

Northwest Fire District

2018 Amendments to the Northwest Fire District Fire Code, 2018 Edition

**Designated as Public Record In:
Northwest Fire District Clerk's Office
Pursuant to Northwest Fire District Resolution #XXXX
Ordinance #XXXXXXX
Effective: January 1, 2019**



DRAFT

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2018 International Fire Code
Fire Code Amendments

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The International Fire Code (IFC) 2018 Edition is hereby adopted by the Northwest Fire District Board for the purpose of establishing minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, and premises.

The International Fire Code as adopted and amended herein shall be enforced by the Fire Marshal of the District, and which shall be operated under the supervision of the Fire Chief.

The 2018 edition of the International Fire Code (2018 IFC) and the Northwest Fire District Amendments shall be known as the “Fire Code of the Northwest Fire District.”

Amendments

The 2018 International Fire Code is hereby amended in the following respects:

CHAPTER 1 ADMINISTRATION

SECTION 101

SCOPE AND GENERAL REQUIREMENTS

Amend section 101.1 as follows:

[A] **101.1 Title.** This regulation shall be known as the Northwest Fire District Fire Code, may be cited as such, and will be referred to herein as “this code”.

Delete and replace section 101.2.1 as follows:

[A] **101.2.1 Appendices.** The following appendices are adopted and amended as part of this code by the Northwest Fire District: B, C, D, E, F, G, H, I, K, L, M, N, O and P as added and/or amended.

Appendix B	Fire-Flow Requirements for Buildings
Appendix C	Fire Hydrant Locations and Distribution
Appendix D	Fire Apparatus Access Roads
Appendix E	Hazard Categories
Appendix F	Hazard Ranking
Appendix G	Cryogenic Fluids—Weight and Volume Equivalents
Appendix H	Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) Instructions
Appendix I	Fire Protection Systems—Noncompliant Conditions
Appendix L	Requirements for Fire Fighter Air Replenishment Systems
Appendix M	High Rise Retroactive Sprinklers
Appendix N	Indoor Trade Shows and Exhibitions
Appendix O	Reserved
Appendix P	Fire Department Standard Details

SECTION 104 GENERAL AUTHORITY AND RESPONSIBILITY

Add Section 104.12

104.12 Fees. The Fire Chief is authorized to establish and collect, with the approval of the Northwest Fire District Fire Board, any amount established by resolution, fees for any or all inspections or operational services authorized by this code. Permit and inspection fees and other operational fees of the Fire Department may be determined by the Fire Chief or designee and established through resolution.

SECTION 105 PERMITS

Add sections 105.7.26; 105.7.27; 105.7.28; 105.8 and 105.8.1

[A] **105.7.26 Access-controlled egress doors.** A construction permit is required to install or modify access-controlled egress doors in accordance with Section 1010.1.4.

[A] **105.7.27 Delayed egress locks.** A construction permit is required to install or modify delayed egress locks in accordance with Section 1010.1.9.7

[A] **105.7.28 Commercial kitchen cooking oil storage.** A construction permit is required to install or modify cooking oil storage systems and their components in accordance with Section 608.

[A] **105.8 Business permit certificate.** The Northwest Fire District shall issue a *business permit certificate* to persons or entities that install, modify, alter, add to, test, repair, or service any *fire alarm system, sprinkler system, standpipe system, fire main, fire pump or any other fire-extinguishing or detection system, device, or appliance*. All *business permit certificates* are required to be renewed on an annual basis and expire on December 31 of each year.

[A] **105.8.1 Suspension or revocation of a business certificate.** The Fire Marshal may suspend or revoke a *business permit certificate* for due cause including, but not limited to, the following:

1. Three or more instances of performing work or activity without a permit within a two-year period.
2. The performance of any fraudulent installation including, but not limited to, installation of sprinklers without connection to piping system or installation of fire alarm devices without being connected to a fire alarm control panel.
3. Failure to provide fire district with proof of insurance.
4. Suspended or revoked Arizona Registrar of Contractors license.
5. Unsafe work practices that put the installers, members of the district or the general public at risk.

SECTION 106 FEES

Add Section 106.6

106.6 Exemption. When a federal agency, municipality or municipal corporation declares itself exempt from the requirements of this code, including payment of applicable fees, the fire code official may elect not to provide inspections, plan reviews or similar services to the exempt buildings.

SECTION 107 INSPECTIONS

Add Section 107.5

107.5 Reinspection. A reinspection fee may be assessed for each permitted inspection or reinspection when such portion of work for which inspection is called, is not complete or when corrections called for are not made. If the items that were identified during the first reinspection of a particular phase are not corrected at the time of the reinspection, the permit will be locked out and further inspections will not be scheduled until a reinspection fee is paid. Reinspection fees may also be assessed when:

1. The permit is not posted or otherwise available on the work site.
2. The *approved* plans are not readily available to the inspector.
3. Access to the site is not provided on the date for which the inspection is scheduled.
4. A competent responsible party representative is not on-site at time of inspection.
5. Significant deviations from the approved plans are found that have not been *approved* by the *fire code official*.
6. The correct address is not provided so that an inspection can be made as scheduled.

Each reinspection will be assessed this fee. This procedure will be repeated on each phase of the installation and inspection process.

SECTION 109

BOARD OF APPEALS

Amend Section 109.1 as follows:

[A] 109.1 Appeals. Whenever an applicant disputes the application or interpretation of this code by staff, a written appeal may be filed with the fire chief within 14 calendar days.

1. The appeal will be heard by the fire chief or an authorized representative within 10 working days of the receipt of the appeal.
2. Adequate information shall be provided by the applicant on the Petition of Appeal to fully describe the condition(s) in question.
3. The fire chief shall consult with the fire code official, and/or an authorized representative as deemed appropriate, to provide additional information regarding the appeal.
4. The applicant may, but is not required to, meet with the fire chief or a designated representative to discuss the appeal.
5. If the appeal is denied, the applicant shall comply with the requirement(s) of the fire code or file an appeal with the Fire District Board within 30 calendar days from the date the appeal was denied.

Delete Section 109.2 in its entirety

Delete Section 109.3 in its entirety

SECTION 110 VIOLATIONS

Add Section 110.3.3.1

[A] 110.3.3.1 Penalty to cover emergency response operations. If it is discovered that a previously identified code violation has gone uncorrected for a period of time exceeding 90 days from the recorded date, and said violation causes an event or contributes to the severity of an event which requires an emergency response, fees may be assessed to recoup the fire district's operational costs. Fees shall be in accordance with the adopted *Northwest Fire District Permit and Fee Schedule*.

Amend Section 110.4 as follows:

[A] **110.4 Violation penalties.** 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 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 misdemeanor, punishable by a fine of not more than \$1000 dollars or by imprisonment not exceeding 365 days, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed as a separate offense.

SECTION 112 STOP WORK ORDER

Amend Section 112.4 as follows:

[A] **112.4 Failure to comply.** Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to correct a violation or unsafe condition, shall be guilty of a *violation penalty* in accordance with Section 110.4.

CHAPTER 2 DEFINITIONS

SECTION 202 GENERAL DEFINITIONS

Business certificate. Is added to read:

BUSINESS PERMIT CERTIFICATE. A business permit certificate is a permit required for companies to inspect, install, modify, alter, add to, test, repair or service any fire alarm system, automatic sprinkler system, standpipe system, fire main, fire pump, or any other fire extinguishing or detection system, device or appliance.

Construction and development handbook. Is added to read:

NORTHWEST FIRE DISTRICT FIRE CODE CONSTRUCTION AND DEVELOPMENT HANDBOOK. A publication developed by the Northwest Fire District to assist contractors, engineers, architects, developers and other

members of the public in navigating through required procedures, installation methods and standard details within the Northwest Fire District.

Contractors list. Is added to read:

NORTHWEST FIRE DISTRICT APPROVED CONTRACTORS LIST. A list of approved contractors who have obtained a business permit certificate by demonstrating the minimum basic knowledge of their respective disciplines and maintaining the required licensing, training and certifications to perform such work within the Northwest Fire District.

Driveway. Is added to read:

DRIVEWAY. A vehicular ingress and egress route that connects a building or structure to a fire department access road.

Interior tenant notification. Is added to read:

INTERIOR TENANT NOTIFICATION. Notification appliances placed within the interior spaces of occupancies equipped with an *automatic sprinkler system*. These appliances are intended to alert occupants of a potential fire condition within the building when the *automatic sprinkler system* water flow switch is activated.

Maintenance. Is added to read:

MAINTENANCE. The repair or replacement of defective or damaged equipment, systems or programming with an exact duplicate model. Maintenance also includes testing of equipment.

Modification. Is added to read:

MODIFICATION. Any change or reprogramming of any *existing* fire and life safety equipment or system regulated by this code, that is not the exact same model, area or programming from the original equipment or installation.

Occupancy classification. Is amended as follows:

Institutional Group I-1. The first sentence is amended to read:

Institutional Group I-1 occupancies shall include buildings, structures or portions thereof for more than 10 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care.

[BG] Six to 16 persons receiving custodial care. Is amended to read:

[BG] Six to 10 persons receiving custodial care. A facility housing not fewer than six and not more than 10 persons receiving custodial care shall be classified as Group R-4.

Residential Group R-3. *Congregate living facilities* is amended to read:
Congregate living facilities (transient or nontransient) with 10 or fewer occupants

Residential Group R-4. The first sentence is amended to read:
Residential Group R-4 occupancies shall include buildings, structures or portions thereof for more than five but not more than 10 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care.

Permit and fee schedule. Is added to read:
NORTHWEST FIRE DISTRICT FIRE CODE PERMIT AND FEE SCHEDULE. A document adopted through resolution by the Northwest Fire District Fire Board that details the scope, application and values of all applicable fees charged by the Northwest Fire District.

Portable fryer appliance. Is added to read:
PORTABLE FRYER APPLIANCE. A portable deep fat fryer must:

1. Be *listed* for operation without required hoods or vents;
2. Be powered by electrical energy only (no fuel-gas connection allowed);
AND
3. Contain an internal fire extinguishing system compliant with Section 904.

If a fryer appliance does not meet all of those requirements, it shall be classified and protected as a *medium-duty cooking appliance* in accordance with the *International Mechanical Code*.

Residential dry standpipe. Is added to read:
RESIDENTIAL DRY STANDPIPE. A standpipe installed to assist in providing an available water supply for firefighting operations when access to a residential structure is otherwise limited.

Shell building. Is added to read:
SHELL BUILDING. A building shell, or envelope, includes all components that separate the interior space within a structure from the surrounding exterior

areas. The shell may be composed of many different features, including walls, windows, doors, roofing, footers, and foundations that is constructed without prior knowledge of the specific occupants, improvements or hazards that will be present within the structure.

Tents, canopies and temporary membrane structures handbook. Is added to read:

NORTHWEST FIRE DISTRICT TENTS, CANOPIES AND TEMPORARY MEMBRANE STRUCTURES HANDBOOK. A publication utilized by the Northwest Fire District that details the requirements for the safe installation and *maintenance of Tents, Canopies, and Temporary Membrane Structures.*

CHAPTER 3 GENERAL REQUIREMENTS

SECTION 307 OPEN BURNING, RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES

Amend Section 307.2.1 as follows:

307.2.1 Authorization. Open burning shall be prohibited within the Northwest Fire District without first obtaining a permit from the Pima County Department of Environmental Quality.

CHAPTER 5 FIRE SERVICE FEATURES

SECTION 501 GENERAL

Add Section 501.3.1

501.3.1 Finished drawings. Upon completion of construction and prior to the issuance of a Certificate of Occupancy, an electronic copy of finished as-built drawings shall be supplied to the Northwest Fire District in an *approved* electronic format. The minimum information that shall be required is as follows:

(a) Floor Plans

- (i) One plan for each building
- (ii) All exterior and interior walls
- (iii) All door locations (ingress/egress) throughout the building, including roll up doors and roof hatch/doors.
- (iv) Stairs and elevator locations.
- (v) Room/suite names and /or numbers.
- (vi) Special hazards and high-piled stock/racks, if any.
- (vii) Fire Department items shall include, but are limited to, standpipes, fire sprinkler risers, alarm panels, fire department connections, and Knox key boxes.

(b) Site Plan

Including parking lot, building numbers, parking garages, fire lanes, gates, and fire hydrants.

(c) Roof Plan

Layout and access (ladder/hatch locations)

The drawings are not required to contain layers listing furnishings, floor coverings, ceiling styles/grids, plumbing fixtures, electrical (light switches, outlets), wall coverings, or landscape information.

SECTION 507 FIRE PROTECTION WATER SUPPLIES

Add Section 507.5.4.1

507.5.4.1 No parking. Vehicles shall not be placed, parked, or kept within 15 feet (4,572mm) of a fire hydrant.

Exception: Unless it is a dedicated parking space and not located directly in front of the hydrant.

Add Section 507.5.7

507.5.7 Reflective pavement markers. All fire hydrants and automatic fire sprinkler fire department connections shall be identified by the installation of *approved* blue 4 inch (10 cm) by 4 inch (10 cm) reflective raised pavement markers placed in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook*.

Add Section 507.5.8

507.5.8 Fire hydrants out of service. All fire hydrants that are placed out of service shall be properly marked or tagged as “Out of Service” with approved markings or tags. Markings and tags shall remain on the fire hydrant until removal is authorized by the water purveyor. The water purveyor, property owner, or responsible contractor shall notify the *fire code official* whenever fire hydrants are taken out of service or placed back in service.

SECTION 510 EMERGENCY RESPONDER RADIO COVERAGE

Amend Section 510.1 as follows:

510.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based on the existing coverage levels of the *Pima County Wireless Integrated Network (PCWIN)* 800 MHz Radio System utilized by the Northwest Fire District, measured at the exterior of the building.

Add section 510.5.5

510.5.5 Emergency responder radio coverage infrastructure. New buildings or structures shall be required to install, at a minimum, two-inch (2”) Electrical Metallic Tubing (EMT) conduit (between floors where applicable) dedicated for potential emergency responder radio coverage use. The conduit will have a breakout box in an equipment room for cables to be pulled. A pull string will be left in the conduit (between each floor, where applicable) in the breakout box. Conduit and breakout boxes shall be installed in accordance with NFPA 70. The conduit and

breakout box will be labeled “PUBLIC SAFETY USE ONLY!”. If it is determined that after all construction is complete that emergency responder radio coverage equipment is required, the conduit will make installation easier and more economical to the building owner. Such emergency responder radio coverage infrastructure shall be provided for the following:

1. New multi-story or multi-level buildings or structures;
2. New single-story buildings or structures totaling 45,000 square feet (4180 m²) or more in size;
3. New buildings or structures containing a basement or other subterranean space totaling 250 square feet (23 m²) in size;
4. Any new building or structure that the *fire code official* has determined to have been constructed in a manner which may limit, or with materials likely to limit, the ability of emergency response personnel to effectively use emergency radio communication while within that building or structure.

New building or structures containing any underground parking areas will be required to provide the capability for a future rooftop antenna to be installed, if deemed necessary, in addition to the above requirements for emergency responder radio coverage infrastructure.

Add Section 510.5.5.1

510.5.5.1 Acceptance. As part of the installation, a final inspection of the emergency responder radio coverage infrastructure shall be required prior to issuance of Certificate of Occupancy.

Add Section 511; 511.1; 511.1.1 and 511.2

SECTION 511 CONTROLLED ACCESS GATES

511.1 General. New and existing controlled access gates installed across fire department access roads and *driveways* shall be *approved* by the *fire code official*. The provisions of this chapter shall apply to the installation, operation, and *maintenance* of controlled access gates.

Exception: Controlled access gates installed across *driveways* serving one individual single-family residence.

511.1.1 Controlled access gate type. All new and existing controlled access gates installed across fire department access roads shall be of an *approved* manual or automatic type.

Exception: Automatic gates are prohibited across dead-end fire department access roads without *approved* turnarounds installed in accordance with Appendix D.

511.2 Compliance. New and existing controlled access gates regulated by this code shall be constructed, installed, and maintained in accordance with UL325, ASTM F2200, and the current Northwest Fire District *Fire Code Construction and Development Handbook*.

Add Section 512 and 512.1

SECTION 512 DRIVEWAYS

512.1 General. *Driveways* exceeding 200 feet (60,960 mm) in length shall provide a minimum unobstructed width of 14 feet (4,267 mm) and a minimum unobstructed height of 13 feet 6 inches (4,115 mm). Such *driveways* shall not exceed 10 percent in grade.

Exception: Where provided with a *residential dry standpipe* in accordance with Sections 905.8.1 and 905.8.2 and *approved* by the *fire code official*.

CHAPTER 6 BUILDING SERVICES AND SYSTEMS

SECTION 607 COMMERCIAL KITCHEN HOODS

Amend Sections 607.3.3 and 607.3.3.1 as follows:

607.3.3 Cleaning. Hoods, grease-removal devices, fans, ducts, and other appurtenances shall be cleaned at intervals as required by Sections 607.3.3.1 through 607.3.3.3. Cleaning shall be completed by a qualified company that holds current International Kitchen Exhaust Cleaning Association (IKECA)-CECS certifications. Qualified persons shall obtain a business permit certificate and be included on the *Northwest Fire District Approved Contractors List* prior to performing work. Required IKECA certifications shall be obtained by January 1, 2020.

607.3.3.1 Inspection. Hoods, grease-removal devices, fans, ducts, and other appurtenances shall be inspected at intervals specified in Table 607.3.3.1 or as *approved* by the *fire code official*. Inspections shall be completed by a qualified company that holds current International Kitchen Exhaust Cleaning Association (IKECA)-CESI certifications. Qualified persons shall obtain a business permit certificate and be included on the *Northwest Fire District Approved Contractors List* prior to performing work. Required IKECA certifications shall be obtained by January 1, 2020.

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS

SECTION 901 GENERAL

Amend Section 901.2 by adding a second paragraph as follows:

901.2 Construction documents. Automatic *fire protection system* hydraulic calculations shall be based on a curve that is 90 percent of the available water supply curve as determined by current flow test information. The *fire code official* shall witness all flow tests.

Amend Section 901.4 by adding second paragraph as follows:

901.4 Installation. The layout, calculation, and installation of fire protection systems shall be performed by persons knowledgeable and trained in such systems. Contractors are required to possess a current license from the Arizona Registrar of Contractors to install fire protection systems. The installer shall follow all manufacturer guidelines for

installation, inspection, and testing. Contractors shall maintain certification when required by the manufacturer.

Add Section 901.4.2.1

901.4.2.1 Partial fire protection systems. Nonrequired systems providing partial fire protection shall not be recognized for exceptions or reductions permitted by other requirements of this code, the *International Building Code*, or any other applicable codes and standards.

Amend Section 901.4.6 as follows:

901.4.6 Pump and riser room size. Fire pumps and *automatic sprinkler system* risers shall be located in a room used exclusively to house fire protection equipment and building utilities. The room shall be a minimum of four feet (121 cm) by four feet (121 cm) in size and shall have a door directly accessible from the exterior of the building.

The room shall be designed with adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working space around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair, or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Fire pump and *automatic sprinkler system* riser rooms shall be provided with doors and unobstructed passageways large enough to allow removal of the largest piece of equipment.

Amend Section 901.6.3 as follows:

901.6.3 Records. Records of all system inspections, tests and *maintenance* required by the reference standards shall be maintained on the premises for a minimum of three years. All contractors on the *Northwest Fire District Approved Contractors List*, performing inspections, tests or *maintenance* required by the referenced standards, shall forward itemized reports of such work to the *fire code official* within 30 days of the activity performed.

Add Section 901.11

901.11 Clearance around fire-protection systems and equipment. A minimum 3-foot (92 cm) clear space shall be maintained for access to fire protection equipment, including control valves and control panels when fire protection equipment is not located within a dedicated room.

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

Delete Section 903.3.5 in its entirety, add Section 903.2.4.1, and delete and replace Sections 903.2.1.1; 903.2.1.2; 903.2.1.3; 903.2.1.4; 9.3.2.2; 903.2.3; 903.2.4; 903.2.6; 903.2.7; 903.2.8.2; 903.2.9; 903.2.9.1; 903.2.9.2 and 903.2.10 as follows:

903.2.1.1 Group A-1. An *automatic sprinkler system* shall be provided throughout buildings containing a Group A-1 *fire area* where one of the following conditions exists:

1. The building containing the Group A-1 *fire area* is 5000 square feet or larger.
2. The Group A-1 *fire area* has an occupant load of 300 or more.
3. The Group A-1 *fire area* is located on a floor other than a level of exit discharge serving such occupancies.
4. The *fire area* contains a multiple-theater complex.

903.2.1.2 Group A-2. An *automatic sprinkler system* shall be provided throughout buildings containing a Group A-2 *fire area* where one of the following conditions exists:

1. The building containing the Group A-2 *fire area* is 5000 square feet or larger.
2. The Group A-2 *fire area* has an occupant load of 100 or more.
3. The Group A-2 *fire area* is located on a floor other than a level of exit discharge serving such occupancies.

903.2.1.3 Group A-3. An *automatic sprinkler system* shall be provided throughout buildings containing a Group A-3 *fire area* where one of the following conditions exists:

1. The building containing the Group A-3 *fire area* is 5000 square feet or larger.
2. The Group A-3 *fire area* has an occupant load of 300 or more.
3. The Group A-3 *fire area* is located on a floor other than a level of exit discharge serving such occupancies.

903.2.1.4 Group A-4. An *automatic sprinkler system* shall be provided throughout buildings containing a Group A-4 *fire area* where one of the following conditions exists:

1. The building containing the Group A-4 *fire area* is 5000 square feet or larger.
2. The Group A-4 *fire area* has an occupant load of 300 or more.
3. The Group A-4 *fire area* is located on a floor other than a level of exit discharge serving such occupancies.

903.2.2 Group B. An *automatic sprinkler system* shall be provided throughout buildings containing a Group B *fire area* where one of the following conditions exists:

1. The building containing the Group B *fire area* is 5000 square feet or larger.
2. The building contains an *ambulatory care facility*.

903.2.3 Group E. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group E *fire area*.

Exception: The building does not exceed 2,500 square feet and the Group E *fire area* is not located on a floor other than a level of exit discharge serving such occupancies.

903.2.4 Group F-1. An *automatic sprinkler system* shall be provided throughout buildings 2500 square feet or larger containing a Group F-1 *fire area*.

903.2.4.1 Group F-2. An *automatic sprinkler system* shall be provided throughout buildings 5000 square feet or larger containing a Group F-2 *fire area*.

903.2.6 Group I. An *automatic sprinkler system* shall be provided throughout buildings containing a Group I *fire area*.

903.2.7 Group M. An *automatic sprinkler system* shall be provided throughout buildings 5000 square feet or larger containing a Group M *fire area*.

903.2.8.2 Group R-4, Condition 1. Group R-4, Condition 1 occupancies shall be required to meet the *automatic sprinkler system* requirements of Group R-4, Condition 2 occupancies.

903.2.9 Group S-1. An *automatic sprinkler system* shall be provided throughout buildings 2500 square feet or larger containing a Group S-1 *fire area*.

903.2.10 Group S-2. An *automatic sprinkler system* shall be provided throughout buildings 5000 square feet or larger containing a Group S-2 *fire area*.

Delete existing Section 903.3.1.1.2 in its entirety (see Section 903.7)

Add Section 903.3.1.1.2

903.3.1.1.2 Minimum design requirements. The minimum design requirements for *automatic fire sprinkler systems* installed per section 903.3.1.1 shall be as determined by Section 903.3.1.1.2.1 or by the NFPA 13 for the respective hazard and commodity classification present, whichever is greater.

Add Section 903.3.1.1.2.1

903.3.1.1.2.1 Multi-occupant or shell buildings. The minimum sprinkler design density for all new multi-occupant or shell buildings shall be Ordinary Hazard (Group 2) as outlined in NFPA 13.

Add Section 903.3.1.1.3

903.3.1.1.3 Storage buildings. Buildings with areas primarily utilized for storage with an interior ceiling height in the storage area 20 feet or more above the finished floor shall be provided with a minimum 8" underground connection from an *approved* water supply to the bottom of the *automatic sprinkler system* riser.

Add Section 903.3.1.2.1.1

903.3.1.2.1.1 Exterior storage closets. Sprinkler protection shall be extended into attached exterior storage closets in R-1 and R-2 occupancies protected with an *automatic sprinkler system* installed in accordance with Section 903.3.1.2.

Add Section 903.3.1.2.1.2

903.3.1.2.1.2 Attached garages, carports, patios and balconies. Attached garages and carports, patios and balconies shall be provided with sprinkler protection.

Add Section 903.3.1.3.1

903.3.1.3.1 Installation requirements. *Automatic sprinkler systems* installed in accordance with Section 903.3.1.3 are required to comply with all of the following:

1. A listed electric bell is required to be installed on the exterior of the building and shall automatically sound upon receiving a signal from the *automatic sprinkler system* water flow switch. The electric bell shall be listed for its application, rated for exterior installation, and be installed in accordance with the manufacturer's specifications.
2. Attached garages are required to be protected by the *automatic fire sprinkler system*. Residential or quick-response sprinklers and the same piping installed in the rest of the system shall be used. Coverage, spacing, and installation requirements shall be compliant with NFPA 13D and the sprinklers' respective listings. Intermediate temperature-rated sprinklers shall be installed where appropriate.
3. NFPA 13D *automatic sprinkler system* risers shall be located in a wall cavity with an *approved* access panel.
4. Partially-enclosed exterior porches and patios are required to be protected by the *automatic sprinkler system* if they meet all of the following conditions:
 - a. The enclosure area is constructed of combustible material.
 - b. The porch is enclosed on at least three sides with the smallest dimension being 48" deep or greater.
 - c. A means of egress (to include bedroom windows) from the structure is present and opens into the enclosed area.

Add Section 903.4.2.1

903.4.2.1 Water-flow notification. Unless a *manual or automatic fire alarm system* is required elsewhere in this code, *interior tenant notification* shall be provided whenever a monitored *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 is present. An *approved* audible/visual notification appliance shall be installed within a normally occupied interior area of each building or tenant space. Americans with Disabilities Act (ADA)-compliant restrooms inside each building or tenant space shall have a visual notification appliance installed within the restroom area. The notification appliances shall be activated by an *approved* means upon water-

flow detection from the *automatic sprinkler system* water-flow switch. Systems shall be required to be installed when:

1. New buildings are constructed: *Interior tenant notification* in accordance with the requirements of 903.4.2.1 shall be provided for all newly constructed buildings containing a monitored *automatic sprinkler system*. If a multi-tenant shell building is constructed, each individual space created by demising walls shall be provided with *interior tenant notification* in accordance with the requirements of 903.4.2.1.
2. *Alterations* occur within buildings or tenant spaces containing a monitored *automatic sprinkler system*: When a building or tenant space undergoes an *Alteration—Level 2* or *Alteration—Level 3* as defined by the 2018 *International Existing Building Code (IEBC)*, *interior tenant notification* shall be provided in accordance with the requirements of 903.4.2.1.
3. A building or tenant space containing a monitored *automatic sprinkler system* undergoes a change in occupancy type or use: *Interior tenant notification* in accordance with the requirements of 903.4.2.1 shall be provided for all areas undergoing a change in occupancy type or use.

The requirements for notification appliance quantities and placement may be increased or adjusted based on occupancy-specific hazards at the discretion of the *fire code official*.

Add Section 903.7

903.7 Bathrooms. Group R occupancies, or areas utilized as Group R areas within another occupancy, that are equipped throughout with an *automatic sprinkler system* in accordance with Sections 903.3.1.1, 903.3.1.2 or 903.3.1.3, shall be required to provide sprinkler protection in all bathroom areas.

Exception: Bathrooms that do not exceed 24 square feet (2 m²) in area and are located within individual dwelling units or sleeping units, provided that walls and ceilings, including the walls and ceilings behind a shower enclosure or tub are of noncombustible or limited combustible materials with a 15-minute thermal barrier rating.

SECTION 904 ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS

Add Section 904.15

904.15 Portable Fryer Appliances. Portable fryer appliances must be Underwriters Laboratories (UL) listed for their application and installed in accordance with the manufacturer's specifications. Portable fryers shall be set up in an *approved* location and shall not be relocated without the approval of both the *fire code official* and the governing health department. Portable fryers must have their factory appliance cables plugged directly into a permanent power receptacle without the use of intervening electrical components. Portable fryers with an oil capacity exceeding 6.00 gallons (2271 ml) must have their internal fire suppression system tied into the building's occupant notification system, where applicable, in accordance with section 907.5. Internal fire extinguishing systems are required to be maintained in accordance with section 904.12.5.

SECTION 905 STANDPIPE SYSTEMS

Amend Section 905.8 as follows:

905.8 Dry standpipes. Dry standpipes shall not be installed.

Exception: Where subject to freezing, where installed in accordance with NFPA 14 or when required by Section 905.8.1.

Add Section 905.8.1

905.8.1 Residential dry standpipes. *Residential dry standpipes* shall be installed when *driveways* do not meet the requirements outlined in Section 512 or as required by the *fire code official*.

Add section 905.8.2

905.8.2 Installation requirements. *Residential dry standpipes* required by Section 905.8.1 shall be installed in accordance with their respective standards and the current Northwest Fire District *Fire Code Construction and Development Handbook*.

SECTION 912 FIRE DEPARTMENT CONNECTIONS

Amend Section 912.2 as follows:

912.2 Location. Fire department connections shall be located a maximum of 200 feet (60,960 mm) from the nearest fire hydrant. With respect to hydrants, *driveways*, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the *fire code official*.

Each fire department connection shall be identified by an approved permanent weather resistant sign in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook*.

SECTION 916 GAS DETECTION SYSTEMS

Add Section 916.10.1

916.10.1 Fire alarm system connections for insulated liquid carbon dioxide systems used in beverage dispensing applications. Where applicable, insulated liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall be connected to the building fire alarm system in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook* and the manufacturer's specifications.

CHAPTER 11 CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS

SECTION 1103

FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS

Add Section 1103.5.5 and 1103.5.5.1

1103.5.5 Fire area increase. An *automatic sprinkler system* shall be provided throughout existing buildings other than one- and two-family *dwelling*s undergoing a *fire area* increase when the square footage of the new *fire area* is greater than 25 percent of the existing fire area and any of the following conditions exist:

1. The available *fire-flow* is less than the *fire-flow* required by Appendix B of this code based upon the new total *fire area*.
2. An *automatic sprinkler system* is required by Section 903 of this code based upon the occupancy type and new total *fire area*.

1103.5.5.1 Fire area increase for existing one- and two-family dwellings. An *automatic sprinkler system* shall be provided throughout existing one- and two-family *dwelling*s undergoing a *fire area* increase where all of the following apply:

1. The square footage of the new *fire area* is greater than 50 percent of the total *fire area* of the existing structure.
2. The new combined *fire area* (new and existing) exceeds 3,600 square feet.
3. The available *fire-flow* is less than the *fire-flow* required by Appendix B of this code based upon the new total *fire area*.

Add section 1103.5.6

1103.5.6 Existing Group R-3 and R-4 residential facilities. All existing Group R-3 and R-4 residential facilities shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.8 within 12 months of discovery or annexation into the Northwest Fire District.

Exception: Buildings equipped throughout with a previously *approved automatic sprinkler system*.

Add Section 1103.7.7

1103.7.7 Existing Group R-3 and R-4 residential facilities. A manual fire alarm system that activates an occupant notification system in accordance with section 907.5 shall be installed in existing Group R-3 and R-4 residential facilities in accordance with section 907.2.8.

Exception: Where the building is equipped throughout with smoke alarms meeting the requirements of Section 907.2.10.2 that are interconnected in accordance with Section 907.2.10.5.

CHAPTER 31 TENTS, TEMPORARY SPECIAL EVENT STRUCTURES AND OTHER MEMBRANE STRUCTURES

SECTION 3103 TEMPORARY TENTS AND MEMBRANE STRUCTURES

Add Section 3103.1.1

3103.1.1 Compliance. Tents and membrane structures regulated by this code shall be constructed and operated in accordance with the current Northwest Fire District *Tents, Canopies and Temporary Membrane Structures* standard.

Add Section 3103.6.1

3103.6.1 Tent staking or ballasting plan. The Tent or Canopy owner, or the Tent or Canopy Rental Company that is responsible for the tent and the tent installation must provide the installation instructions in accordance with the *Industrial Fabrics Association International (IFAI) Safe Installation and Maintenance of Tents and Fabric Structures Procedural Handbook* at the time of application. Detailed documentation on how those requirements will be met must be reviewed before the permit is issued and approved.

CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

SECTION 3310 ACCESS FOR FIRE FIGHTING

Amend Section 3310.1 as follows:

3310.1 Required access. Fire department access shall be *approved* by the *fire code official* and constructed/maintained in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook*.

CHAPTER 53 COMPRESSED GASES

SECTION 5307 COMPRESSED GASSES NOT OTHERWISE REGULATED

Amend Section 5307.3 as follows:

5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications. Insulated liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall be *approved* by the *fire code official* and constructed/maintained in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook*.

CHAPTER 80 REFERENCED STANDARDS

Amend Chapter 80 by adding the following references:

IFAI

*Industrial Fabrics Association International
1801 County B Road W
Roseville, MN 55113*

- ***Safe Installation and Maintenance of Tents and Fabric Structures Procedural Handbook (6th Edition, 2017)***

NWFD

*Northwest Fire/Rescue District
5225 W Massingale Road*

- ***Northwest Fire District Fire Code Construction and Development Handbook***
- ***Northwest Fire District Permit and Fee Schedule***
- ***Northwest Fire District Tents, Canopies and Temporary Membrane Structures***

APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS

SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS

Amend section B105.2 as follows:

B105.2 Buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses. The minimum *fire-flow* and flow duration for buildings other than one- and two-family *dwellings*, Group R-3 and R-4 buildings and *townhouses* shall be specified in Table B105.1(2) and modified by B105.3.1.

Add section B105.3.1

B105.3.1 Water supply for buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses equipped with an automatic sprinkler system. A reduction in required *fire-flow* and flow duration of up to 75 percent, as approved by the *fire code official*, is allowed for buildings other than one- and two-family *dwellings*, Group R-3 and R-4 buildings and *townhouses* when the building is equipped throughout with an approved *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. The resulting *fire-flow* and flow duration shall not be less than 1,500 gallons per minute (5678 L/min) for 2 hours as specified in Table B105.1(2).

Delete Table B105.2 in its entirety

APPENDIX D FIRE APPARATUS ACCESS ROADS

SECTION D103 MINIMUM SPECIFICATIONS

Delete Section D103.5 in its entirety

APPENDIX L REQUIREMENTS FOR FIRE FIGHTER AIR REPLENISHMENT SYSTEMS

SECTION L101 GENERAL

Add Section L101.2

L101.2 Where required. A fire fighter air replenishment system (FARS) shall be installed in the following buildings:

1. *High-rise buildings.*
2. Buildings with basements or underground areas three or more floors below grade with an area greater than 20,000 square feet (1858 m²).

SECTION L104 DESIGN AND INSTALLATION

Amend Section L104.13.1 as follows:

L104.13.1 Location. Fill stations for refilling breathing air cylinders shall be located as follows:

1. Fill stations shall be provided at the fifth floor above and the third floor below the ground level floor, and every third-floor level thereafter.
2. On floor levels requiring fill stations, one fill station shall be provided adjacent to a required exit stair at a location designated by the *fire code official*. In

buildings required to have three or more exit stairs, additional fill stations shall be provided at a ratio of one fill station for every three stairways.

APPENDIX P FIRE DEPARTMENT DETAILS

Add Section P101

SECTION P101 GENERAL

P101.1 Scope. The Northwest Fire District has approved standard details for both new and existing buildings located within the Northwest Fire District. These details can be used by building owners, property representatives, design professionals and contractors to determine the acceptable installation standards. The details can be modified, reviewed and approved by the Northwest Fire District as needed.

P101.2 Compliance. All standard details for new and existing buildings regulated by this code shall be constructed, installed, and maintained in accordance with the current Northwest Fire District *Fire Code Construction and Development Handbook*. This includes, but is not limited to, all processes, markings, signage, fire department access, construction, and fire service feature requirements.