SNOHOMISH COUNTY COUNCIL
SNOHOMISH COUNTY, WASHINGTON

AMENDED ORDINANCE NO. 07-088

RELATING TO STANDARDS FOR AUTOMATIC FIRE SPRINKLER SYSTEMS, AND ADOPTING A NEW CHAPTER 30.52G SCC

WHEREAS, the Washington State Legislature has adopted the most current construction codes as the State Building Code (SBC) pursuant to chapter 19.27 RCW effective in the State of Washington on July 1, 2007; and

WHEREAS, section 903 of the International Building Code (IBC) and section 903 of the International Fire Code (IFC) provide automatic fire protection system requirements; and

WHEREAS, neither section 903 of the IBC nor section 903 of the IFC was included in the adoption of those codes by Snohomish County; and

WHEREAS, the 2006 editions of the IBC and IFC, except chapter 1 and section 903 were adopted as amended by the State Building Code Council, and Snohomish County in Ordinance Nos. 07-085 and 07-087 and

WHEREAS, chapter 19.27 RCW mandates that the SBC be administered and enforced by counties and cities, and grants counties and cities limited authority to amend the code as it applies within their jurisdictions; and

WHEREAS; title 30 of the Unified Development Code (UDC) currently includes amendments to the state's automatic sprinkler system provisions that were adopted in Ordinance No. 99-116 by Snohomish County; and

WHEREAS, the County's existing sprinkler provisions are more restrictive than those in section 903 of the IBC and IFC; and

WHEREAS, only minor amendments are proposed to the sprinkler provisions already contained in the UDC; and

WHEREAS, the adoption of a new chapter 30.52G SCC incorporates and modifies the automatic sprinkler provisions of section 903 of the IBC and IFC to create simplicity of use by providing the modified standards in one chapter of title 30 SCC; and

WHEREAS, the retention of more restrictive automatic sprinkler system standards than required by the IBC and IFC that were originally adopted in Ordinance. No. 99-116 will be of substantial benefit to the public by helping to contain fires and by

aiding in the evacuation of commercial buildings by providing additional time for occupants to exit the buildings; and

WHEREAS, the local amendments to the automatic sprinkler provisions will be more readily understood in their full context; and

WHEREAS, the Snohomish County Council Planning Committee discussed adopting Ordinance No. 07-088 on July 10, 2007 and August 14, 2007; and

WHEREAS, the Snohomish County Council conducted a public hearing on September 5, 2007, to consider the entire record and hear public testimony on Ordinance No. 07-088 adopting the automatic sprinkler system provisions.

NOW, THEREFORE, BE IT ORDAINED:

Section 1. The foregoing recitals are incorporated by this reference as though set forth in full.

Section 2. The Snohomish County Council makes the following findings of fact:

A. Chapter 19.27 RCW allows jurisdictions to amend the IBC and the IFC to be more restrictive than the state building code without the review and approval of the State Building Code Council (SBCC) unless the amendments affect single family detached residential units or multi-family residential buildings of four or less units.

B. The Snohomish County Council and the Snohomish County Executive have identified the regulation of safe and quality development and construction as a high priority and have delegated the responsibility for administering the State Building Code to Snohomish County Planning and Development Services (PDS).

C. PDS endeavors to administer and enforce the SBC in accordance with chapter 19.27 RCW in order to provide for statewide consistency for the construction industry and the citizens of Snohomish County.

D. Recodifying the existing automatic sprinkler requirements in chapters 30.52A and 30.53A SCC into a new chapter 30.52G SCC will provide a user friendly version of the regulations.

E. In addition to recodifying existing automatic sprinkler provisions adopted by Ordinance No. 99-116, this ordinance amends some of the provisions of section 903 of the IBC and IFC. Such amendments include, but are not limited to:

(1) SCC 30.52G.050 requires that sprinkler systems be installed in buildings that are added to or altered such that they exceed 10,000 square feet.

(2) SCC 30.52G.120 includes requirements for installing sprinkler systems in nightclubs consistent with the IFC and 2007 amendments to RCW 19.27.500, .510 and 84.36.660 that require automatic sprinkler systems in nightclubs by December 1, 2009.

(3) SCC 30.52G.130 is made consistent with SBC amendments.

(4) SCC 30.52G.210 provides that sprinkler requirements for Group B occupancies shall be the same as for Group M occupancies.

(5) SCC 30.52G.250 amends the SBC to include a more restrictive requirement for repair garages to require sprinkler systems in S-1 occupancies where there is open flame or welding conducted in a floor area larger than 3,000 square feet.

(6) SCC 30.52G.540 amends provisions related to fire alarm systems by adding the language "and visible alarm notification appliances."

Section 3. The Snohomish County Council makes the following conclusions:

A. These amendments to the construction codes will not result in less restrictive performance standards or objectives than those in the SBC.

B. The adoption of a new chapter 30.52G SCC related to automatic sprinkler systems will make the code easier to understand.

C. Fire protection systems designed, installed, inspected, operated, tested and maintained in conjunction with the SBC as amended by Snohomish County will protect public life and safety and property.

D. This ordinance is required to implement the State Building Code Act, not the Growth Management Act and, therefore, this ordinance does not adopt development regulations under SCC 30.10.080. Pursuant to SCC 30.73.040(2)(c), planning commission review is not required.

E. Environmental review under the State Environmental Policy Act is not required pursuant to WAC 197-11-800(20).

F. The proposed ordinance is in the best interest of Snohomish County and will protect life, safety and welfare.

Section 4. A new chapter is added to Snohomish County Code subtitle 30.5 to read as follows:

CHAPTER 30.52G
AUTOMATIC SPRINKLER SYSTEMS

Sections:

30.52G.010 Automatic sprinkler provisions - adopted.
30.52G.020 Automatic sprinkler provisions – general (IFC and IBC 903.1).
30.52G.030 Alternative protection (IFC and IBC 903.1.1).

30.52G.040 Where required (IFC and IBC 903.2).
30.52G.050 Existing commercial buildings.
30.52G.060 Group A (IFC and IBC 903.2.1).
30.52G.070 Group A-1 (IFC and IBC 903.2.1.1)
30.52G.080 Group A-2 (IFC and IBC 903.2.1.2).
30.52G.090 Group A-3 (IFC and IBC 903.2.1.3).
30.52G.100 Group A-4 (IFC and IBC 903.2.1.4).
30.52G.110 Group A-5 (IFC and IBC Subsection 903.2.1.5).
30.52G.120 Nightclub (IFC and IBC 903.2.1.6).
30.52G.130 Group E (IFC and IBC 903.2.2).
30.52G.140 Group F-1 (IFC and IBC 903.2.3).
30.52G.150 Woodworking operations (IFC and IBC 903.2.3.1).
30.52G.160 Group H (IFC and IBC 903.2.4).
30.52G.170 General Group H (IFC and IBC 903.2.4.1).
30.52G.180 Group H-5 occupancies (IFC and IBC 903.2.4.2).
30.52G.190 Group H- pyroxylin plastics (IFC and IBC 903.2.4.3).
30.52G.200 Group I (IFC and IBC 903.2.5).
30.52G.210 Groups B and M (IFC and IBC 903.2.6).
30.52G.220 High-piled storage (IFC and IBC 903.2.6.1).
30.52G.230 Group R (IFC and IBC 903.2.7).
30.52G.239 All Group S occupancies.
30.52G.240 Group S-1.
30.52G.250 Group S-1 repair garages (IFC and IBC 903.2.8.1).
30.52G.260 Group S-1 bulk storage of tires (IFC and IBC 903.2.8.2).
30.52G.270 Group S-2 (IFC and IBC 903.2.9).
30.52G.280 Commercial parking garages (IFC and IBC 903.2.9.1).
30.52G.290 Windowless stories in all occupancies (IFC and IBC 903.2.10).
30.52G.300 Stories and basements without openings (IFC and IBC 903.2.10.1).
30.52G.310 Opening dimensions and access (IFC and IBC 903.2.10.1.1).
30.52G.320 Openings on one side only (IFC and IBC 903.2.10.1.2).
30.52G.330 Basements (IFC and IBC 903.2.10.1.3).
30.52G.340 Rubbish and linen chutes (IFC and IBC 903.2.10.2).
30.52G.350 Buildings 55 feet or more in height (IFC and IBC 903.2.10.3).
30.52G.360 During construction (IFC and IBC 903.2.11).
30.52G.370 Other hazards (IFC and IBC 903.2.12).
30.52G.380 Ducts conveying hazardous exhausts (IFC and IBC 903.2.12.1).
30.52G.390 Commercial cooking operations (IFC and IBC 903.2.12.2).
30.52G.400 Other required suppression systems (IFC and IBC 903.2.13).
30.52G.410 Installation requirements (IFC and IBC 903.3).
30.52G.430 NFPA 13 sprinkler systems (IFC and IBC 903.3.1.1).
30.52G.440 NFPA 13R sprinkler systems (IFC and IBC 903.3.1.2 and 903.3.1.2.1).
30.52G.450 NFPA 13D sprinkler systems (IFC and IBC 903.3.1.3).
30.52G.460 Quick-response and residential sprinklers (IFC and IBC 903.3.2).
30.52G.470 Obstructed locations (IFC and IBC 903.3.3).
30.52G.480 Actuation (IFC and IBC 903.3.4).

30.52G.490 Water supplies (IFC and IBC 903.3.5 – 903.3.5.2).
30.52G.500 Hose threads (IFC and IBC 903.3.6).
30.52G.510 Fire department connections (IFC and IBC 903.3.7).
30.52G.520 Sprinkler system monitoring and alarms (IFC and IBC 903.4).
30.52G.530 Signals (IFC and IBC 903.4.1).
30.52G.540 Alarms (IFC and IBC 903.4.2).
30.52G.560 Floor control valves (IFC and IBC 903.4.3).
30.52G.570 Testing and maintenance (IFC and IBC 903.5).
30.52G.580 Proxylin plastics (IFC and IBC 903.6.1).

30.52G.010 Automatic sprinkler provisions - adopted.

The automatic sprinkler provisions of section 903 of the 2006 edition of the International Building Code (IBC) and section 903 of the 2006 edition of the International Fire Code (IFC), as adopted and amended by the Washington State Building Code Council and included in chapter 19.27 RCW, are adopted to the extent that they are included in and amended by this chapter.

30.52G.020 Automatic sprinkler provisions – general (IFC and IBC 903.1).

Automatic sprinkler systems shall comply with this chapter.

30.52G.030 Alternative protection (IFC and IBC 903.1.1).

Alternative automatic fire-extinguishing systems complying with section 904 of the IFC shall be permitted in place of automatic sprinkler protection where recognized by the applicable standard and approved by the fire marshal.

30.52G.040 Where required (IFC and IBC 903.2).

Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this chapter. For the purposes of this chapter, fire walls shall not define separate buildings.

Exception:

Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire-resistance-rated walls and 2-hour fire-resistance-rated floor/ceiling assemblies.

30.52G.050 Existing commercial buildings.

Automatic sprinkler systems as defined in the IBC or IFC shall be provided throughout any existing commercial building renovated, added to, or altered whose combined fire areas exceed 10,000 square feet.

30.52G.060 Group A (IFC and IBC 903.2.1).

An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in SCC 30.52G.060 through 30.52G.110 SCC. 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. For Group A-5 occupancies, the automatic sprinkler system shall be provided in the spaces indicated in SCC 30.52G.110.

30.52G.070 Group A-1 (IFC and IBC 903.2.1.1).

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

(1) The fire area exceeds 10,000 square feet (929 m^2).
(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.
(4) The fire area contains a multitheater complex.

30.52G.080 Group A-2 (IFC and IBC 903.2.1.2).

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

30.52G.090 Group A-3 (IFC and IBC 903.2.1.3).

An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

(1) The fire area exceeds 10,000 square feet (929 m^2).
(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.

Exception:

Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

30.52G.100 Group A-4 (IFC and IBC 903.2.1.4).

An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

(1) The fire area exceeds 10,000 square feet (929m^2).
(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.

Exception:

Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

30.52G.110 Group A-5 (IFC and IBC 903.2.1.5).

An automatic sprinkler system shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas in excess of 1,000 square feet (93 m^2).

30.52G.120 Nightclub (IFC and IBC 903.2.1.6).

An automatic sprinkler system shall be provided throughout an occupancy with a nightclub. All nightclubs as defined in RCW 19.27.510 shall be provided with automatic sprinklers not later than December 1, 2009. The fire marshal, for the application of this provision, may establish an occupant load based on the observed use of the occupancy in accordance with Table 1004.1.2 of the IFC.

30.52G.130 Group E (IFC and IBC 903.2.2).

An automatic sprinkler system shall be provided for all Group E occupancies.

Exceptions:

(1) Portable school classrooms, provided aggregate area of any cluster or portion of a cluster or portable classrooms does not exceed 5,000 square feet (465 m^2). Clusters of portable classrooms shall be separated as required in chapter 5 of the IBC.
(2) Group E Occupancies with an occupant load of 50 or less.

30.52G.140 Group F-1 (IFC and IBC 903.2.3).

An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

(1) Where a Group F-1 fire area exceeds 10,000 square feet (929 m^2).

(2) Where a Group F-1 fire area is located more than three stories above grade plane.

(3) Where the combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 20,000 square feet (1,858 m^2).

30.52G.150 Woodworking operations (IFC and IBC 903.2.3.1).

An automatic sprinkler system shall be provided throughout all Group F-1 occupancy fire areas that contain woodworking operations in excess of 2,500 square feet (232 m^2) in areas which generate finely divided combustible waste or use finely divided combustible materials.

30.52G.160 Group H (IFC and IBC 903.2.4).

Automatic sprinkler systems shall be provided in high-hazard occupancies as required in SCC 30.52G.170 through 30.52G.190.

30.52G.170 General Group H (IFC and IBC 903.2.4.1).

An automatic sprinkler system shall be installed in all Group H occupancies.

30.52G.180 Group H-5 occupancies (IFC and IBC 903.2.4.2).

An automatic sprinkler system shall be installed in all Group H-5 occupancies. The design of the sprinkler system shall not be less than that required by the building code for the occupancy hazard classifications in accordance with Table 30.52G.180. Where the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers required to be calculated is 13.

TABLE 30.52G.180

Location	Occupancy Hazard Classification
Fabrication areas	Ordinary Hazard Group 2
Service corridors	Ordinary Hazard Group 2
Storage rooms without dispensing	Ordinary Hazard Group 2
Storage rooms with dispensing	Extra Hazard Group 2
Corridors	Ordinary Hazard Group 2

30.52G.190 Group H- pyroxylin plastics (IFC and IBC 903.2.4.3).

An automatic sprinkler system shall be provided in all Group H occupancy buildings, or portions thereof, where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg).

30.52G.200 Group I (IFC and IBC 903.2.5).

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

Exception:

An automatic sprinkler system installed in accordance with SCC 30.52G.440 or 30.52G.450 shall be allowed in Group I-1 facilities.

30.52G.210 Groups B and M (IFC and IBC 903.2.6).

An automatic sprinkler system shall be provided throughout buildings containing a Group B or M occupancy where one of the following conditions exists:

(1) Where a Group B or M fire area exceeds 10,000 square feet (929 m^2).
(2) Where a Group B or M fire area is located more than three stories above grade Plane.
(3) Where the combined area of all Group B or M fire areas on all floors, including any mezzanines, exceeds 20,000 square feet (1,858 m^2).

30.52G.220 High-piled storage (IFC and IBC 903.2.6.1).

An automatic sprinkler system shall be provided in accordance with the IFC in all buildings of Group M where storage of merchandise is in high-piled or rack storage arrays.

30.52G.230 Group R (IFC and IBC 903.2.7).

An automatic sprinkler system installed in accordance with SCC 30.52G.410 shall be provided throughout all buildings with a Group R fire area.

Exception: Group R-1 if all of the following conditions are met:

(1) The Group R fire area is no more than 500 square feet and is used for recreational use only;
(2) The Group R fire area is only one story;
(3) The Group R fire area does not include a basement;
(4) The Group R fire area is no closer than 30 feet from another structure;
(5) Cooking is not allowed within the Group R fire area;
(6) The Group R fire area has an occupant load of no more than 8; and
(7) A hand held (portable) fire extinguisher is in every Group R fire area.

30.52G.239 All Group S occupancies.

An automatic sprinkler system shall be installed throughout all Group S occupancies that have 10,000 square feet (929 m^2) or more of floor area.

30.52G.240 Group S-1 (IFC and IBC 903.2.8).

An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

(1) Group S-1 fire area exceeds 10,000 square feet (929 m^2).
(2) A Group S-1 fire area is located more than three stories above grade plane.
(3) The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 20,000 square feet (1,858 m^2).

30.52G.250 Group S-1 repair garages (IFC and IBC 903.2.8.1).

An automatic sprinkler system shall be provided throughout the following Group S-1 buildings used as repair garages as defined by the IBC:

(1) Buildings two or more stories in height, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m^2).
(2) One-story building with a fire area containing a repair garage exceeding 12,000 square feet (1115 m^2).
(3) Buildings with a repair garage servicing vehicles parked in the basement.
(4) S-1 repair garages where the use of open flame or welding is conducted with a floor area in excess of 3,000 square feet or more.

30.52G.260 Group S-1 bulk storage of tires (IFC and IBC 903.2.8.2).

Group S-1 buildings and structures where the area for the storage of tires exceeds 20,000 cubic feet (566 m^3) shall be equipped throughout with an automatic sprinkler system in accordance with SCC 30.52G.430.

30.52G.270 Group S-2 (IFC and IBC 903.2.9).

An automatic sprinkler system shall be provided throughout Group S-2 buildings classified as enclosed parking garages in accordance with section 406.4 of the IBC or where located beneath other group occupancy buildings or structures.

Exception: Enclosed parking garages located beneath Group R-3 occupancies.

30.52G.280 Commercial parking garages (IFC and IBC 903.2.9.1).

An automatic sprinkler system shall be provided throughout buildings used for storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (465 m^2).

30.52G.290 Windowless stories in all occupancies (IFC and IBC 903.2.10).

An automatic sprinkler system shall be installed in the locations set forth in SCC 30.52G.300 through 30.52G.330.

Exception: Group R-3 and Group U.

30.52G.300 Stories and basements without openings (IFC and IBC 903.2.10.1).

An automatic sprinkler system shall be installed throughout every story or basement of all buildings where both the floor area exceeds 1,500 square feet (139.4 m^2) and where there is not provided at least one of the following types of exterior wall openings:

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

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

30.52G.310 Opening dimensions and access (IFC and IBC 903.2.10.1.1).

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

30.52G.320 Openings on one side only (IFC and IBC 903.2.10.1.2).

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

30.52G.330 Basements (IFC and IBC 903.2.10.1.3).

Where any portion of a basement is located more than 75 feet (22,860 mm) from an opening described in SCC 30.52G.300, the basement shall be equipped throughout with

an approved automatic sprinkler system.

30.52G.340 Rubbish and linen chutes (IFC and IBC 903.2.10.2).

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

30.52G.350 Buildings 55 feet or more in height (IFC and IBC 903.2.10.3).

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

Exceptions:

(1) Airport control towers;
(2) Open parking structures; and
(3) Occupancies in Group F-2.

30.52G.360 During construction (IFC and IBC 903.2.11).

Automatic sprinkler systems required during construction, alteration and demolition operations shall be provided in accordance with the IFC.

30.52G.370 Other hazards (IFC and IBC 903.2.12).

Automatic sprinkler protection shall be provided for the hazards indicated in SCC 30.52G.380 and 30.52G.390.

30.52G.380 Ducts conveying hazardous exhausts (IFC and IBC 903.2.12.1).

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

Exception:

Ducts in which the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

30.52G.390 Commercial cooking operations (IFC and IBC 903.2.12.2).

An automatic sprinkler system shall be installed in commercial kitchen exhaust hoods and duct systems where an automatic sprinkler system is used to comply with section

904 of the IFC.

30.52G.400 Other required suppression systems (IFC and IBC 903.2.13).

In addition to the requirements of SCC 30.52G.040, the provisions indicated in Tables 30.52G.400A and B also require the installation of a suppression system for certain buildings and areas.

TABLE 30.52G.400A
ADDITIONAL REQUIRED SUPPRESSION SYSTEMS

IBC SECTION	SUBJECT
402.8	Covered malls
403.2, 403.3	High-rise buildings
404.3	Atriums
405.3	Underground structures
407.5	Group 1-2
410.6	Stages
411.4	Special amusement buildings
412.2.5, 412.2.6	Aircraft hangars
415.6.2.4	Group H-2
416.4	Flammable finishes
417.4	Drying rooms
507	Unlimited area buildings
508.2	Incidental use areas
1025.6.2.3	Smoke-protected assembly seating
IFC	Sprinkler system requirements as set forth in Section 903.2.13 IFC

30.52G.410 Installation requirements and standards (IFC and IBC 903.3).

Automatic sprinkler systems shall be designed and installed in accordance with SCC 30.52G.420 through 30.52G.570.

30.52G.430 NFPA 13 sprinkler systems (IFC and IBC 903.3.1.1).

Where the provisions of the construction codes require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section or section 903.3.1.1 of the IFC or IBC, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in SCC 30.52G.440.

Exception:

Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system, in accordance with section 907.2 of the IFC 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.

(2) Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire marshal.

(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.

30.52G.440 NFPA 13R sprinkler systems (IFC and IBC 903.3.1.2 and 903.3.1.2.1).

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

(2) Sprinkler protection installed in accordance with NFPA 13R shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

30.52G.450 NFPA 13D sprinkler systems (IFC and IBC 903.3.1.3).

Where allowed, automatic sprinkler systems in one- and two-family dwellings shall be installed throughout in accordance with NFPA 13D.

30.52G.460 Quick-response and residential sprinklers (IFC and IBC 903.3.2).

Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with SCC 30.52G.430 and their listings:

(1) Throughout all spaces within a smoke compartment containing patient sleeping units in Group I-2 in accordance with the IBC.

(2) Dwelling units and sleeping units in Group R and I-1 occupancies.

(3) Light-hazard occupancies as defined in NFPA 13.

30.52G.470 Obstructed locations (IFC and IBC 903.3.3).

Automatic sprinklers shall be installed 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 (1,219 mm) in width. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.

Exception:

Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with section 904 of the IFC.

30.52G.480 Actuation (IFC and IBC 903.3.4).

Automatic sprinkler systems shall be automatically actuated unless specifically provided for in the fire code.

30.52G.490 Water supplies (IFC and IBC 903.3.5 – 903.3.5.2).

(1) Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in SCC 30.52G.410. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the plumbing code.

(2) Where the domestic service provides the water supply for the automatic sprinkler system, the supply shall be in accordance with this section.

(3) Limited area sprinkler systems serving fewer than 20 sprinklers on any single connection are permitted to be connected to the domestic service where a wet automatic standpipe is not available. Limited area sprinkler systems connected to domestic water supplies shall comply with each of the following requirements:

(a) Valves shall not be installed between the domestic water riser control valve and the sprinklers.

Exception:
An approved indicating control valve supervised in the open position in accordance with SCC 30.52G.520.

(b) The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13, NFPA 13R or NFPA 13D.

(4) A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

(5) A secondary on-site water supply equal to the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for high-rise buildings in Seismic Design Category C, D, E or F as determined by the IBC. The

secondary water supply shall have a duration of not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.

Exception: Existing buildings.

30.52G.500 Hose threads (IFC and IBC 903.3.6).

Fire hose threads and fittings used in connection with automatic sprinkler systems shall be as prescribed by the fire marshal.

30.52G.510 Fire department connections (IFC and IBC 903.3.7).

The location of the fire department connections shall be approved by the fire marshal.

30.52.520 Sprinkler system monitoring and alarms (IFC and IBC 903.4).

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;
(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 systems 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; and
(7) Trim valves to pressure switches in dry, pre-action and deluge sprinkler systems that are sealed or locked in the open position.

30.52G.530 Signals (IFC and IBC 903.4.1).

Alarm, supervisory and trouble signals shall be distinctly different and automatically transmitted to an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire marshal, shall sound an audible signal at a constantly attended location.

Exceptions:

(1) Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored; and

(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.

30.52G.540 Alarms (IFC and IBC 903.4.2).

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

30.52G.560 Floor control valves (IFC and IBC 903.4.3).

Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings.

30.52G.570 Testing and maintenance (IFC and IBC 903.5).

Sprinkler systems shall be tested and maintained in accordance with section 901 of the IFC.

30.52G.580 Proxylin plastics (IFC and IBC 903.6.1).

All structures occupied for the manufacture or storage of articles of cellulose nitrate (proxylin) plastic shall be equipped with an approved automatic fire-extinguishing system. Vaults located within buildings for the storage of raw proxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute per square foot (68 L/min/m^2) over the area of the vault.

Section 5. Severability and Savings. If any section, sentence, clause or phrase of this ordinance shall be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause, or phrase of this ordinance. Provided, however, that if any section, sentence, clause, or phrase of this ordinance is held to be invalid by a court of competent jurisdiction, then the section, sentence, clause, or phrase in effect prior to the effective date of this ordinance shall be in full force and effect for that individual section, sentence, clause, or phrase as if this ordinance had never been adopted.

PASSED this 5th day of September, 2007.

SNOHOMISH COUNTY COUNCIL
Snohomish County, Washington

Chairperson

ATTEST:

Asst. Clerk of the Council

(X) APPROVED
( ) EMERGENCY
( ) VETOED

9/11/07

for County Executive Date

MARK SOINE
Deputy Executive

ATTEST:

Approved as to form:

Deputy Prosecuting Attorney

D-17