conjunction with the dispensing of Class I, II, ((~~or~~))IIIA, or III-B liquids into the fuel tanks of motor vehicles or motorized equipment on premises not normally accessible to the public. The approval shall include a definite time limit.

CITY CLERK

Section 238. Subsection 2206.6.2 of the 2006 International Fire Code is amended as follows:

2206.6.2 Piping, valves, fittings and ancillary equipment for above-ground tanks for Class I, II, ((~~and~~))IIIA and III-B liquids. Piping, valves, fittings and ancillary equipment for above-ground tanks shall comply with Sections 2206.6.2.1 through 2206.6.2.6.

* * *

Section 239. Subsection 2206.7.6 of the 2006 International Fire Code is amended as follows:

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, or III-B 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.

2206.7.6.1 Special requirements for nozzles. Where dispensing of Class I, II, ((~~or~~))IIIA, or III-B liquids is performed, a listed automatic-closing-type hose nozzle valve shall be used incorporating all of the following features:

1. The hose nozzle valve shall be equipped with an integral latch-open device.

CITY CLERK

2. When the flow of product is normally controlled by devices or equipment other than the hose nozzle valve, the hose nozzle valve shall not be capable of being opened unless the delivery hose is pressurized. If pressure to the hose is lost, the nozzle shall close automatically.

   Exception: Vapor recovery nozzles incorporating insertion interlock devices designed to achieve shutoff on disconnect from the vehicle fill pipe.

3. The hose nozzle shall be designed such that the nozzle is retained in the fill pipe during the filling operation.

4. The system shall include listed equipment with a feature that causes or requires the closing of the hose nozzle valve before the product flow can be resumed or before the hose nozzle valve can be replaced in its normal position in the dispenser.

Section 240. 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 241. 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 242. Subsection 2403.2 of the 2006 International Fire Code is amended as follows:

Ens CITY CLERK

2403.2 Approval required. Tents and membrane structures having an area in excess of 200 square feet (19 m2) and canopies in excess of 400 square feet (37 m2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exception((s)):

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 m2).~~

~~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 m2) total.~~

~~2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.~~))

Section 243. Subsection 2404.2 of the 2006 International Fire Code is amended as follows:

2404.2 Flame propagation performance treatment. Before a permit is granted, the owner or agent shall file with the fire code official a certificate executed by an approved testing laboratory certifying that the tents; canopies and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of <u>material approved by a nationally recognized testing laboratory or of</u> material meeting the flame propagation performance criteria of NFPA 701 or shall be treated with a flame retardant in an approved

Ens CITY CLERK

manner and meet the flame propagation performance criteria of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the permit.

Point of Information

The California State Fire Marshal is an approved nationally recognized testing laboratory.

Section 244. Subsection 2404.5 of the 2006 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 feet (6096 mm) of 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.

Exception: Items approved by NFPA 701 or a nationally recognized testing laboratory as meeting flame propagation performance criteria established by NFPA 701 and receiving approval from the fire code official.

Section 245. Subsection 2505.4 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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.

Exception: When stored on a single rack having dimensions not exceeding 68 inches by 48 inches by 76 inches (1727 mm by 1219 mm by 1930 mm) for commercial display, the distance to property lines that can be built upon may be reduced to 10 feet (3048 mm) and no separation is required from buildings on the same property.

Section 246. Subsection 2601.1 of the 2006 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 26.01.07, *Cutting, Welding and Other Hot Work on Marine Vessels* and 26.02.07, *Designated Hot Work Facilities and Shipyards.*

Section 247. Subsection 2601.5 of the 2006 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 248. Subsection 2602.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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, or any other similar spark, arc or flame-producing activity.

* * *

P_F 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, P_F. A wet P_F device is commonly known as a hydraulic seal, hydraulic valve or hydraulic back-pressure valve.

* * *

Section 249. Subsection 2604.2 of the 2006 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,

CITY CLERK

or the responsible manager under a hot work program, is authorized to extend the fire watch based on the hazards or work being performed.

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, ((~~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 hose lines 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~~))40-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.

Section 250. Section 2605 of the 2006 International Fire Code is amended as follows:

EDS CITY CLERK

SECTION 2605

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 gas and other nonliquefied flammable gases.

2605.4.1.1 Prohibitions. Acetylene gas shall not be:

1. ((p))Piped except in approved cylinder manifolds and cylinder manifold connections, or
2. ((u))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.

BDS CITY CLERK

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 (4 m^3) each at normal temperature and pressure (NTP). Aggregate quantity of flammable gas shall not exceed 1,000 cubic feet (28 m^3) in unsprinklered buildings and 2,000 cubic feet (57m^3) 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 (8 m^3) each at normal temperature and pressure and the aggregate storage quantity inside the building does not exceed 1,000 cubic feet (28 m^3).

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 (7m3) at normal temperature and pressure and shall be limited to a total aggregate gas capacity of

CITY CLERK

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 (.45 kg) LP-gas capacity is equivalent to 2.2 pounds water capacity.

1 gallon (3.8 L) of LP-gas at 60°F (16°C) weighs 4.22 pounds (2 kg).

1 gallon (3.8 L) of water weighs 8.33 pounds (4 kg).

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

CITY CLERK

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 (170 L) per control area or an aggregate quantity of 90 gallons (340 L) 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 5 feet (1524 mm) 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 (6096 mm) of each other.

CITY CLERK

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.

* * *

Section 251. A new subsection 2609.8 is adopted to read as follows:

2609.8 P_F devices. P_F devices shall be designed and installed in fuel gas lines in accordance with NFPA 51.

Section 252. Subsection 2701.1 of the 2006 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

EMS CITY CLERK

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 manufacturers' instructions and label directions.

3. The off-site transportation of hazardous materials when in accordance with Department of Transportation (DOTn) regulations.

4. Building materials not otherwise regulated by this code.

5. Refrigeration systems (see Section 606).

6. Stationary storage battery systems 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 manufacturers' original consumer packaging in Group M occupancies.

9. The storage of distilled spirits and wines in wooden barrels and casks.

10. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids when in accordance with Section 3405.5.

11. Hazardous materials handled at marine terminals in accordance with Section 2701.1.2.

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. The

CITY CLERK

details of any action granting such a waiver shall be recorded and entered in the files of the ((~~code enforcement agency~~))fire code official.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology. 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.

2701.1.2 Hazardous materials at marine terminals. Hazardous materials that are handled and temporarily located at marine terminals and are incidental to transportation shall be in accordance with SFD Administrative Rule 27.01.07, *Marine Terminals.*

Section 253. Subsection 2701.5.2 of the 2006 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.

CITY CLERK

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 Special Hazards Unit of the Fire Prevention Division for specific guidelines, format and assistance.

Section 254. Subsection 2701.6 of the 2006 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.

* * *

BNS CITY CLERK

Section 255. Table 2703.1.1(1) of the 2006 International Fire Code is amended as follows:

TABLE 2703.1.1(1)

MAXIMUM ALLOWABLE QUANTITY PER CONTROLAREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD [a, j, m, n, p]

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANITY IS EXCEED	STORAGE[b]			USE-CLOSED SYSTEMS[b]			USE-OPEN SYSTEM	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible liquid [c,i]	II	H-2 or H-3	Not Applic-able	120 [d, e, g]	Not Applicable	Not Applicable	120 [d, g]	Not Applicable	Not Applicable	30 [d]
	IIIA	H-2 or H-3		330 [d, e, g]			330 [d, g]			80 [d]
	IIIB	Not Applicable		13,200 [e, f]			13,200 [d]			3,300 [f]

* * *

For SI: 1 cubic foot = 0.02832 m3, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

a. For use of control areas, see Section 2703.8.3.

b. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.

c. The quantities of alcoholic beverages in retail and wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons.

CITY CLERK

In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs, consumer or industrial products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids with the remainder of the solutions not being flammable shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.

d. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.

e. Maximum allowable quantities shall be increased 100 percent when stored in approved storage cabinets, day boxes, gas cabinets, exhausted enclosures or safety cans. Where Note d also applies, the increase for both notes shall be applied accumulatively.

f. Quantities shall not be limited in a building equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

g. Allowed only in buildings equipped throughout with an approved automatic sprinkler system.

h. Containing not more than the maximum allowable quantity per control area of Class IA, Class IB or Class IC flammable liquids.

i. ((~~Inside a building, the maximum capacity of a combustible liquid storage system that is connected to a fuel oil piping system shall be 660 gallons provided such system conforms to this code.~~))<u>A maximum quantity of 660 gallons of combustible liquid is allowed in one single control area when in a tank connected to a generator or other fuel oil system provided such tank is installed in accordance with Chapter 34.</u>

j. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.

DIS CITY CLERK

k. A maximum quantity of 200 pounds of solid or 20 gallons of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation or sanitation of equipment when the storage containers and the manner of storage are approved.

l. Net weight of pyrotechnic composition of the fireworks. Where the net weight of the pyrotechnic composition of the fireworks is not known, 25 percent of the gross weight of the fireworks including packaging shall be used.

m. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 2703.1.2.

n. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 2703.11, see Table 2703.11.1.

o. Densely-packed baled cotton that complies with the packing requirements of ISO 8115 shall not be included in this material class.

p. The following shall not be included in determining the maximum allowable quantities:

1. Liquid or gaseous fuel in fuel tanks on vehicles.
2. Liquid or gaseous fuel in fuel tanks on motorized equipment operated in accordance with this code.
3. Gaseous fuels in piping systems and fixed appliances regulated by the *International Fuel Gas Code*.
4. Liquid fuels in piping systems and fixed appliances, regulated by the *International Mechanical Code*.

<u>q. The closed use maximum allowable quantity is allowed to be exceeded in a single control area when combustible liquids are contained within a protected aboveground tank system installed</u>

CITY CLERK

in accordance with SFD Administrative Rule 34.01.07 *Use Of Protected Aboveground Tanks For Fuel Storage Inside Buildings.*

Section 256. Subsection 2703.2.2.2 of the 2006 International Fire Code is amended as follows:

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 ASME 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 415.8.6.3 of the *International Building Code* for Group H-5 occupancies.

CITY CLERK

Section 257. Subsection 2703.2.4 of the 2006 International Fire Code is amended as follows:

2703.2.4 Installation of tanks. Installation of tanks shall be in accordance with Sections 2703.2.4.1 through 2703.2.4.2.1.

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 above-ground tank in an underground vault complying with Section 3404.2.8 shall be permitted.

* * *

Section 258. Subsection 2703.2.6 of the 2006 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,

CITY CLERK

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 259. Subsection 2703.3.1 of the 2006 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 260. Subsection 2704.13 of the 2006 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.

CITY CLERK

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 *Seattle Building Code*. The fire-resistive wall and the reduction in distance combined with a weather protection canopy are considered to be indoor storage.

Section 261. Subsection 2705.3.9 of the 2006 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 *Seattle Building Code*. The fire-resistive wall and the reduction in distance combined with a weather

CITY CLERK

protection canopy are considered to be indoor storage.

Section 262. Subsection 2801.1 of the 2006 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. Manufacturing of aerosol products using hazardous materials shall also comply with Chapter 27.

Section 263. Subsection 2802.1 of the 2006 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 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).~~))

* * *

Section 264. Subsection 2803.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

2803.1 Classification levels. Aerosol products shall be classified as Level 1, 2 or 3 in accordance with Table 2803.1((~~and NFPA30B~~)). Aerosol products in cartons which are not identified in accordance with this section shall be classified as Level 3.

Section 265. Subsection 2804.1 of the 2006 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 1 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 container size of 4 fluid ounces (118 ml).

Section 266. Subsection 3001.1 of the 2006 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 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).

CITY CLERK

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 Chapter 26.

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 267. Subsection 3006.2 of the 2006 International Fire Code is amended as follows:

3006.2 Interior supply location. Medical gases shall be stored in areas dedicated to the storage of such gases without other storage or uses. Where containers of medical gases in quantities greater than the permit amount are located inside buildings, they shall be in a 1-hour exterior room, a 1-hour interior room or a gas cabinet in accordance with Section 3006.2.1, 3006.2.2 or 3006.2.3. Rooms or areas where hazardous medical gases are stored or used in quantities exceeding the maximum allowable quantity per control area set forth in Section 2703.1 shall be in accordance with the *International Building Code* for High Hazard Group H Occupancies.

Section 268. Subsection 3006.4 of the 2006 International Fire Code is hereby repealed.

CITY CLERK

Section 269. Subsection 3201.1 of the 2006 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 containing 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), which shall comply with NFPA 59A, *Standard for Gaseous Hydrogen Systems at Consumer Sites*.

Partially full containers containing residual cryogenic fluids shall be considered as full for the purposes of the controls required.

Oxidizing cryogenic fluids, including oxygen, shall comply with NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks.*

Flammable cryogenic fluids, including hydrogen, methane and carbon monoxide, shall comply with NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks.*

Inert cryogenic fluids, including argon, helium and nitrogen, shall comply with CGA P-18.

Section 270. Subsection 3301.1 of the 2006 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.

CITY CLERK

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.

CITY CLERK

9. Items preempted by federal regulations.

10. Explosive material, fireworks, pyrotechnic special effect material and small arms ammunition located at permitted marine terminals in accordance with Administrative Rule 27.01.07 *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 allowed in Section 3304.

((~~2. Manufacture, assembly and testing of fireworks as allowed in Section 3305.~~

~~3~~))2. The use of fireworks for display as allowed in Section 3308.

((~~4. The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided such fireworks comply with, CPSC 16 CFR, Parts 1500 and 1507, and DOTn 49CFR, 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.

BNS CITY CLERK

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 271. Subsection 3301.2.4 of the 2006 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 105.3.7 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.

CITY CLERK

((~~**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 272. Subsection 3301.3 of the 2006 International Fire Code is amended as follows:

3301.3 Prohibited explosives and activities.

3301.3.1 Prohibited explosives. 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).

CITY CLERK

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.

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 sale.

2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.

3. The use of binary explosives or plosphoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or 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.

CITY CLERK

Section 273. Subsection 3305.1 of the 2006 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:

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 274. Subsection 3305.3 of the 2006 International Fire Code is amended as follows:

3305.3 Intraplant separation of operating buildings. Explosives manufacturing buildings 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 or 3304.5.2(3), as appropriate.

((~~**Exception:** Fireworks manufacturing buildings separated in accordance with NFPA 1124.~~))

EMS CITY CLERK

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.

Section 275. Subsection 3305.4 of the 2006 International Fire Code is amended as follows:

3305.4 Separation of manufacturing operating buildings from inhabited buildings, public traffic routes and magazines. When an operating building on an explosive materials plant site is designed to contain explosive materials, such a building shall be located away from inhabited buildings, public traffic routes and magazines in accordance with Table 3304.5.2(2) or 3304.5.2(3) as appropriate, based on the maximum quantity of explosive materials permitted to be in the building at one time (see Section 3301.8).

((~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~))

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CITY CLERK

Section 276. Subsection 3305.5 of the 2006 International Fire Code is amended as follows:

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 277. The title of Section 3306 of the 2006 International Fire Code is amended as follows:

SECTION 3306
SMALL ARMS AMMUNITION, MODEL ROCKET MOTORS AND MARINE FLARES

Section 278. Subsection 3306.1 of the 2006 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 279. Subsection 3306.5.1.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

3306.5.1.2 Black powder. No ((~~more than 1 pound (0.454 kg) of~~))black powder shall be displayed in Group M occupancies.

Section 280. A new subsection 3306.5.1.4 is adopted to read as follows:

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 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.

Section 281. A new subsection 3306.5.1.5 is adopted to read as follows:

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.

Section 282. Subsection 3306.5.2 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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 no 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 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.

CITY CLERK

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) or 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.

3306.5.2.2 Black powder. Commercial stocks of black powder in quantities less than 5((~~0~~)) pounds (((~~23~~))2.3 kg) shall be allowed to be stored in Type 2 or 4 indoor or outdoor magazines. Quantities greater than 5((~~0~~)) pounds (((~~23~~))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:

CITY CLERK

((~~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.~~))

1. Quantities not to exceed 20,000 small arms primers stored in a building shall be arranged such that not more than 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. The minimum required separation between cabinets shall be allowed to be reduced to 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 1/4 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.

2.5. 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.

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2.6. 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 283. Subsection 3308.1 of the 2006 International Fire Code is amended as follows:

3308.1 General. The sale, possession, use or discharge of fireworks and pyrotechnic special effects in the City of Seattle is prohibited except where authorized by a 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.

Section 284. Subsection 3808.2 of the 2006 International Fire Code is amended as follows:

3308.2 Permit application. ((~~Prior to issuing permits for a fireworks display, plans for the display, inspections of the display site and demonstrations of the display operations shall be~~

CITY CLERK

~~approved. A plan establishing procedures to follow and actions to be taken in the event that a shell fails to ignite in, or discharge from, a mortar or fails to function over the fallout area or other malfunctions shall be provided to the fire code official.~~)) No person under 18 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 285. Subsection 3808.4 of the 2006 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 (30 480 mm) 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

CITY CLERK

designated landing area shall not be within 100 ft (30480mm) of tents, canopies and membrane structures.

The firing and storage site shall be located not less than 200 feet (60 960 mm) from an building, tent, canopy or membrane structure.

When the display is fired from a barge, such barge shall be of noncombustible construction or have a noncombustible surface.

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 (60 960mm) 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 (9144 mm) at all times.

Section 286. Subsection 3308.8 of the 2006 International Fire Code is amended as follows:

3308.8 Display supervision. Whenever in the opinion of the fire code official or the operator a hazardous condition exists, the fireworks display shall be discontinued immediately until such time as the dangerous situation is corrected.

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.

CITY CLERK

Display operators and assistants shall be 18 years of age or older. The operator shall ensure that no person under the age of 18 is allowed within 200 feet (60 960 mm) of the fire and storage site.

3308.8.2 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 persons are allowed within 200 feet (60 960 mm) of the firing and storage site. This requirement shall be in effect from ½ 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 pyrotechnics operator.

Section 287. Subsection 3308.11 of the 2006 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 than 10 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 288. Subsection 3401.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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.

Section 289. Subsection 3401.2 of the 2006 International Fire Code is amended as follows:

3401.2 Nonapplicability. This chapter shall not apply to liquids as otherwise provided in other laws or regulations or chapters of this code, including:

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 in 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.~~))

((4))3. Refrigerant liquids and oils in refrigeration systems (see Section 606).

((~~5~~))4. Storage and display of aerosol products complying with Chapter 28.

CITY CLERK

((~~6~~))5. Storage and use of liquids that have no fire point when tested in accordance with ASTM D 92.

((~~7~~))6. Liquids with a flashpoint 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.

((~~8~~))7. Liquids without flash points that can be flammable under some conditions, such as certain halogenated hydrocarbons and mixtures containing halogenated hydrocarbons.

((~~9~~))8. The storage of distilled spirits and wines in wooden barrels and casks.

Point of Information

Permits and inspections for underground storage tank installations are deferred to the Washington State Department of Ecology. 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.

Section 290. Subsection 3402.1 of the 2006 International Fire Code is amended as follows:

3402.1 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.

* * *

REFINERY. A plant in which flammable or combustible liquids are produced on a commercial scale from crude petroleum, natural gas((~~oline~~)) or other hydrocarbon sources.

CITY CLERK

* * *

VAULT. An enclosure consisting of four walls, a floor, and a top for the purpose of containing a liquid storage tank and not intended to be occupied by personnel other than for inspection, repair, or maintenance of the vault, the storage tank, or related equipment. [NFPA 30: 3.3.47]

Section 291. Subsection 3404.2.3.2 of the 2006 International Fire Code is amended as follows:

3404.2.3.2 Label or placard. Tanks more than 100 gallons (379 L) in capacity, which are permanently installed or mounted and used for the storage of Class I, II, ((~~or~~)) IIIA, or III-B liquids, shall bear a label and placard identifying the material therein. Placards shall be in accordance with NFPA 704.

Exceptions:

1. Tanks of 300-gallon (1136 L) capacity or less located on private property and used for heating and cooking fuels in single-family dwellings.
2. Tanks located underground.

Section 292. Subsection 3404.2.7.3.3 of the 2006 International Fire Code is amended as follows:

3404.2.7.3.3 Vent pipe outlets. Vent pipe outlets for tanks storing Class I, II or IIIA liquids shall be located such that the vapors are released at a safe point outside of buildings and not less than 12 feet (3658 mm) above the adjacent ground level. Vapors shall be discharged upward or horizontally away from adjacent walls to assist in vapor dispersion. Vent outlets shall be located

CITY CLERK

such that flammable vapors will not be trapped by eaves or other obstructions and shall be at least 5 feet (1524 mm) from building openings or lot lines of properties that can be built upon.

Vent outlets on atmospheric tanks storing Class IIIB liquids are allowed to discharge inside a building if the vent is a normally closed vent.

Exception: Vent pipe outlets on Class III-B liquid tanks inside buildings connected to generators shall be located such that the vapors are released to a safe location outside buildings.

Section 293. Subsection 3404.2.7.4 of the 2006 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 venting devices shall be listed and approved. ((~~Emergency vents for Class I, II and IIIA liquids shall not discharge inside buildings.~~)) The requirement for additional venting applies 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, the requirement for additional venting 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 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.

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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.

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 above-ground tanks located inside buildings containing Class II or Class IIIA liquids for emergency or standby generators in stalled in accordance with Administrative Rule 34.01.07, *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 294. Subsection 3404.2.7.5.2 of the 2006 International Fire Code is amended as follows:

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings at a location free from sources of ignition and not less than 5 feet (1524 mm) away

CITY CLERK

from building openings or lot lines of property that can be built on. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use and properly identified.

Filling and emptying connections to generator tanks containing Class III-B liquids shall be located at a safe location outside of buildings. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use. A sign in accordance with Section 2703.6 that displays the following warning shall be permanently attached at the filling location:

DELIVERING OTHER THAN CLASS III-B COMBUSTIBLE LIQUIDS TO THIS FILL LOCATION IS A VIOLATION OF THE SEATTLE FIRE CODE AND STRICTLY PROHIBITED

Section 295. Subsection 3404.2.7.5.6 of the 2006 International Fire Code is amended as follows:

3404.2.7.5.6 Location of connections that are made or broken. Filling, withdrawal and vapor-recovery connections for Class I, II and IIIA liquids which are made and broken shall be located outside of buildings at a location away from sources of ignition and not less than 5 feet (1524 mm) away from building openings. Such connections shall be closed and liquid tight when not in use and shall be properly identified.

Exception: Fill connections for diesel fuel tanks attached to emergency generators may be located within dedicated loading docks of buildings when installed within 10 ft. (3048 mm) of the exterior opening of the loading dock, provided the loading dock entrance doors have openings comprising at least 50% of the door area.

CITY CLERK

Section 296. Subsection 3404.2.7.5.8 of the 2006 International Fire Code is amended as follows:

3404.2.7.5.8 Overfill prevention. An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfill of all Class I, II and IIIA liquid storage tanks. Storage tanks in refineries, bulk plants or terminals regulated by Sections 3406.4 or 3406.7 shall have overfill protection in accordance with API 2350.

Exception: Outside above-ground tanks with a capacity of 1320 gallons (5000 L) or less.

An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfilling of Class III-B liquid storage tanks inside buildings connected to generators.

Section 297. Subsection 3404.2.7.10.1 of the 2006 International Fire Code is amended as follows:

3404.2.7.10.1 Leaking tank disposition. Leaking tanks shall be promptly emptied, repaired and returned to service, abandoned or removed in accordance with Section 3404.2.13 or 3404.2.14 and in accordance with WAC 173-360-325.

Section 298. Subsection 3404.2.7.11 of the 2006 International Fire Code is amended as follows:

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.

CITY CLERK

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* and WAC 173-360-325.

Section 299. Subsection 3404.2.8 of the 2006 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 300. Subsection 3404.2.9.1 of the 2006 International Fire Code is amended as follows:

3404.2.9.1 Fire protection. Fire protection for above-ground tanks shall comply with Sections 3404.2.9.1.1 through 3404.2.9.1.4.

Above-ground 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 above-ground tanks.

Above-ground 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 above-ground tanks of any size and portable and stationary tanks up to 660 gallons (2498 L) individual capacity provided with approved portable fire extinguishers and an adequate available water supply.

Above-ground tanks located outside and used for the storage of Class III combustible liquids shall be protected in accordance with Table 4.3.2.1.1(a) of NFPA 30.

CITY CLERK

Exception: Protected above-ground tanks.

* * *

Section 301. Subsection 3404.2.9.4 of the 2006 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 outside source of liquid or to an approved location.

Tanks containing Class III-B liquids and connected to generators shall be provided with a means to prevent overflow into buildings in accordance with Section 3404.2.7.5.8.

3404.2.9.4.2 Maximum quantity allowed outside of a liquid storage room. Above-ground storage tanks storing Class I, II and IIIA liquids inside buildings in quantities exceeding the maximum allowable quantity per control area set forth in Table 2703.1.1(1) shall be confined to a liquid storage room constructed and separated as required by the *Seattle Building Code* and complying with Section 3404.3.7.

Exception: Protected above-ground tanks containing Class II or III-A liquids in accordance with SFD Administrative Rule 34.01.07 *Use Of Protected Above-ground Tanks For Fuel Storage Inside Buildings.*

BDS CITY CLERK

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 (75 700 L).

Section 302. Subsection 3404.2.9.5.1 of the 2006 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 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.

3404.2.9.5.1.1 Location of tanks with pressures 2.5 psig or less. Above-ground tanks operating at pressures not exceeding 2.5 psig (17.2 kPa) for storage of Class I, II or IIIA liquids, which are designed with a floating roof, a weak roof-to-shell seam or equipped with emergency venting devices limiting pressure to 2.5 psig (17.2 kPa), shall be located in accordance with Table 4.3.2.1.1(a) of NFPA 30.

Exceptions:

1. Vertical tanks having a weak roof-to-shell seam and storing Class IIIA liquids are allowed to be located at one-half the distances specified in Table 4.3.2.1.1(a) of NFPA 30, provided the tanks are not within a diked area or drainage path for a tank storing Class I or II liquids.

CITY CLERK

2. Liquids with boilover characteristics and unstable liquids in accordance with Sections 3404.2.9.5.1.3 and 3404.2.9.5.1.4.

3. For protected above-ground tanks in accordance with Section 3404.2.9.6 and tanks in at-grade or above-grade vaults in accordance with Section 3404.2.8, the distances in Table 4.3.2.1.1(b) of NFPA 30 shall apply and shall be reduced by one-half, but not to less than 5 feet (1524 mm).

TABLE 3404.2.9.5.1-A

QUANTITY RESTRICTIONS FOR ABOVE- GROUND

STORAGE TANKS USED FOR DISPENSING INTO EQUIPMENT

TYPE OF LIQUID	**LOCATION OF TANK**		
	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	660 gallons	Maximum primary	Maximum primary tank

DMS CITY CLERK

use		tank capacity = 2,000 gallons	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.

[3]Maximum individual compartment capacities shall not exceed the maximum allowable primary tank capacity for the class of liquid.

3404.2.9.5.1.2 Location of tanks with pressures exceeding 2.5 psig. Above-ground tanks for the storage of Class I, II or IIIA liquids operating at pressures exceeding 2.5 psig (17.2 kPa) or equipped with emergency venting allowing pressures to exceed 2.5 psig (17.2 kPa) shall be located in accordance with Table 4.3.2.1.2 of NFPA 30.

CITY CLERK

Exception: Liquids with boilover characteristics and unstable liquids in accordance with Sections 3404.2.9.5.1.4 and 3404.2.9.5.1.5.

* * *

Section 303. Subsection 3404.2.13 of the 2006 International Fire Code is amended as follows:

3404.2.13 Abandonment and status of tanks. Tanks taken out of service shall be removed in accordance with Section 3404.2.14, or safeguarded in accordance with Sections 3404.2.13.1 through 3404.2.13.2.3 and API 1604. Residential heating oil tanks required by this section to be removed or decommissioned shall also comply with Administrative Rule 34.02.07, *Decommissioning Residential Heating Oil Tanks*.

* * *

Section 304. A new subsection 3404.2.15 is adopted to read as follows:

3404.2.15 Maintenance. Above-ground tanks and connected piping shall be maintained in a safe operating condition. Tanks shall be maintained in accordance with their listings.

Damage to above-ground 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 305. Subsection 3404.3.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

3404.3.1 Design, construction and capacity of containers and portable tanks. The design, construction and capacity of containers and portable tanks for the storage of Class I, II and IIIA liquids shall be in accordance with this section and Section 6.2 of NFPA 30.

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.

Section 306. Subsection 3404.3.4.4 of the 2006 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 (38 L) shall be in approved containers in approved locations.

Section 307. Subsection 3404.3.5.1 of the 2006 International Fire Code is amended as follows:

LDS CITY CLERK

3404.3.5.1 Basement storage. Class I liquids shall be allowed to be stored in basements ((~~in amounts not exceeding the maximum allowable quantity per control area for use-open systems in Table 2703.1.1(1), provided that automatic suppression and other fire protection are provided in accordance with Chapter 9.~~))protected throughout by an approved automatic sprinkler system required in accordance with Chapter 9. The maximum aggregate quantity of all combined Class I flammable liquids in a basement shall not exceed 30 gallons and Class I-A flammable liquids shall not exceed 10 gallons.

Quantities of Class I flammable liquids in basements in excess of 10 gallons shall be stored in approved liquid storage cabinets in accordance with Section 3404.3.2.

Exception: Class I liquids stored and used in basement areas of research laboratories in accordance with Administrative Rule 34.03.07, *Flammable Liquid Storage and Use in Basement Level Laboratories.*

Class II and IIIA liquids shall also be allowed to be stored in basements, provided that automatic suppression and other fire protection are provided in accordance with Chapter 9.

Section 308. Subsection 3404.3.6.1 of the 2006 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.

BDS CITY CLERK

Plastic containers may be used for Class II and III liquids only when individual containers are:

1. Stored less than 5 feet (1524 mm) high; or

2. Confined to box bins protected by automatic sprinklers within racks.

Section 309. Subsection 3404.3.7.3 of the 2006 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 310. Subsection 3404.3.7.5 of the 2006 International Fire Code is amended as follows:

3404.3.7.5 Fire protection. Fire protection for liquid storage rooms shall comply with Sections 3404.3.7.5.1 and 3404.3.7.5.2.

If secondary containment of nonwater-miscible flammable or combustible liquids is achieved through the use of recessed floors or liquid-tight sills as allowed 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

CITY CLERK

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 325M.

Section 311. Subsection 3404.3.8.2 of the 2006 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.

Section 312. Subsection 3404.3.8.4 of the 2006 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. Automatic foam-water systems and automatic 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.

LMS CITY CLERK

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 313. Subsection 3405.4.1 of the 2006 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 through-put industrial processes where the source of heat is remotely supplied using steam, hot water, oil or other heat 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 noncommercial 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 314. A new subsection 3405.4.10 is adopted to read as follows:

3405.4.10 Existing units.

CITY CLERK

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 (227 L) or less which are constructed of UL or CSA approved components and 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 3 feet (914 mm) from ignition sources, and separated from exit ways by 1-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 purposes in a laboratory setting or similar controlled environment.

3405.4.10.2 Listing. Solvent distillation units used to process Class I, II or IIIA liquids shall be listed in accordance with the *Seattle 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 (227 L) or less when separated from exits and exit ways by

LMS CITY CLERK

1-hour fire-resistant construction and located at least 3 feet (914 mm) away from ignition sources.

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.

3405.4.10.3 Location. Solvent distillation units shall not be used in basements. Units processing Class I, II or IIIA liquids, having a distillation capacity exceeding 60 gallons (227 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.

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 autoignition temperature of the liquid being distilled.

Section 315. A new subsection 3405.4.11 is adopted to read as follows:

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 (4572 mm) from public ways, property lines, combustible construction and openings to buildings.

CITY CLERK

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 316. Subsection 3406.5.4.5 of the 2006 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 issued a permit 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

CITY CLERK

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 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.

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 (4572 mm) 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 (4572 mm) 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.

CITY CLERK

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 11/4 inches (32mm).

11. The dispensing hose shall not be extended from the reel more than 100 feet (30 480 mm) in length.

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 (61 L), a 10-foot-long (3048 mm) containment boom, an approved container with lid, ((~~and~~)) a nonmetallic shovel and a storm drain spill kit shall be provided to mitigate a minimum 5-gallon (19 L) fuel spill.

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 shutoff device which, when activated, immediately causes flow of fuel from the tank vehicle to cease.

DIS CITY CLERK

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.

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

CITY CLERK

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 (19 L). 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 and other persons cannot 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 317. Subsection 3801.1 of the 2006 International Fire Code is amended as follows:

CITY CLERK

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.

Exceptions:

1. LP-gas used with oxygen for hot work operations shall be in accordance with Chapter 26.

2. LP-gas used in connection with outdoor patio heaters shall be in accordance with Section 603.4.

Properties of LP-gases shall be determined in accordance with Appendix B of NFPA 58 as amended.

Section 318. Subsection 3801.3 of the 2006 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 319. Section 3803 of the 2006 International Fire Code is amended as follows:

SECTION 3803

INSTALLATION OF EQUIPMENT

CITY CLERK

3803.1 General. LP-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.

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 6.17.1.2]

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

CITY CLERK

temporary heating as set forth in this section and Sections 6.17.4, 6.17.5 and 6.17.8 of NFPA 58 as amended. [NFPA 58 6.17.4]

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]

Location	Maximum Individual Container Capacity	Maximum Aggregate Quantity per Floor	Maximum Aggregate Quantity 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	735 lbs. water capacity (nominal	4410 lbs. water capacity (nominal

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	100 lb LP-gas capacity)	300 lb LP-gas capacity)	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 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

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[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.

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]

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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)

[1] Weight of LP-gas per gallon = 4.20 lbs.

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 6.17.6]

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 6.17.7]

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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 6.17.9]

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 2.7((~~5~~)) pounds (1.2 kg). [NFPA 58 6.17.9.3.3]

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 6.17.9.4]

3803.2.2 Industrial vehicles and floor maintenance machines. Containers on industrial vehicles and floor maintenance machines shall comply with ((~~NFPA 58,~~)) Sections 11.12 and 11.13 of NFPA 58 as amended. [NFPA 58 11.12, 11.13]

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.*~~))

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.

CITY CLERK

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 6.6.7.1]

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 LP-gas containers on exterior balconies. LP-gas containers with a water capacity greater than 2.7 pounds (1.2-kg) shall not be located above the first floor on decks or balconies that are attached to a Group R-1 or R-2 Occupancy.

Exceptions:

1. 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. See NFPA 58 6.17.11.2.

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 exterior balcony of any occupancy except Group R-2 occupancies that are licensed by the Washington State Department of Health and Social Services or Washington State Department of Health, 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

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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
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)

CITY CLERK

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)
	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)
	Fire District	200 lbs. water capacity (nominal 84 lbs. LP-gas capacity)	400 lbs. water capacity (nominal 168 lbs. LP-gas capacity)

Ens CITY CLERK

Fueling Hot Tar Tank Trucks			
	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 a 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 320. Subsection 3804 of the 2006 International Fire Code is amended as follows:

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~~)).

CITY CLERK

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 6.3.1]

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 6.4.5 of NFPA 58 as amended. [NFPA 58 6.4.5]

* * *

Section 321. Section 3805 of the 2006 International Fire Code is amended as follows:

DIS CITY CLERK

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 roof of any occupancy except Group R-2 occupancies that are licensed by the Washington State Department of Health and Social Services or Washington State Department of Health, provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

EMS CITY CLERK

3805.5 Stationary installations inside buildings. Stationary installations of LP-gas containers inside buildings are prohibited. [NFPA 58 6.2.2]

Section 322. Subsection 3806.3 of the 2006 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 6.5]

Section 323. Subsection 3807.2 of the 2006 International Fire Code is amended as follows:

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 6.20 of NFPA 58 as amended. [NFPA 58 6.20]

Section 324. Subsection 3807.3 of the 2006 International Fire Code is amended as follows:

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 6.4.5.2]

Section 325. Subsection 3808 of the 2006 International Fire Code is amended as follows:

DMS CITY CLERK

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 6.23 of NFPA 58 as amended.

3808.2 Fire extinguishers. Fire extinguishers complying with Section 906 shall be provided as specified in NFPA 58 as amended.

Section 326. Section 3809 of the 2006 International Fire Code is amended as follows:

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.
3. Containers at consumer sites or distributing points, which are connected for use. [NFPA 58 8.1]

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 8.2.1.1]

3809.3 Position. Containers in storage having individual water capacity greater than 2.7((~~5~~)) 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 8.2.1.2]

CITY CLERK

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 8.2.1.3]

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 8.2.1.4]

3809.6 Storage on roofs. Containers which are not connected for use shall not be stored on roofs. [NFPA 58 8.2.1.5]

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.

Exception: Department of Transportation (DOT) specification cylinders with a maximum water capacity of 2.7((~~5~~)) 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 8.2.2]

CITY CLERK

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 (DOT) specification cylinders with maximum water capacity of 2.7((~~5~~)) pounds (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 is 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 8.3.2.3]

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, is limited to containers having a maximum individual water capacity of 2.7 lbs. (1.2 kg) and not exceeding 5.4-lb (2.4-kg) aggregate water capacity per living space unit. Each container shall meet DOT specifications. [NFPA 58 8.3.5]

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

DIS CITY CLERK

shall be separated by a minimum of 300 feet (91 440 mm). Storage beyond these limitations shall comply with Section 3809.11. [NFPA 58 8.3.3]

Individual LP-gas container capacities and aggregate quantities of LP-gas allowed to be stored within buildings not accessible to the public are limited in accordance with Table 3809.10.

TABLE 3809.10

STORAGE WITHIN BUILDINGS NOT ACCESSIBLE TO THE PUBLIC[1]

Location	Max Individual Container Capacity	Maximum Aggregate 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	735 lbs. water capacity (nominal

CITY CLERK

	30 lbs. LP-gas capacity)	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 8.3.3.4]

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.

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 Section 6.20 of NFPA 58 as amended.

EMS CITY CLERK

3809.12 Location of storage outside of buildings. Storage outside of buildings of containers awaiting use, resale or part of a cylinder exchange program shall be located in accordance with Table 3809.12-A. [NFPA 58 8.4]

Maximum aggregate quantities located outside of buildings accessible to the public shall be in accordance with Table 3809.12-B.

TABLE 3809.12-A

SEPARATION FROM EXPOSURES OF CONTAINERS AWAITING USE, RESALE OR EXCHANGE STORED OUTSIDE OF BUILDINGS FROM EXPOSURES

QUANTITY OF LP-GAS STORED (pounds)	MINIMUM SEPARATION DISTANCE FROM STORED CYLINDERS TO (feet): Nearest important building or group of buildings or line of adjoining property that may be built upon	Line of adjoining property occupied by schools, places of religious worship, hospitals, athletic fields or other points of public gathering; busy thoroughfares; or sidewalks	LP-gas dispensing station	Doorway or opening to a building with two or more means of egress	Doorway or opening to a building with one means of egress	Combustible materials	Motor vehicle fuel dispenser
720 or less	0	0	5	5	10	10	20
721 - 2,500	((0))10	10	10	5*	10	10	20
2,501 - 6,000	10	10	10	10	10	10	20
6,001 -	20	20	20	20	20	10	20
Over 10,000	25	25	25	25	25	10	20

For SI: 1 foot = 304.8 mm, 1 pound = 0.454 kg.

*5 foot (1524 mm) setback allowed to one of the two exits;10 foot (3048 mm) setback required to second exit.

TABLE 3809.12-B

STORAGE OUTSIDE BUILDINGS ACCESSIBLE TO THE PUBLIC[1]

Location	Max	Maximum

CITY CLERK

	Individual Container Capacity	**Aggregate Quantity**
Fire District	72 lbs. water capacity (nominal 30 lbs. LP-gas)	357 lbs. water capacity (nominal 150 lbs. LP-gas)
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.

CITY CLERK

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 8.4.2.2]

* * *

Section 327. Subsection 3811.3 of the 2006 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 Section 11.15 of NFPA 58 as amended.

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

CITY CLERK

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	-

* Based on propane specific gravity of .508 at 60 degrees Fahrenheit

CITY CLERK

Section 328. Chapter 45 of the 2006 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—04 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

CITY CLERK

130— 07 Fixed Guideway Transit and Passenger Rail Systems as amended 316

* * *

498-01 Safe Havens and Interchange Lots for Vehicles Transporting Explosives 3301.1.2

502—04 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

* * *

58—96 Steel Underground Tanks for Flammable and Combustible Liquids—with Revisions through July 1998 . . . . . .3404.2.13.1.5

142-06 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids . . . . . Chapter 34

* * *

Section 329. A new Chapter 46 is adopted to read as follows:

CHAPTER 46

WATERFRONT STRUCTURES FIRE PROTECTION

SECTION 4601

GENERAL

CITY CLERK

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 26.02.07 *Designated Hot Work Facilities and Shipyards.*

4601.1.1 Conflicts. Where there is a conflict between this code and an ordinance or rule, this chapter governs 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. 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 and fire evacuation, and shall include the location of portable fire extinguishers and hose

CITY CLERK

cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.

Point of Information

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 includes artificially protected works, the public or

CITY CLERK

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 26.02.07, *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 a watercraft of any type, other than a seaplane 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

CITY CLERK

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. The apparatus access lane shall meet the requirements of Appendix D.

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

CITY CLERK

4605.1 Standpipe systems. A manual Class I standpipe system in accordance with NFPA 14, or Class III standpipe system in accordance with NFPA 14, when approved by the fire code official, 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. Approved plastic pipe may be used when installed underwater, or when another approved method of protection from fire is provided. The standpipe piping shall be a minimum of 4 inches (102 mm), sized to provide a minimum of 500 gpm at 130 psi at the most remote hose connection, with a simultaneous flow of 500 gpm at the third most remote hose connection on the same pier while maintaining a maximum system pressure of 175 psi.

4605.1.1 Hose connections. Hose connection stations on required standpipes shall be provided at the water end of the pier, wharf, or float, and along the entire length of the pier, wharf, or float at spacing not to exceed 150 feet (45 720 mm) and as close as practical to the land end.

Exception: The hose connection at the land end of the pier, wharf or float may be omitted when a hose connection is located within 150 feet (45 720 mm) of the fire apparatus access road.

Each hose connection shall consist of a valved 2 1/2-inch (64 mm) fire department hose outlet. Outlet caps shall have a predrilled 1/8-inch (3.2 mm) 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.

4605.2 Automatic sprinkler systems.

CITY CLERK

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 that do not exceed 10 feet (3048 mm) in width.

4605.2.3 Superstructure. Automatic sprinklers shall be provided in superstructures as specified in Chapter 9.

2008 CITY CLERK

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.

4605.4 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested in accordance with Administrative Rule 9.02.07 *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 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

Section 330. 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.

CITY CLERK

SECTION 9001

GENERAL

9001.1 Definitions. For the purpose of this chapter, the following words and terms 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.

CITY CLERK

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 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 apply.

Section 331. 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

CITY CLERK

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 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

CITY CLERK

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.
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 apply providing they are not less stringent.

Section 332. 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.

CITY CLERK

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.
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

CITY CLERK

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 Building Codes and Seattle Fire Codes adopted after August 5, 1966, the provisions of the later adopted code apply.

Section 333. 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" means the 1982 Seattle Building Code. Where used in this Chapter, the terms "this Code" and "the fire code" mean the 1982 Seattle Fire Code.

SECTION 9301

GENERAL

9301.1 Purpose. The main purpose of this chapter 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 chapter may permit the use of alternative methods and innovative

BDS CITY CLERK

approaches and techniques to achieve its purpose, when approved by the chief and the Building Official.

9301.2 Scope. This chapter applies 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 finds a condition in a high-rise building not specifically addressed in this chapter, which in the chief's opinion makes fire escape or fire fighting unusually difficult, the chief is authorized to 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 of Planning and Development 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 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:

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.

CITY CLERK

3. Staff persons are available in low income high-rise buildings whose primary duty requires them to be at the front desk.

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: Those buildings that meet the following requirements:

1. At least fifty percent (50%) of the dwelling or housing units as defined in the Seattle Housing and Building Maintenance Code (Seattle Municipal Code Ch. 22.204) are rented to non-transient persons at a rent at or 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.

DIS CITY CLERK

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.

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 fire-resistive construction. Wire-glass protected by sprinklers on both sides may be accepted as one-hour fire-resistive 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

DIS CITY CLERK

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.
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.

DNS CITY CLERK

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.

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,

CITY CLERK

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.
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.

CITY CLERK

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 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 fire-resistive 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:

bns CITY CLERK

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.
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.

Exception: Where a corridor has an approved automatic sprinkler system, smoke detectors may be omitted from the corridor.

CITY CLERK

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.

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.
3. All wiring work shall be done under applicable permit obtained from the Department of Planning and Development.

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

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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

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.

CITY CLERK

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 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 floors 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.

THIS CITY CLERK

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.

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 334. A new Chapter 94 is adopted to read as follows:

FIRE PROTECTION FOR COVERED BOAT MOORAGE

Point of Information

The requirements of this chapter originated in City of Seattle Ordinance 121773, effective May 18, 2005. The requirements of this ordinance apply to all covered moorage marina facilities in existence on the effective date of May 18, 2005.

SECTION 9401

GENERAL

9401.1 Scope. This chapter applies to covered portions of all marinas with covered boat moorage in existence at the time of its adoption.

Exceptions:

1. Approved designated facilities and shipyards in accordance with Administrative Rule 26.02.07 *Designated Hot Work Facilities and Shipyards*,
2. Boathouses.

CITY CLERK

9401.2 Intent. This Chapter is intended to promote the health, safety and welfare of life and property from fire at covered boat moorage.

9401.3 Modifications. The retroactive requirements of this chapter shall be permitted to be modified if their application clearly would be impractical for economic or physical reasons in the judgment of the fire code official, and only where it is clearly evident that a reasonable degree of safety is provided.

9401.4 Signage. Conspicuous signage shall be located at the fire apparatus access road termination point and the shore end of piers, wharves and floats. Signage shall indicate the address, directions and maps when required by the fire code official. For those structures that are designed to support vehicles, signage shall indicate 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 and shall have a minimum stroke of 0.5 inches (12.7 mm).

9401.5 Smoking Restrictions. Smoking shall be prohibited in all areas where fuels and other flammable and combustible liquids and gases are stored or dispensed, in battery rooms, and in other such locations as management or the fire code official shall designate. "No Smoking" signs shall be conspicuously posted.

9401.6 Transmittal of Fire Emergency. All marinas and boatyards shall have a means to notify the fire department rapidly in the event of an emergency. If a telephone is used for this purpose, it shall be available for use at all times and shall not require the use of a coin. The street address of the facility and the emergency telephone number(s) shall be displayed prominently on a sign at the telephone.

DHS CITY CLERK

9401.7 Labeling electrical shutoffs. Electrical transformers, control panels, and breaker panels shall be readily accessible, clearly labeled and indicate the areas they service. See also SFC 605.3.

9401.8 Fire extinguishers. One portable fire extinguisher having a minimum rating of 2A 20-BC shall be provided within 75 feet (22,860 mm) 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 SFC 906 and NFPA Standard 10.

SECTION 9402

DEFINITIONS

9402.1 Definitions. For the purposes of this chapter, the following words and terms have the meanings shown herein.

BERTH is the water space to be occupied by a boat or other vessel alongside or between bulkheads, piers, piles, fixed and floating docks, or any similar access structure. (See also definition for Slip.)

BOATHOUSE is an independently floating structure designed to be moored to a main float system to enclose and protect a vessel or vessels. A boathouse is capable of being moved on water, but is typically moored to a float system for long periods of time.

COVERED BOAT MOORAGE is a pier or system of floating or fixed accessways to which vessels on water may be secured, and is covered by a roof.

DIS CITY CLERK

DRAFT CURTAIN. A structure arranged to limit the spread of smoke and heat along the underside of the ceiling or roof.

FIRE PARTITION is a vertical assembly of materials designed to restrict the spread of fire and in which openings are protected.

FLOAT is a floating structure normally used as a point of transfer for passengers and goods or both, for mooring purposes.

GRAVITY-OPERATED DROP OUT VENTS. Automatic smoke and heat vents containing heat-sensitive glazing designed to shrink and drop out of the vent opening when exposed to fire.

MARINA is any portion of the ocean or inland water, either naturally or artificially protected, for the mooring, servicing or safety of vessels and includes 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.

MARINE MOTOR FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as fuel for watercraft are stored and dispensed from fixed equipment on shore, piers, wharves, floats or barges into the fuel tanks of watercraft and included all other facilities used in connection therewith.

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 wharves and related onshore facilities, designated by the fire code official, which by virtue of the pier construction, location, emergency

CITY CLERK

vehicle access, fire protection, hydrant availability and onsite safety personnel in accordance with Seattle Fire Department Administrative Rule 26.02.07, *Designated Hot Work Facilities and Shipyards,* is suitable to permit repairs, including major conversions, on marine vessels of any length.

SLIP is a berthing space between or adjacent to piers, wharves, or docks; the water areas associated with boat moorage. (See also definition for Berth.)

VESSEL is a watercraft of any type, other than a seaplane 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 9403

PLANS AND APPROVALS

9403.1 Plans. Plans for marina fire-protection shall be approved prior to installation. The work shall be subject to final inspection and approval after installation.

SECTION 9404

ACCESS AND WATER SUPPLY

9404.1 Fire apparatus access roads. Fire apparatus access roads shall be provided and so located as to provide fire department apparatus access to within 150 feet (45,720 mm) travel distance to the shore end of all marina piers, wharves, and floats. Fire apparatus access roads shall be in accordance with Appendix D.

BDS CITY CLERK

Exception: When approved by the fire code official, a Class I standpipe system may be installed on piers, wharves, or floats when conditions are such that providing fire department access lanes to within 150 feet (45,720 mm) of the shore end of the piers, wharves, and floats is not practical. Additional standpipe requirements are found in SFC 9405.1.

9404.2 Premises access. The fire department shall have access to fenced, gated, or locked grounds, piers, wharves or floats. Appropriate means of access (including keys and cardkeys) shall be provided in an approved secured lock box (Knox Box) on the premises in an approved location. The fire department shall be notified immediately of any changes in the means of access.

9404.3 Fire hydrants. At least two fire hydrants shall be provided. One hydrant shall be located within 500 feet (152,400 mm) 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 (304,800 mm) 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.

Exception: The requirements for fire hydrants may be modified when alternate arrangements are approved by the fire code official.

9404.4 Water supply. All required hydrants shall be capable of delivering not less than 1,000 gpm at a minimum residual pressure of 20 psi each.

CITY CLERK

Exception: The requirements for water supply may be modified when alternate arrangements are approved by the fire code official.

SECTION 9405

FIRE PROTECTION EQUIPMENT

9405.1 Standpipe systems. A manual Class I standpipe system (or class III standpipe system when approved by the fire code official) in accordance with NFPA Standard 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 (45,720 mm). Approved plastic pipe may be used when installed underwater, or other approved method of protection from fire is provided. The standpipe piping shall be a minimum of 4 inches (102 mm), sized to provide a minimum of 500 gpm at 130 psi at the most remote hose connection, with a simultaneous flow of 500 gpm at the third most remote hose connection on the same pier while maintaining a maximum system pressure of 175 psi. Existing standpipe systems providing equivalent performance to the specification listed above may be acceptable when approved by the fire code official.

9405.1.1 Hose connections. Hose connections on required standpipes shall be provided at the water end of the pier, wharf, or float, and along the entire length of the pier, wharf, or float at spacing not to exceed 150 feet (45,720 mm) and as close as practical to the land end.

Exception: The hose connection at the land end of the pier, wharf or float may be omitted when a hose connection is located within 150 feet (45,720 mm) of the fire apparatus access road.

CITY CLERK

Each hose connection shall consist of a valved 21/2-inch (64 mm) fire department hose outlet. Outlet caps shall have a predrilled 1/8-inch (3.2 mm) 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.

9405.2 Automatic sprinkler systems. Automatic sprinklers shall be provided for each separate covered boat moorage area exceeding 8,000 sq. ft. (743 m2) in projected roof area, excluding roof overhangs. A separate covered boat moorage area is one that has at least 16 feet uncovered horizontal separation from any part of any adjacent covered boat moorage area.

The sprinkler system shall be designed and installed in accordance with NFPA Standard 13 for Extra Hazard Group 2 occupancy.

Exception: Covered boat moorage already protected by an automatic sprinkler system is not required to be upgraded to Extra Hazard Group 2 criteria.

9405.2.1 Monitoring. Sprinkler systems shall be monitored by an approved central station.

9405.3 Smoke and heat vents: Approved automatic smoke and heat vents shall be provided in covered boat moorage areas exceeding 2,500 sq. ft. (232 m2) in area, excluding roof overhangs.

Exception: Smoke and heat vents are not required in areas protected by automatic sprinklers.

9405.3.1 Design and installation. Where smoke and heat vents are required they shall be installed near the roof peak, evenly distributed and arranged so that at least one vent is over each covered berth. The effective vent area shall be calculated using a ratio of one square foot of

CITY CLERK

vent to every fifteen square feet of covered berth area (1:15). Each vent shall provide a minimum opening size of 4 ft. x 4 ft.

9405.3.1.1 Smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100 degrees F (56 degrees C) and 220 degrees F (122 degrees C) above ambient.

Exception: Gravity-operated drop out vents.

9405.3.1.2 Gravity-operated drop out vents. Gravity operated dropout vents shall fully open within 5 minutes after the vent cavity is exposed to a simulated fire represented by a time-temperature gradient that reaches an air temperature of 500 degrees F (260 degrees C) within 5 minutes.

9405.4 Draft curtains. Draft curtains shall be provided in covered boat moorage areas exceeding 2,500 sq. ft. (232 m2) in area, excluding roof overhangs.

Exception: Draft curtains are not required in areas protected by automatic sprinklers.

9405.4.1 Draft curtain construction. Draft curtains shall be constructed of sheet metal, gypsum board or other approved materials that provide equivalent performance to resist the passage of smoke. Joints and connections shall be smoke tight.

9405.4.2 Draft curtain location and depth. The maximum area protected by draft curtains shall not exceed 2,000 sq. ft. (186 m2) or two slips or berths, whichever is smaller. Draft curtains shall not extend past the piling line. Draft curtains shall have a minimum depth of 2 feet (609 mm) below the lower edge of the roof and shall not extend closer than 8 feet (2438 mm) to the walking surface on the pier.

CITY CLERK

9405.5 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than one two-way 21/2-inch (64 mm) fire department connection (FDC), which shall be readily visible and located at the fire apparatus access road or other approved location. The FDC for class I standpipe systems may be located at the shore end of the pier, wharf, or float when the distance between the fire apparatus access road and FDC is less than 150 feet (45,720 mm). See also SFC 9404.3 Fire hydrants.

9405.6 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested in accordance with Administrative Rule 9.02.07 *Confidence Test Requirements for Life Safety Systems.* Notwithstanding fire department inspections, maintenance and periodic testing are the owner's responsibility. All persons performing such work shall have a certificate from the fire department to perform such work. See Administrative Rule 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment.*

9405.7 Moorage in intervening moorage space. Vessels moored in open spaces between covered moorage shall not exceed 7 feet (2,133.6 mm) from the top of the vessel superstructure to the waterline, unless protected by an approved fire partition.

Section 9406

Emergency Plans and Training

9406.1 Emergency plan. Owners or operators of piers, wharves, floats and marinas shall prepare and maintain a current emergency plan for the facility. The plan shall include procedures for fire department notification, fire evacuation, and include location of portable fire extinguishers and

DHS CITY CL

hose cabinets, sprinkler and standpipe system control valves, fire department connections and electrical disconnects.

9406.2 Signage. Signs, posters, or posted instructions shall be provided where practicable to remind the public of basic fire safety practices and to warn of unusual or extreme fire hazards. All boat owners at the marina shall be provided with written instructions for reporting fires and other emergencies and actions to be taken in the event of a fire.

Point of Information

For examples of emergency plans, see information bulletins located at www.seattle.gov/fire titled Emergency Procedures for Public Occupancies and Fire Evacuation Planning.

9406.3 Employee training. Practice drills shall be held a minimum of twice a year.

9406.3.1 All employees shall know the location of fire-fighting equipment, and shall be instructed in the procedures for response to a fire or other emergency, response to a fire alarm, reporting a fire or other emergency to the proper authorities (and to designated facility employees), and in the employees' designated role(s) in emergency situations. See SFC 9406.

9406.3.2 All employees, including office personnel, shall be given training in the use of portable fire extinguishers.

9406.4 Fire department liaison. When requested by the Seattle Fire Department, management shall assist the fire department in pre-fire planning for the following:

(1) Entries and access routes for equipment within the premises,

BDS CITY CLERK

(2) Location, construction, use, and accessibility of all buildings and all their subdivisions including basements, storage lockers, and other areas,

(3) Location and extent of outside working areas,

(4) Location and means of access to both dry and wet boat-storage areas,

(5) Type and capacity of standpipes on piers and walkways, including all points where connection of hydrant or pumper supplies can be affected,

(6) Types and capacities of facility equipment, including work or tow boats, portable pumps, pier-mounted hose cabinets, all portable fire extinguishers, and other equipment,

(7) Voltages and capacities of electrical systems, and location of electrical disconnecting means.

Section 9407

Operational Hazards

9407.1 The marina or boatyard operator shall post in a prominent location or provide to boat operators using a marina or boatyard for mooring, repair, servicing, or storage, a list of safe operating procedures containing the following:

(1) Procedures for disposal of trash;

(2) Nonsmoking areas;

(3) Location of fire extinguishers and hoses;

(4) Procedures for turning in a fire alarm; and

(5) Fueling procedures.

9407.2 Fueling Operations. Fueling of floating marine craft with Class I fuels at other than a marine motor fuel-dispensing facility is prohibited. Fueling of floating marine craft with Class II

DPS CITY CLERK

or III fuels at other than a marine motor fuel-dispensing facility shall be in accordance with SFC 2210.4.

Section 9408

Compliance

9408.1 Compliance. All corrections that may be necessary to provide the minimum fire safety requirements established in this Chapter shall be completed by the owners as follows:

(a) The fire code official shall develop a procedure for surveying marinas to effect compliance with this Chapter. The fire code official is authorized to send written and signed notices to the owners of all non-complying marinas. Within 120 days of the date of notification by the fire code official, the owner shall submit to the fire code official a concept design and firm schedule for complying with the requirements of this chapter.

(b) The fire code official shall review the concept design and firm schedule and respond in writing. The time schedule for compliance shall be measured from the date of the fire code official's response to the concept design and firm schedule for each marina, and shall not exceed the time limits set forth in subsection (c) of this section.

(c) The time limits for complying with the requirements of this Chapter are as follows:

Fire Extinguishers	1 year
Signage	1 year
Emergency Plan	1 year

CITY CLERK

Smoke and Heat Vents and Draft Curtains	7 years
Fire Hydrants	5 years
Standpipes	7 years
Sprinkler Systems	10 years

(d) Marinas will not be deemed to be in violation of this Chapter until the time limits set forth in subsection (c) above have expired. Appeals to compliance with this section shall be in accordance SFC 108.

Section 335. Section B103 of the 2006 International Fire Code is amended as follows:

SECTION B103

MODIFICATIONS

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

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

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

CITY CLERK

B103.4 Deferment. The fire code official is authorized to defer enforcement of fire flow requirements to allow time for infrastructure upgrades to occur. Temporary mitigation measures as approved by the fire code official may be required for projects in areas with deficient fire flow.

Section 336. Subsection B105 of the 2006 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 up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system.

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

Exceptions:

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

2. The resulting fire-flow shall not be less than 1,000 gallons per minute (3790 L/min) for the

CITY CLERK

prescribed duration as specified in Table B105.1 for a building that consists only of Group R-2 and its associated parking.

Section 337. Subsection D101.1 of the 2006 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 338. Subsection D102.1 of the 2006 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).

Section 339. Section D103 of the 2006 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.

CITY CLERK

Exception: Grades steeper than 10 percent as approved by the fire ((~~chief~~))code official.

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~~))3 and Figure D103.3. Required turnarounds shall be located not more than 150 feet (45 720 mm) from the dead-end terminus of the fire apparatus access road.

TABLE D103.3((4))

REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH	WIDTH	TURNAROUNDS
0–150	20	None required
151–500	20	120-foot Hammerhead, 60-foot "Y" or
501–750	26	120-foot Hammerhead, 60-foot "Y" or
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

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 R-3 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.

BNS CITY CLERK

3. Construction of gates shall be of materials that allow manual operation by one person.
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 or when a key box containing the key(s) to the lock is installed at the gate location.
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 removed 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((20)) to 26 feet in width. Fire apparatus access roads 12((20)) 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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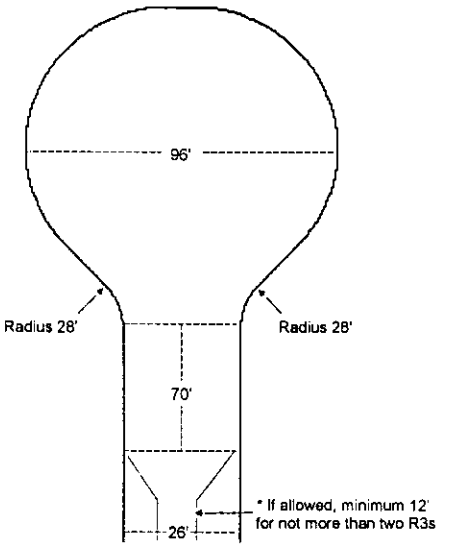
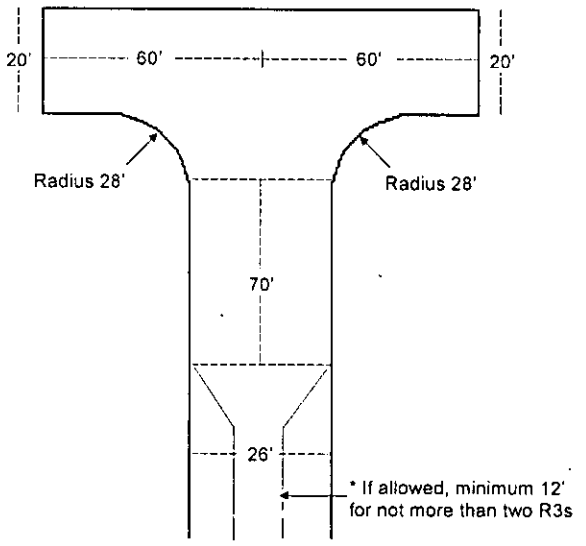
Section 340. Figure D103.1 of the 2006 International Fire Code is hereby repealed and a new Figure D103.1 is added to read as follows:

Figure D103.1

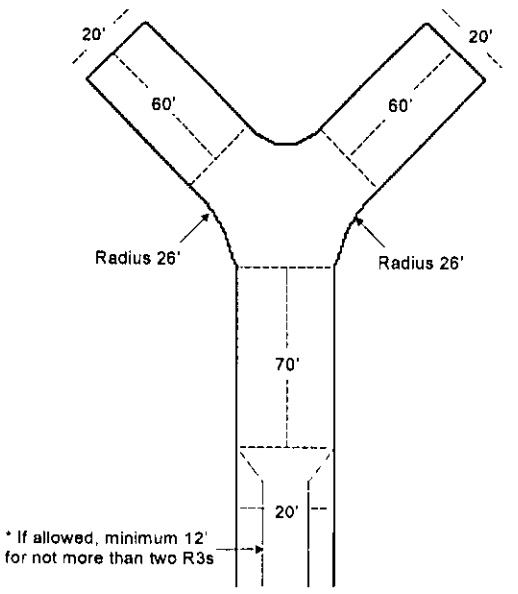


96 Foot Cul-de-sac

CITY CLERK

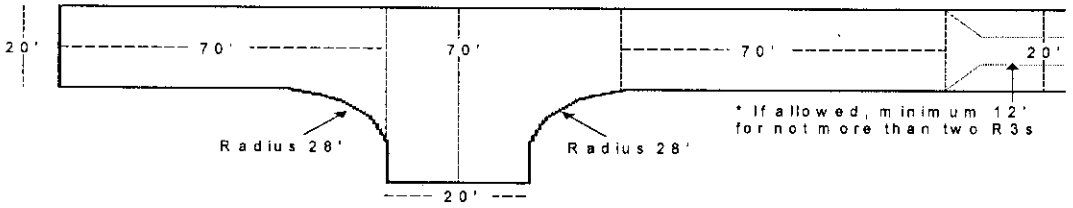


120 Foot Hammerhead



60 Foot Y – Acceptable Alternative to 120 Foot Hammerhead

CITY CLERK



Acceptable Alternative to 120 Foot Hammerhead

Section 341. Subsection D104 of the 2006 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 m2) shall be provided with two separate and approved fire apparatus access roads.

CITY CLERK

Exception: Projects having a gross building area of up to 124,000 square feet (11 520 m2) 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 342. Subsection D105.1 of the 2006 International Fire Code is amended as follows:

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.~~))in areas between the access road and the buildings or portions of buildings that would impede the safe deployment of the aerial ladders.

Exception: Buildings that are equipped throughout with approved automatic sprinkler systems.

Section 343. Subsection 6.5.1.3 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.5.1.3 The transfer of liquid into containers on the roofs of structures shall be ((~~permitted, provided that the installation conforms to the requirements contained in 6.6.7 through 6.17.11~~)) prohibited.

CITY CLERK

Section 344. Subsection 6.6.3.4 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.6.3.4 Where a single ASME container complying with Table 6.6.3.3 is installed ((~~in isolated locations~~)) with ((~~non-fire-proofed~~)) 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 E 1529 for the performance requirements for fire-resistive assemblies.

Section 345. Subsection 6.6.4.3 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.6.4.3 Steel supports shall be protected against fire exposure with a material that has a fire resistance rating of at least 2 hours. ((~~except that continuous steel skirts that have only one opening that is 18 in. (460 mm) or less in diameter shall have fire protection applied to the outside of the skirts.~~))

Section 346. Subsection 6.6.7.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.6.7.1 Installation of containers on roofs of buildings, including parking garages, shall be prohibited((~~, unless approved by the authority having jurisdiction and the fire department~~)).

Section 347. Subsection 6.6.7.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is hereby repealed.

CITY CLERK

Section 348. Subsection 6.17.1.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.1.2 Cylinders in use shall mean connected for use.

(A) The use of cylinders indoors shall be only for the purposes specified in 6.17.4 through 6.17.9.

(B) The use of cylinders indoors shall be limited to those conditions where operational requirements make the indoor use of cylinders necessary and location outside is impractical.

(((~~(C) The use of cylinders on roofs 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.~~

~~(D)~~))(C) Liquid LP-Gas shall be piped into buildings or structures only for the purposes specified in 6.8.1.1(4).

Section 349. Subsection 6.17.3.5 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.3.5 Where cylinders are located on a floor, ((~~roof,~~)) or balcony, cylinders shall be secured to prevent falling over the edge.

Section 350. Subsection 6.17.4.8 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.4.8 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]. If there is more than one such manifold, it shall be separated from any other by at least 20 ft (6.1 m).

CITY CLERK

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 351. Subsection 6.17.6.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.6.1 Cylinders used in buildings housing industrial occupancies for processing, research, or experimental purposes shall comply with 6.17.6.1 (A) and 6.17.6.1.(B).

(A) 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).

(B)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 352. Subsection 6.17.7.2 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.7.2 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:

(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 ((~~institutional~~)) Group I occupancies.

(2) If more than one such cylinder is located in the same room, the cylinders shall be separated by at least 20 ft (6.1 m).

CITY CLERK

(3) Cylinders not connected for use shall be stored in accordance with Chapter 8.

(4) Cylinders shall not be stored in a laboratory room.

Section 353. Subsection 6.17.11 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.17.11.1 ((~~Where cylinders are installed permanently on roofs of buildings, the buildings shall be of fire-resistant construction or noncombustible construction having essentially noncombustible contents, or other construction or contents that are protected with automatic sprinklers.~~

~~(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. (15m).~~

~~(B) Cylinders shall be located in areas where there is free air circulation, at least 10 ft (3m) 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. (460 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 6.17.2.4 through 6.17.2.6.~~

~~(E) Hose shall not be used for connection to cylinders.~~

(F) ~~The fire department shall be advised of each installation.~~))

LP-gas containers are prohibited on the roofs of buildings including parking garages.

Exceptions:

1. Temporary installations allowed in accordance with Section 6.17.2.

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 provided a portable fire extinguisher having a minimum rating of 20-B is located within 30 feet of the grill.

Section 354. Subsection 6.23.3.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

6.23.3.1 Fire protection shall be provided for installations with an aggregate water capacity of more than 4000 gal (15.1 m3) ((~~and of ASME containers on roofs~~)).

Section 355. Subsection 8.4.1.1 of the National Fire Protection Association 58 Liquefied Petroleum Gas Code, 2004 edition, is amended as follows:

8.4.1.1. Storage outside of buildings for cylinders awaiting use, resale, or part of a cylinder exchange point shall be located as follows:

(1) At least 5 ft (1.5 m) from any one doorway or opening in a building frequented by the public where occupants have at least two means of egress as defined by NFPA 101, Life Safety Code. A minimum 10 ft (3 m) setback is required from the second doorway or opening in the building.

CITY CLERK

(2) At least 10 ft (3 m) from any doorway or opening in a building or sections of a building that has only one means of egress.

(3) At least 20 ft (6.1 m) from any automotive service station fuel dispenser.

Section 356. A new subsection 5.1.1.1.1 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

5.1.1.1.1 Fixed guideway transit and passenger rail stations are classified as Group A, Division 3 occupancies in accordance with the 2006 *Seattle Building Code* and 2006 *Seattle Fire Code*.

Section 357. Subsection 5.2.2 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 2006 *Seattle Fire Code* and Chapter 33 of the 2006 *Seattle Building Code* shall apply.

CITY CLERK

Section 358. A new subsection 5.3.1 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 2006 *Seattle Building Code*. Smoke control shall restrict movement of smoke to the general area of fire origin and non-occupied exhaust areas and maintain tenability in the means of egress.

Section 359. Subsection 5.5.1 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 2006 *Seattle Building Code*, except as herein modified.

Section 360. Subsection 5.5.5.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

5.5.5.1 The occupant load for a station shall be based on whichever is greater:

(1) T((t))he train load of trains simultaneously entering the station on all tracks in normal traffic direction 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 1004.1.1 of the 2006 Seattle Building Code.

CITY CLERK

Section 361. Subsection 5.5.6.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

5.5.6.1 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 2006 Seattle Building Code.

Section 362. A new subsection 5.5.6.3.2.8 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

5.5.6.3.2.8 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 2006 Seattle Building Code.

Exception: The clear width is not required in existing facilities undergoing alterations.

Section 363. A new subsection 5.5.1.3.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

5.5.1.3.1 Access to three or more exits shall be provided from a floor area where required by Section 1019.1 of the 2006 Seattle Building Code.

CITY CLERK

Section 364. A new subsection 5.5.1.3.4 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

5.5.1.3.4 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 1020.1.7 of the 2006 *Seattle Building Code*.

Section 365. Subsection 5.5.1.4 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

5.5.1.4 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 366. Subsection 5.6.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

5.6.1 Stations shall be provided with a system of emergency lighting in accordance with ((~~NFPA 10,~~)) <u>Section 1006 of the 2006 *Seattle Building Code*,</u> except as otherwise noted herein.

CITY CLERK

Section 367. Subsection 5.7.3.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 12,000 square feet (1115 m^2); or

2. The fire area has an occupant load of 300 or more.

3. The fire area is located on a floor other than the level of exit discharge.

Section 368. A new subsection 5.7.3.1.2 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 2006 Seattle Fire Code.

Section 369. Subsection 5.7.4.1.1 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

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 370. Subsection 5.7.4.3* of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

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 9.03.07 *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 371. Subsection 5.7.6* of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 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 2006 *Seattle Fire Code*.

CITY CLERK

Section 372. Subsection 6.2.1.2 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

6.2.1.2 System egress ((~~points~~)) walk surfaces shall be illuminated at a level of not less than 2.69 lx (0.25 ft-candles).

Section 373. Subsections 6.2.2.5, 6.2.2.5.1, 6.2.2.5.2, and 6.2.2.5.3 respectively of NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, are hereby repealed.

Section 374. Subsection 6.5.2.1 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is amended as follows:

6.5.2.1 An approved fire standpipe system shall be provided ~~in~~ for underground and elevated fixed guideway transit and passenger rail system trainways where physical factors prevent or impede access to the water supply or fire apparatus, where required by the authority having jurisdiction.

Section 375. A new subsection 6.5.2.7 of the National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

6.5.2.7 Standpipe lines shall be sized in accordance with the following:

(1) Standpipe lines shall be a minimum size of 152.4mm (6 in.).

CITY CLERK

(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 376. A new subsection 6.5.2.8 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

6.5.2.8 Four-way 2½ in. fire department connections shall be provided at all emergency access points.

Section 377. A new subsection 6.5.2.9 of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is adopted to read as follows:

6.5.2.9 Standpipes shall be interconnected at all tunnel cross passageways and within the stations, with isolation valves provided for each interconnection.

Section 378. Subsection A.6.2.2.5.3 of Annex A of National Fire Protection Association 130 Standard for Fixed Guideway Transit and Passenger Rail Systems, 2007 edition, is hereby repealed.

BDS CITY CLERK

Section 379. Subsection 4.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

4.2 Safeguards During Construction. During the course of construction or alteration of any facility addressed in this standard, the provisions of ((~~NFPA 241~~)) Chapter 14 of the 2006 *Seattle Fire Code* and Chapter 33 of the 2006 *Seattle Building Code* shall apply, except as modified herein.

Section 380. Subsection 4.3.3 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

4.3.3 Bridges and Elevated Highways.

((~~**4.3.3.1*** Critical structural members shall be protected from collision and high-temperature exposure that can result in dangerous weakening or complete collapse of the bridge or elevated highway.~~))

4.3.3.1((~~2~~)) Fire protection for bridges and elevated highways shall comply with the requirements of Chapter 6 and Chapter 9.

Section 381. Subsection 4.3.4.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed.

CITY CLERK

Section 382. Subsection 4.3.6* of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

4.3.6* Roadway Beneath Air-Right Structures.

((~~**4.3.6.1** The limits that an air-right structure imposes on the emergency accessibility and function of the roadway that is located beneath the structure shall be assessed.~~

~~**4.3.6.2** Where an air-right structure encloses both sides of a roadway, it shall be considered a road tunnel for fire protection purposes and shall comply with the requirements of Chapter 7.~~

~~**4.3.6.3** Where an air-right structure does not fully enclose the roadway on both sides, the decision to consider it as a road tunnel shall be made by the authority having jurisdiction after an engineering analysis in accordance with 4.3.1.~~

4.3.6.1((4)) Fire protection for roadways that are located beneath air-right structures shall comply with the requirements of Chapter 8 and Chapter 9.

Section 383. A new subsection 4.7 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows

4.3.7* Ancillary Facilities. All related ancillary facilities that support the operation of limited access highways shall be protected as required by all applicable NFPA standards and local building codes, except as modified by this standard.

Section 384. A new subsection 4.4 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

4.4 Emergency Response Plan.

4.4.1 A designated authority shall carry out a complete and coordinated program of fire protection that shall include written preplanned emergency response procedures and standard operating procedures.

4.4.2 Emergency traffic-control procedures shall be established to regulate traffic during an emergency.

4.4.3 Emergency procedures and the development of an emergency response plan shall be completed in accordance with the requirements of Chapter 12.

Section 385. A new subsection 4.5 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

4.5 Emergency Communications. Emergency communications, where required by the authority having jurisdiction, shall be provided by the installation of outdoor-type telephone boxes, coded alarm telegraph stations, radio transmitters, or other approved devices. Such devices shall meet the following requirements:

(1) They shall be made conspicuous by means of indicating lights or other approved markers.

(2) They shall be identified by a readily visible number plate or other approved device.

(3) They shall be posted with instructions for use by motorists.

CITY CLERK

(4) They shall be located in approved locations so that motorists can park vehicles clear of the travel lanes.

(5) Emergency communication devices shall be protected from physical damage from vehicle impact.

(6) Emergency communication devices shall be connected to a staffed or monitored facility.

Section 386. A new subsection 4.6 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows

4.6 Signage. Signs, mile markers, or other approved location reference markers shall be installed along the highway to allow motorists to provide authorities with accurate locations for accident or emergency areas.

Section 387. Subsections 5.2 and 5.3 respectively of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are hereby repealed.

Section 388. Subsection 5.4 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

5.2((4*)) Fire Apparatus.

CITY CLERK

5. 2((4)).1 Arrangements for the response of nearby fire companies and emergency squads shall be made a part of the emergency response planning process.

5. 2((4)).2 Where a means of access that allows outside aid companies to enter the facility is provided, procedures for using such access shall be included in the emergency response plan.

5. 2((4)).3 Precautions shall be taken at the points of entry to alert and control traffic to allow emergency equipment to enter safely

Section 389. Subsection 5.5 and 5.6 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are hereby repealed.

Section 391. Subsections 6.2 and 6.3 respectively of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are amended as follows:

Point of Information

Where numbers and titles of subsections are retained and the body of text in the subsection is struck, the numbers and titles have no meaning for purpose of enforcement.

6.2 Emergency Communications. ((~~Emergency communications, where required by the authority having jurisdiction, shall be provided by the installation of outdoor-type telephone~~

EMS CITY CLERK

~~boxes, coded alarm telegraph stations, radio transmitters, or other approved devices. Such devices shall meet the following requirements:~~

~~(1) They shall be made conspicuous by means of indicating lights or other approved markers.~~

~~(2) They shall be identified by a readily visible number plate or other approved device.~~

~~(3) They shall be posted with instructions for use by motorists.~~

~~(4) They shall be located in approved locations so that motorists can park vehicles clear of the travel lanes.~~))

6.3 Signage. ((~~Signs, mile markers, or other approved location reference markers shall be installed along the highway to allow motorists to provide authorities with accurate locations for accident or emergency areas.~~))

Section 391. Subsection 6.5 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

6.5* Fire ((~~Standpipe~~))Hydrant and Water Supply. Where the distance from an acceptable water supply source as defined in 9.2.3 to any point on the bridge or elevated highway exceeds 120 m (400 ft), the bridge shall be provided with a ((~~standpipe~~)) hydrant system in accordance with the requirements of Chapter 9.

Section 392. Subsection 6.7 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed.

CITY CLERK

Section 393. Subsection 6.8 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

6.7((8)) Control of Hazardous Materials. Where required by the authority having jurisdiction, control of hazardous materials shall be in accordance with the requirements of Chapter 13.

Section 394. A new subsection 6.8 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

6.8 Protection of Structure

6.8.1* Critical structural members shall be protected from collision and high-temperature exposure that can result in dangerous weakening or complete collapse of the bridge or elevated highway.

Section 395. Subsection 6.9 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed.

Section 396. Subsection 7.4.1.1 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

7.4.1.1 Manual ((~~Double-Action~~)) Fire Alarm Boxes.

CITY CLERK

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Section 397. Subsection 7.8 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

7.8 Standpipe, Fire Hydrant and Water Supply. Standpipe, fire hydrant and water supply systems in road tunnels shall be provided in accordance ((~~comply~~)) with the requirements of Chapter 9.

Section 398. Subsections 7.13 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

7.13* Ancillary Facilities. ((~~All related ancillary facilities that support the operation of road tunnels shall be protected as required by all applicable NFPA standards and local building codes and are not covered under this standard.~~))

Section 399. Subsections 7.16 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

7.16 Emergency Response Plan.

CITY CLERK

((~~7.16.1 A designated authority shall carry out a complete and coordinated program of fire protection that shall include written preplanned emergency response procedures and standard operating procedures.~~

~~7.16.2 Emergency response procedures and the development of an emergency response plan shall comply with the requirements of Chapter 12.~~))

Section 400. Subsection 7.17 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

7.17 ((~~Emergency~~))Means of Egress.

7.17.1 General. ((~~Emergency~~))The means of egress requirements for all road tunnels and those roadways beneath air-right structures that the authority having jurisdiction determines are similar to a road tunnel shall be in accordance with Chapter 10 of the 2006 *Seattle Building Code*, except as modified herein((~~7.17.2 through 7.17.7~~)).

7.17.2 Tenable Environment. ((~~Identification.~~)) A tenable environment shall be provided in those portions of the tunnel that are not involved in an emergency and in all emergency exits and cross passageways. ((~~Emergency exits and cross passageways shall be marked in accordance with Section 7.10 of NFPA *101*.~~))

7.17.2.1 Maintenance. The means of egress shall be maintained in accordance with Chapter 10 of the 2006 *Seattle Fire Code.*

7.17.3 Walking Surfaces.

CITY CLERK

7.17.3.1 The walking surfaces of the emergency exits, cross passageways, and walkways shall be slip resistant.

7.17.3.2 Changes in elevation, ramps, and stairs shall meet the requirements of Chapter 7 of NFPA *101*.

((~~**7.17.3.3* Tenable Environment.** A tenable environment shall be provided in those portions of the tunnel that are not involved in an emergency and in all emergency exits and cross passageways.~~))

7.17.4 Doors.

7.17.4.1 Doors to the emergency exits shall open in the direction of exit travel.

7.17.4.2 Horizontal sliding doors ((~~Doors to cross passageways~~)) shall be permitted ((~~to open in either direction~~))in cross passages.

7.17.4.3 Doors shall be listed fire doors with a minimum 1½ -hour rating and shall be installed in accordance with NFPA 80.

((~~**7.17.4.4** Doors shall be equipped with hardware in accordance with NFPA *101*.~~))

7.17.4.4((5)) The force required to open the doors fully when applied to the latch side shall be as low as possible, but shall not exceed 222 N (50 lb).

7.17.4.5((6)) Doors and hardware shall be designed to withstand positive and negative pressures created by passing vehicles.

7.17.5 Maintenance. ((~~Emergency exits, cross passageways, and walkways shall be maintained to allow for their intended use.~~))

7.17.6 Emergency Exits

CITY CLERK

7.17.6.1 Emergency exits shall be provided throughout the tunnel spaced not more than 300 m (1000 ft) apart.

((~~**7.17.6.2*** Emergency exits shall conform to NFPA *101*, Chapter 7.~~))

7.17.6.((3))2 The emergency exits shall be enclosed in a minimum 2-hour fire-rated enclosure having a Class A interior finish as defined in NFPA *101*.

7.17.7 Cross Passageways. Where tunnels are divided by a minimum of 2-hour fire-rated construction or where tunnels are in twin bores, cross passageways between the tunnels shall be permitted to be utilized in lieu of emergency exits. The following requirements shall be met:

(1) Cross passageways shall not be farther than 200 m (656 ft) apart.

((~~(2) Openings in cross passageways shall be protected with self-closing fire door assemblies having a minimum of a 1-hour rating and shall be installed in accordance with NFPA 80.~~))

(((~~3~~))2) An emergency egress walkway with a minimum clear width of 1 m (3.6 ft) shall be provided on each side of the cross passageways.

(a) Walkways shall be protected from oncoming traffic by either a curb or a change in elevation or barrier.

(b) Walkways shall be continuous the entire length of the tunnel, terminating at surface grade.

(c) Raised walkways in tunnels shall have guards in accordance with 7.2.2.4 of NFPA *101*.

(d) Intermediate rails shall not be required for walkway guards.

(((4))3) Where portals of the tunnel are below surface grade, surface grade shall be made accessible by a stair, vehicle ramp, or pedestrian ramp.

THIS CITY CLERK

Section 401. Subsection 8.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

8.2 Application. ((~~Where required by the authority having jurisdiction, the requirements of Chapter 4 shall apply~~.))

8.2.1 The limits that an air-right structure imposes on the emergency accessibility and function of the roadway that is located beneath the structure shall be assessed.

8.2.2 Where an air-right structure encloses both sides of a roadway, it shall be considered a road tunnel for fire protection purposes and shall comply with the requirements of Chapter 7.

8.2.3 Where an air-right structure does not fully enclose the roadway on both sides, the decision to consider it a road tunnel shall be made by the authority having jurisdiction after an engineering analysis in accordance with 4.3.1.

Section 402. A new subsection 8.9 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

8.9 Standpipe, Fire Hydrant and Water Supply: Where the roadway beneath air-right structure length is 90m (300 ft) or greater, fire hydrants, standpipes and water supply systems shall be provided in accordance with the requirements Chapter 9.

CITY CLERK

Section 403. Subsection 9.1.1 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

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((~~, inspected, and~~ maintained)) as Class I systems in accordance with NFPA 14, except as modified herein.

9.1.1.1. Standpipe systems shall be inspected and maintained in accordance with NFPA 25.

Section 404. Subsection 9.1.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

9.1.2 The required flow rate for the standpipe system shall ((~~not~~))be ((~~required to exceed 1920 L/min (500 gpm)~~)) in accordance with NFPA 14, unless approved by the authority having jurisdiction.

Section 405. Subsection 9.1.3 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed, and a new subsection 9.1.3 is adopted to read as follows:

9.1.3 Dry 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.

Ens CITY CLERK

Section 406. Subsections 9.1.4 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed, and a new subsection 9.1.4 is adopted to read as follows:

9.1.4 Combination air relief/vacuum valves shall be installed at each high point on the system.

Section 407. Subsections 9.1.5, 9.1.6, 9.1.7, 9.1.8, 9.1.9 and 9.1.10 respectively of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are hereby repealed.

Section 408. Subsection 9.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

9.2 Water Supply.

((~~**9.2.1** Wet standpipe systems (automatic or semiautomatic) shall be connected to an approved water supply that 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.~~

~~**9.2.3** Acceptable water supplies shall include 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~~

EDS CITY CLERK

~~(3) Pressure-type or gravity-type storage tanks that are installed, inspected, and maintained in accordance with NFPA 22~~))

Section 409. Subsection 9.3 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are amended as follows:

9.3 Fire Department Connections.

9.3.1 Fire department connections shall be of the threaded ~~two-way or three-way~~ 65-mm (2½-in.) four-way type ~~or shall consist of one 100 mm (4 in.) quick-connect coupling that is accessible to a fire department pumper~~.

9.3.2 Each independent standpipe system shall have a minimum of two fire department connections that are remotely located from each other.

9.3.3 Fire department connections shall be protected from vehicular damage by means of bollards or other approved barriers.

9.3.4 ((~~Wherever possible, f~~))Fire department connection locations shall be coordinated with emergency access and response locations.

Section 410. Subsection 9.4 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

9.4 Hose Connections.

CITY CLERK

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.

9.4.2 ((~~Hose connection spacing shall not exceed 85 m (275 ft).~~))Two 65 mm (2 1/2 in.) hose connection outlets shall be provided at each required hose connection location.

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.

9.4.4 Hose connections shall have 65 mm (21/2 in.) external threads in accordance with NFPA 1963 ((~~and the authority having jurisdiction~~)).

9.4.5 Hose connections shall be equipped with caps to protect hose threads.

Section 411. Subsection 9.5 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is hereby repealed.

Section 412. Subsection 9.6 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

9.5((6)) Identification Signs.

9.5((6)).1 Identification signage for standpipe systems and components shall be approved by and developed with input from the authority having jurisdiction.

9.5((6)).2 Identification signage shall, as a minimum, identify the name and limits of the roadway that is served.

CITY CLERK

9.5((6)).3 Identification signage shall be conspicuous and shall be affixed to, or immediately adjacent to, fire department connections and each roadway hose connection.

Section 413. A new subsection 9.6 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

9.6 Fire Hydrants and Water Supply.

9.6.1 Fire hydrants for limited access highways shall be provided in accordance with Appendix C. See Table C105.1 Note c.

9.6.2 Fire hydrants for road tunnels, depressed highways, roadways beneath air-right structures, bridges, and elevated highways shall be provided so that no location on the protected roadway is more than 90 m (300 ft.) from the fire hydrant.

9.6.3 Fire hydrants shall provide a minimum of 3780 L/min (1000) gpm) at 1.4 bar (20 psi) flowing independently, and a minimum of 5760 L/min (1500 gpm) to any two outlets flowing simultaneously.

Section 414. A new subsection 9.7 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

9.7 Bridges and Elevated Highways.

9.7.1 Fire hydrants for bridges and elevated highways shall be provided in accordance with this section and Section 9.2.

CITY CLERK

9.7.2 Where median dividers and/or four or more traffic lanes are present, fire hydrants for bridges and elevated highways shall be provided on both sides of the roadway at the required spacing or installed in the median divider at the required spacing.

9.7.3 Fire hydrants for bridges and elevated highways shall have two 100 mm (4 in.) hose connection outlets, with external threads in accordance with City of Seattle Standard Plan No. 310a, and each outlet provided with an indicating valve easily operable from the roadway.

9.7.4 The hose connection outlets shall be oriented parallel to the roadway and face in both directions of travel.

9.7.5 Hose connection outlets shall be positioned such that the centerline of each outlet is installed not more than 400 mm (16 in.) horizontally from the inside edge of the top and not less than 200 mm (8 in.) above the top of the guardrail or edge barrier, and not more than 1370 mm (54 in.) above the roadway.

Exception: When outlets are installed in median dividers that are more than 800 mm (32 in.) wide, the 400 mm (16 in.) from the inside edge requirement may be exceeded.

9.3.6 Hose connection outlets shall be provided with caps that are removable with a standard hydrant wrench.

9.7.7 Hose connection outlet caps shall be provided with a 3 mm (1/8 in.) hole and be secured with a short length of chain or cable to prevent falling after removal.

9.7.8 Water shall be supplied to bridge and elevated highway hydrants by the use of approved manually actuated preaction or deluge valves installed in locations not subject to freezing, such as in underground vaults or other approved locations.

CITY CLERK

9.7.9 Access to the preaction or deluge valves and manual actuation capability at the valve locations shall be provided.

9.7.10 A preaction or deluge valve actuation device (such as an electrical switch, push button, manual pull staton, etc,) shall be installed at each hydrant location and be protected from damage in a weatherproof enclosure that can be opened without the use of tools or special knowledge, or with a standard hydrant wrench, or other approved method.

9.7.11 The location of the preaction or deluge valve actuation switch installed at each hydrant shall be readily visible and have appropriate signage.

9.7.12 A means to indicate that the system is in the tripped condition such as a light beacon or remote monitoring of the system shall be provided.

9.7.13 Hydrant systems for bridges and elevated highways shall have provisions for complete draining after use.

9.7.14 Combination air relief/vacuum valves shall be installed at each high point on the system.

Section 415. A new subsection 9.8 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

9.8 Maintenance and Confidence Testing

9.8.1 Standpipe systems shall be inspected and tested in accordance with NFPA 25.

9.8.2 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

CITY CLERK

responsibility of such other person as may be designated, and are separate from fire department inspections.

9.8.3 The person, firm or corporation performing such work shall have an appropriate certificate from the fire department. See Administrative Rules 9.01.07 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and Administrative Rule 9.02.07 *Confidence Test Requirements for Life Safety Systems.*

Section 416. Subsection 11.4 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

11.4*Emergency Power. ((~~**Source.** The power source for all systems shall be of a capacity and configuration commensurate with the purpose of the system.~~)) Road tunnels shall be provided with Class I, Type 60 emergency power in accordance with Article 700 of NFPA 70, National Electrical Code®, and NFPA 110, Standard for Emergency and Standby Power Systems. The following systems shall be connected to the emergency power system: ~~provided with reliable power for a fire emergency:~~))

(1) Emergency ((~~L~~))lighting

(2) ((~~Lighting for means of egress and areas of refuge~~))Traffic control

(3) Exit signs

(4) Communications

(5) Tunnel drainage ((~~and fire pump(s)~~))

(6) Ventilation ((~~during a fire emergency~~))

CITY CLERK

(7) Fire detection

11.4.1 The emergency power system shall have a capacity and rating sufficient to supply all equipment required to be connected by 11.4.

11.4.3 Selective load pickup and load shedding shall be permitted in accordance with NFPA 70, *National Electrical Code®*.

11.4.4((1)) The primary and secondary sources shall be wired to system equipment so that a single event or fire produces a minimum effect on the operation of the overall system.

Section 417. Subsection 12.3 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

12.3* Emergency Response Plan. The emergency response plan shall be submitted for acceptance and approval by the authority having jurisdiction and shall include, as a minimum, the following:

(1) Name of plan

(2) Name of responsible agency

(3) Names of responsible individuals

(4) Dates adopted, reviewed, and revised

(5) Policy, purpose, scope, and definitions

(6) Participating agencies, senior officials, and signatures of executives authorized to sign for each agency

CITY CLERK

(7) Safety during emergency operations

(8) Purpose and operation of ((~~central supervising station~~))operations control center and alternate location(s), as applicable ((~~central supervising station~~))

(9) Purpose and operation of command post and auxiliary command post

(10) Communications (e.g., radio, telephone, and messenger service) available at ((~~central supervising station~~))operations control center and command post; efficient operation of these facilities

(11) Fire detection, fire protection, and fire-extinguishing equipment; access/egress and ventilation facilities available; details of the type, amount, location, and method of ventilation

(12) Procedures for fire emergencies, including a list of the various types of fire emergencies, the agency in command, and the procedures to follow

(13) Maps and plans of the roadway system, including all local streets

(14) Any additional information that the participating agencies want to include

* * *

Section 418. Subsection 12.5 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

12.5 Operations Control Center (OCC)((~~Central Supervising Station (CSS)~~)). Subsections 12.5.1 through 12.5.8 shall apply where the facility has ((~~a central supervising station~~))an operations control center for the operation and supervision of the facility.

CITY CLERK

12.5.1 The ((~~CSS~~))OCC shall be staffed by qualified, trained personnel and shall be provided with the essential apparatus and equipment to communicate with, supervise, and coordinate all personnel.

12.5.2 The ((CSS))OCC shall provide the capability to communicate rapidly with participating agencies.

12.5.5 ((CSS))OCC personnel shall be thoroughly familiar with the emergency procedure plan and shall be trained to implement it effectively.

12.5.6 An alternate site(s) that can function efficiently during an emergency in the event that the ((~~CSS~~))OCC is out of service shall be selected and equipped, or equipment shall be readily available.

12.5.7* The ((CSS))OCC shall be located in an area that is separated from other occupancies by construction that has a 2-hour fire resistance rating.

12.5.8 The ((~~CSS~~))OCC shall be protected by fire detection, fire protection, and fire-extinguishing equipment to provide early detection and suppression of fire in the OCC((~~CSS~~)).

Section 419. Subsections 12.7.2, 12.7.3, 12.7.4, 12.7.5* of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are hereby repealed.

CITY CLERK

Section 420. Subsections 12.8, 12.8.1, 12.8.2 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, are hereby repealed.

Section 421. Subsection 13.1 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

13.1 General. This chapter applies 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 does 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.

CITY CLERK

13.1.2 ((~~A program shall be maintained for enforcing such regulations.~~)) The following classes of hazardous materials 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~~

CITY CLERK

~~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 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

EMS CITY CLERK

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;

(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;

CITY CLERK

(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 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.

CITY CLERK

Section 422. Annex A.10.1 of National Fire Protection Association 502 Standard for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is amended as follows:

A.10.1 Tunnel ventilation systems that are installed in road tunnels are an important element of tunnel fire protection systems. Ventilation systems are installed in road tunnels to maintain an acceptable level of traffic-generated pollutants within the tunnel roadway.

Ventilation systems that are designed to control the contaminant levels within road tunnels (normal operations) can be configured several ways, employing either central fans or local fans.

A.10.1.1 For guidance on developing an appropriate engineering analysis, the user should reference the performance-based alternatives in NFPA *101*.

Table A.10.1

Cause of Fire	**Peak Fire Heat-Release Rate** **MW**
Passenger Car	5 – 10
Multiple Passenger Cars (2 – 4 vehicles)	10 – 20
Bus	20 – 30
Heavy Goods Vehicle	70 – 200

CITY CLERK

Tanker	200 – 300

Section 423. A new subsection A.13.1 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2004 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 424. A new TABLE A.13.1.2 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2004 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

CITY CLERK

			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
Flammable solid	4	4.1	173.124

DHS CITY CLERK

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 425. A new subsection A.13.1.3 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

A13.1.3 *See Table A.13.1.2*

CITY CLERK

Section 426. A new subsection A.13.1.5 of the National Fire Protection Standard 502 for Road Tunnels, Bridges, and other Limited Access Highways, 2004 edition, is adopted to read as follows:

A13.1.5 See Table A.13.1.2

Section 427. 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 10th day of September, 2007, and signed by me in open session in authentication of its passage this 10th day of September, 2007.

President _____ of the City Council

Approved by me this 21st day of September, 2007.

Gregory J. Nickels, Mayor

Filed by me this 21st day of September, 2007.

City Clerk

(Seal)

CITY CLERK

Form revised December 4, 2006

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	DOF Analyst/Phone:
Fire	Diane Hansen / 386-1451	Aimee Strasko Carlisle / 386-4090

Legislation Title:
AN ORDINANCE relating to the Seattle Fire Code, adopting as the Seattle Fire Code the 2006 edition of the International Fire Code with some exceptions, amending and adding various provisions to that fire code; and amending Section 22.600.020 of the Seattle Municipal Code.

- **Summary of the Legislation:** The legislation adopts the 2006 International Fire Code, with local amendments, as the 2006 Seattle Fire Code. The express purpose of this code is to promote the health, safety, and welfare of the general public.

- **Background:** This ordinance locally adopts and amends the 2006 International Fire Code, which is the technical fire code and the edition specified respectively by the State Legislature and State Building Code Council as the minimum standard for use throughout our state. By adopting such codes locally and making amendments, we are able to address many unique characteristics of our community. Companion codes including the building code, residential code, mechanical code, and fuel gas code are being submitted simultaneously by the Department of Planning and Development, each a separate ordinance.

Notable changes between the current 2003 Seattle Fire Code and the proposed legislation are few, but include incorporating updated requirements for fire sprinkler installations in nightclubs as adopted by the 2007 Washington State legislature; refining on-site fire suppression water supply and smoke control requirements for newly constructed high-rise buildings; and adding and clarifying requirements related to the fueling of emergency generators, including the use of biodiesel. The provisions pertaining to emergency generators will allow for unlimited amounts of biodiesel (Type B100) in buildings protected by automatic sprinklers and up to 13,200 gallons of B100 in unsprinklered buildings. Local amendments are also included to provide for safe motor vehicle fueling with biodiesel. These regulations generally pertain to the types of tanks and nozzles used for dispensing of the fuel.

The amendments proposed in this ordinance have the approval of the Fire Code Advisory Board, whose members represent the public, labor, business, industries, and technical and professional disciplines. The members of this board have been meeting regularly to review the proposed code for the past twelve months.

_X__ This legislation does not have any financial implications.

CITY CLERK

City of Seattle

Gregory J. Nickels, Mayor

Office of the Mayor

August 28, 2007

Honorable Nick Licata
President
Seattle City Council
City Hall, 2nd Floor

Dear Council President Licata:

I am pleased to transmit the attached proposed ordinance adopting the 2006 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, fire sprinklers and fire alarm systems, permits for hazardous materials and processes, and fire safety and evacuation planning. The 2006 Seattle Fire Code is comprised of the 2006 International Fire Code, adopted for use statewide by the Washington State Building Code Council, along with local amendments addressing the unique characteristics and requirements of our community.

The International Fire Code, on which the Seattle Fire Code is based, is updated every three years to incorporate code changes developed and approved at the national level including new technology and revisions to national standards. The 2006 Seattle Fire Code is generally comparable to the 2003 Seattle Fire Code presently in use. Notable changes are few, but include incorporating updated requirements for fire sprinkler installations in nightclubs as adopted by the 2007 Washington State Legislature; refining on-site fire suppression water supply and smoke control requirements for newly constructed high-rise buildings; and adding and clarifying requirements related to the fueling of emergency generators, including the use of biodiesel. The provisions pertaining to emergency generators will allow for unlimited amounts of biodiesel (B100) in buildings protected by automatic sprinklers and up to 13,200 gallons of B100 in unsprinklered buildings. Local amendments were also included to provide for safe motor vehicle fueling with biodiesel.

The 2006 Seattle Fire Code will help protect the people who live, work, and visit in the City of Seattle. The proposed code has been extensively reviewed and approved by the Seattle 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 Kenneth Tipler at 386-1064 or Diane Hansen at 386-1451.

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, Email: mayors.office@seattle.gov
An equal employment opportunity, affirmative action employer. Accommodations for people with disabilities provided upon request.

CITY CLERK

[Clerk's Note: Because of its large size, the Affidavit of Publication for Ordinance 122491 has been saved as a separate file for electronic display and downloading. The file is a PDF document requiring Adobe Acrobat or equivalent program to view.]

Affidavit of Publication for Ordinance 122491
Affidavit (9.51 MB)