

## **EXHIBIT A**

### **CHANNAHON FIRE PROTECTION DISTRICT FIRE PREVENTION CODE**

#### **ADOPTION OF THE INTERNATIONAL FIRE CODE 2015 EDITION WITH AMENDMENTS**

The regulations of the 2015 edition of the International Fire Code, including appendix B, C, D, F, H, I, K, L, and M as published by the International Code Council is hereby adopted as the Fire Code for which regulates and governs the safeguarding of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices; and from conditions hazardous to life or property in the use or occupancy of existing or proposed new buildings or premises; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said Fire Code on file in the Channahon Fire Protection District are hereby referred to, adopted, and made a part hereof, as if fully set out in this legislation, with the additions, insertions, deletions, and changes as are hereafter set forth. Nothing in this code shall effect single and multifamily dwellings, attached or detached, that do not exceed three stories in height.

#### **101.1 Title.**

Channahon Fire Protection District.

#### **103.1 General**

Delete this section and insert the following local jurisdiction:

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.

The Village of Channahon has appointed the Channahon Fire Protection District as the Fire Inspection component for the Village. The Village Building Official shall be the Fire Official of the Village of Channahon. The Village shall be responsible for implementation, administration, education, and enforcement of the provisions of the Village Fire Prevention Code. From time to time, the Channahon Fire Protection District will assist the Village Building Code Official with other duties and initiatives, in the interest of the public safety of the Village.

The Village with duties supplemented by the Channahon Fire Protection District, shall adopt from time to time, those policies and procedures, which are deemed appropriate to carry out the terms of local fire code enforcement.

At the written request of the Village, the Channahon Fire Protection District shall conduct inspections of existing structures within the fire district jurisdictional area to ascertain whether said structures, and uses contained therein, comply with the provisions of the Village Fire Prevention Code. The Channahon Fire Protection District shall attempt to schedule the inspections within 30 days of the receipt of the written request by the Village and the Channahon Fire Protection District will report the results of the inspections to the Village, in writing, within 14 days following any inspection. The Village shall submit written requests to the Channahon Fire Protection District in such a manner so as to allow the fire district reasonable scheduling to accomplish inspections and reports. The Village will determine if any such inspection must be made with a Village inspector present, and so shall indicate in its request.

Such inspections shall consist of the following:

- A. The Village will send a written request along with a list of businesses/buildings to be inspected. This will serve as authorization for the annual inspections.
- B. The Channahon Fire Protection District will perform annual inspections which will consist of an initial fire inspection of the premises utilizing a form, which will include verification that a current business license has been issued (if applicable). Such form may be modified from time to time to include information deemed appropriate by the Village and/or Channahon Fire Protection District. A copy of the completed inspection form will be given to the property manager, owner, or tenant at the time of inspection. This form will clearly indicate any code violations and specify a date for re-inspection.
- C. Copies of the inspection reports are to be sent to the Village Building Official, who will review the inspection reports.
- D. If applicable, the Channahon Fire Protection District will perform a follow-up inspection within 30 days of the original inspection to confirm the alleged violations listed on the initial inspection report have been corrected.
- E. If the alleged violations have not been corrected, the Channahon Fire Protection District will provide a 15 day reconciliation period to repair the violations and seek the assistance of the Village to ensure compliance utilizing the provisions of the Village Fire Prevention Code and Village of Channahon Code of Ordinances.
- F. If the alleged violations have not been reconciled, the Channahon Fire Protection District will provide a 10 day final reinspection period and seek the assistance of the Village to ensure compliance utilizing the provisions of the Village Fire Prevention Code and Village of Channahon Code of Ordinances.

#### **104.5 Notice and orders**

##### **Add as an additional sentence for local jurisdiction:**

The Village building code official is authorized to issue ordinance violation citations exceeding the 55 day violation notice in conjunction with the fire district. The Village will enforce all violations exceeding the 55 day violation notices.

#### **105.4.2.1 Fire Protection Shop Drawings**

##### **Add as additional sections for local jurisdiction**

For each hydraulically calculated automatic fire sprinkler system area identified, on submitted shop drawings, provide a copy of the hydraulic name plate.

#### **105.4.2.2 Site Plan and Construction Plan Review:**

##### **Add as additional sections for local jurisdiction**

Each applicant for a building permit involving new construction, additions, and/or alterations, subdivision improvements, planned unit development (PUD), fire detection/suppression systems, change of occupancy classification, or any other item that will affect the Fire Protection District's operation, shall submit professional designed plans to the District for review and comment. Applicant shall provide three (3) printed sets and an electronic copy of all required plans, documents and a complete description of the work to be performed.

#### **105.4.2.3 Plan Review and Site Inspection Fee Schedule**

##### **Add as additional sections for local jurisdiction**

Each applicant shall submit three (3) printed sets and an electronic copy of sprinkler, fire alarm, and construction documents essential for third party review. All fees to be directly paid to the third party review firm.

#### **109.4 Violation penalties.**

##### **Insert the following local language as required to be specified:**

[Fine not less than fifty (\$50.00) dollars, nor more than seven hundred and fifty (\$750.00) dollars for each offense].

Final enforcement of the Village Fire Code violations shall be addressed through the Village of Channahon's legal due process.

#### **110.7 Fire Watch**

Where conditions exist that are deemed hazardous to life and property by the building representative or the Code Official, or their designee, a fire watch shall be implemented. Fire alarm systems and fire sprinkler systems are required fire protection systems. If the fire alarm system and fire sprinkler systems is out of service for any reason and cannot be repaired or resolved within 24 hours, then the Fire Prevention Bureau or the Channahon Fire Protection District must be notified and the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected until the fire alarm system and fire sprinkler system have been returned to normal service. The minimum level of fire watch personnel shall be one guard per floor in multistory buildings and one guard for each fire protection system zone in single story buildings. Additional guards assigned as fire watch may depend upon the hazard and building design. The fire watch service shall continue until the fire alarm system and fire sprinkler system are both placed back in service.

The building representative must notify occupants of the fire watch within 24 hours of its establishment. Fire watch personnel shall be provided with at least one reasonable and reliable means of notifying the fire department. Their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

After the fire alarm and fire sprinkler systems have been repaired and are back in service the Fire Prevention Bureau and all building occupants shall be notified. Call the Fire Prevention Bureau to advise when the systems have been put back in service.

Conditions that may require a fire watch shall include, but are not limited to, the following:

- A. Building in which the fire safety equipment and supervision is placed out of service for any and all reasons including but not limited to maintenance, or unresolved trouble or supervisory signals, and will not be restored within twenty-four (24) hours;
- B. Special programs or events where there will be space for standing room over the seating area and the exits will handle both seated and standing people; and
- C. Situations where the fire-load is greater than the normal day-to-day operation.

#### **111.4 Failure to Comply**

##### **Delete this section and insert the following:**

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 an offense, punishable by a fine of not less than Fifty Dollars (\$50.00), nor more than Seven Hundred and Fifty Dollars (\$750.00) for each offense. Each day that a violation continues shall be deemed a separate offense.

#### **Section 301.3 Protection of Occupants/Public**

##### **Add as an additional section**

Whenever and wherever, within the jurisdiction of the Village of Channahon a condition is found in any building, lot or premises, that in the joint opinion of the Village Building Official and Channahon Fire Protection District Inspector is ambiguous but still remains as part of the provisions of this Chapter, but that requires correction or removal for the protection of the occupants or the public, the Village and Fire District, shall order such conditions corrected or removed and the owner or occupant of such buildings, lots, or premises shall comply with such order. The Village Building Official and Channahon Fire Protection District Inspector will refer to the most applicable building and fire code sections of the current code.

## **SECTION 316 HAZARDS TO FIREFIGHTERS**

### **316.7 Add as an additional section to the chapter**

The owner of any commercial or industrial structure, or any multiunit residential structure of three (3) units or more, that uses light-frame truss-type construction shall allow the marking of the structure with a truss construction emblem so as to provide warning to persons conducting fire control and other emergency operations of the existence of light-frame truss-type construction in the structure. The truss construction emblem shall be provided by the *fire code official* and shall be permanently affixed to the building as directed by the *fire code official*.

### **503.1.4 Fire Apparatus Access and Review**

#### **Add as additional paragraph to the section:**

All fire apparatus access road and fire lanes shall be reviewed and recommendations made by the Channahon Fire Protection District and approved by the Village Engineer.

### **503.2.1 Dimensions**

#### **Add as an additional sentence to the paragraph**

Unless otherwise increased by the *fire code official* due to apparatus size and access concerns.

### **503.2.3 Surfaces**

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.

#### **Add as an additional sentence to the paragraph:**

It is the responsibility of the property owner to maintain the surface of the fire access road/lanes at all times, including the maintenance of a clear path for fire apparatus staging and/or parking.

### **503.2.9 Private Drive Identification**

#### **Add as an additional paragraph:**

It is the responsibility of residents or in the case of Homeowners Association to provide *approved* address markings at the intersection of a private drive and the public right of way so that the fire district and police department can identify the addresses down extended private lanes. In the event there are multiple buildings or residences that branch from the private drive, the address must be placed on the building or residence which is visible upon approach.

### **505.1 Address identification.**

Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure with address numbers not less than 6 inch height. Address numbers shall be maintained by the property owner or authority.

### **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 listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the *fire code official*.

All access roads protected by an automatic gate shall be provided with an access system *approved* by the *fire code official* allowing the fire district rapid access to the property in the event of a fire, alarm, or other emergency.

**Add as an additional sentence to the paragraph:**

All buildings/units with automatic fire alarm systems, automatic fire suppression systems, and/or medical alert systems shall have installed a key lock box in a location(s) approved by the Channahon Fire Protection District, for access during an activation of an alarm and/or emergency. Permanently mounted key lock box shall be equipped with a tamper switch device that indicates when access is made and when the box is removed from its mounted location. Tamper switches shall be wired to the burglar alarm if one is available, otherwise to the fire alarm and provided a dedicated zone.

**507.2.3 Dimension of Water Supply Mains**

**Add as an additional paragraph**

Water mains supplying water to required hydrant system shall not be less than eight (8) inches in diameter.

**507.2.4 Dead end mains**

**Add as an additional section**

One or two-family residential developments may have hydrants supplied by a dead-end water line where there are 30 or fewer dwelling units protected by the supply. Dead end water mains shall not exceed six hundred (600) feet of eight (8) inch pipe. Hydrants located on dead end water mains shall have “dead end” disk attached to the steamer outlet of the hydrant.

**507.2.5 Looped water supply line requirement**

**Add as an additional section:**

Fire hydrants in areas zoned multi-family, commercial, industrial or mixed occupancy shall be on a looped (receiving water from more than one direction) water supply line of an *approved* size for the development when required by the Village and determined acceptable by the Village engineer.

**507.5.1- Where required (Fire Hydrants).**

Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122m) 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*.

**Insert the following to the paragraph:**

The maximum hydrant spacing shall be no more than four hundred (400) feet apart. Hydrants in areas zoned multi-family, commercial, industrial or mixed occupancy shall be spaced no farther than three hundred (300) feet apart except as provided in Appendix C that may require spacing between hydrants to be less than three hundred (300) feet based on fire flow requirement. Spacing shall be measured as normal roadway travel between hydrants on an adjacent, all weather, and public road as hose can be laid from a fire district apparatus and in accordance. All hydrants shall be located within sixteen (16) inches of the paved portion of an all-weather public roadway with a minimum setback from curbs or edges of pavement. Variances may be required by the local authority. Hydrants shall be marked by hydrant locators so they may be seen even when concealed (507.5.8). No hydrant should be located closer than 50 feet from any

existing or anticipated exposing structure in commercial and manufacturing areas. Where streets are provided with median dividers that cannot be crossed by fire apparatus laying hose lines, hydrant spacing shall be on each side of the street arranged on an alternating basis. All hydrants added after adoption of this ordinance shall be provided with Stortz fitting on the 5” outlet.

#### **507.5.1.2 Hydrant for FDC**

##### **Add as an additional section**

Additional fire hydrants shall be located in an *approved* location within a minimum of seventy-five (75) feet of the Fire District Connection (FDC).

#### **507.5.7 Hydrant Street Locators**

##### **Add as additional paragraph to this section:**

Fire hydrant locations shall be visually indicated in accordance with Village of Channahon specification, as may be amended from time to time. All fire hydrants installed after the effective date of this chapter shall be required to have fire hydrant marker(s) installed before acceptance. Hydrant markers are to be installed by the developer, owner, or contractor as follows:

- i. As may comply with the department of transportation regulations.
- ii. Areas such as, but not limited to parking lots, loading areas, or storage yards shall have marker location designated by the Village Code Official.

Any hydrant marker damaged or removed during the course of street construction or repair shall be immediately replaced by the contractor, developer, or person responsible for removal or damage.

#### **607.9 – Elevator size specifications**

##### **Add as additional paragraph to this section:**

Elevator cars shall be of size and dimensions to accommodate the ambulance stretcher used by the Fire Protection District. In the buildings two stories in height or more, and required to have an elevator, at least one elevator shall be of such size and arrangement to accommodate a twenty-four (24) inch by eighty-four (84) inch ambulance stretcher in the horizontal, open position. The diagonal inside measurements of the elevator car shall not be less than ninety-six (96) inches. When two elevators are provided in the building and only one is “stretcher” compliant the “stretcher” compliant elevator shall be identified by the international symbol for emergency medical services (Star of Life) that is not less than three (3) inches high and shall be placed on the elevator door frame on each floor. The inside hand rail shall be set at a maximum thirty-six (36) inch height allowed under the American with Disabilities Act (ADA) standards to better accommodate the stretcher. The cab size is to be a minimum five (5) foot by seven (7) foot platform and minimum two thousand five hundred (2,500) lb. capacity with a forty-two (42) inch slide door.

#### **607.9.1 – Elevator Communications**

All required emergency elevator phones shall directly dial the Channahon Fire Protection District's Communications Center via the phone number designated by the *fire code official*

### **SECTION 901- FIRE PROTECTION SYSTEMS GENERAL**

#### **Section 901.4.6- Pump and riser room size.**

Where provided, fire pump rooms and automatic sprinkler system riser rooms shall be designed with adequate space for the 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 applicants, 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 a door(s) and an unobstructed passageway large enough to allow removal of the largest piece of equipment.

**Insert the following as additional sentence:**

All fire sprinkler control rooms and fire pump rooms shall be accessible by a direct outside access door and accessible from inside the building. The doors shall be marked with 6 inch lettering identifying the rooms. The fire sprinkler control room shall be provided with a one hour separation from the remaining building.

**901.11 Multi Tenant Occupancy**

When an automatic suppression system is installed in a multi tenant building, each tenant shall have its own sprinkler supply line off the main or riser with its own water flow switch and control valve. A strobe light shall be mounted on the exterior front of that tenant. The strobe light shall activate upon water flow and/or fire alarm activation within the individual unit.

**Section 902.1 Definitions**

**The following terms are defined in Chapter 2:**

**Insert the following as additional:**

**Fire Area.** The aggregate floor area bounded by the exterior walls of a building; regardless of fire walls, fire barriers, or fire resistance-rated horizontal assemblies.

Fire Area is defined as the entire building that cannot be subdivided into multiple fire areas to permit the omission of automatic fire sprinklers.

**Section 903.2 Where required.**

Approved automatic sprinkler systems in new buildings and structures shall be provided in locations described in Sections 903.2.1 through 903.2.12.

**Amend as follows:**

*Approved automatic sprinkler systems* shall be provided in all use groups and every fire area shall be provided with an automatic fire sprinkler system installed in accordance with the requirements of the applicable standards; NFPA 13, NFPA 13R, NFPA 13D. All fire areas stated as 12,000 square feet or greater shall be reduced to 5,000 square feet or greater. The *fire code official* shall approve any exempt locations for fire sprinkler coverage. Provide in all use groups S and F with a ceiling roof height of twenty five (25) feet or greater with an Early Suppression Fast Response (ESFR) fire sprinkler system or a hydraulically calculated system for Class IV commodities with rack storage calculated to the greatest storage height. All fire sprinkler systems shall be supervised by an approved automatic fire alarm system which automatically transmits alarm, supervisory, and trouble fire signals by a two-way private radio alarm system to Remote Supervisory Stations or U.L. listed Central Stations complying with Chapter 26 of NFPA 72, which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the Fire Districts dispatch center.

The exception as specified in IFC 2015 Section 903.2 shall apply in addition to the following:

Exceptions:

1. Mobile portable storage buildings as determined by *fire code official*.
2. Group R3 homes of less than 5,000 square feet living space.
3. Mobile retail estate sales and constructions trailers utilized during the development of property when approved by the *fire code official*.
4. Occupancy Group S where fire area is less than 12,000 square feet, and ceiling roof height is less than twenty-five (25) feet. This exception shall not apply to S-1 buildings that include

bulk storage cloth, burlap and paper, books and paper in rolls or packs; cardboard and cardboard boxes; furniture, tires, upholstery, mattresses which for the purpose of this ordinance is classified as Group H.

5. Occupancy Group U buildings as an accessory building to other occupancy classifications and is under 12,000 square feet.

### **903.3.5 Age of Hydraulic Data**

#### **Insert as additional to the section:**

Hydrant water flow data used for the design of any sprinkler system shall be measured as required by the Village and the Channahon Fire Protection District, but in no circumstance will be older than three (3) years. The Village and the Channahon Fire Protection District may require updated flow data to be collected as a result of changes to water system design, usage, or demand in a period more recent than three years.

### **903.3.8.6 Hydraulic Calculations Nameplate**

#### **Insert as additional to the section:**

A hydraulic nameplate shall be attached to the riser for each hydraulically calculated area.

### **903.4 Sprinkler system supervision 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 by a *listed* fire alarm control unit.

#### **Delete this section and insert the following for local jurisdiction:**

Alarm, supervisory and trouble signals shall be distinctly different and shall be electrically supervised by a fire alarm system.

#### **903.4.1 Monitoring**

Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to Central Stations or Remote Supervisory Stations by a two way private radio alarm system complying with Chapter 26 of NFPA 72 which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the District's designated dispatch center.

*Includes exceptions, not be amended.*

### **Section 903.4.2 Alarms**

#### **Delete this section and insert the following for local jurisdiction:**

Approved audible and visible appliances shall be connected to each automatic sprinkler system in accordance with this section. Sprinkler system 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.

#### **Insert as additional section:**

##### **903.4.2.1 Exterior appliances. Visible appliances.**

A red 75 cd, weather-proof strobe light and 10" bell shall be provided above the fire department connection. The strobe light shall be supervised by the fire alarm system and shall only operate upon waterflow activation.

##### 903.4.2.1.1 Audible appliances

An audible appliance supervised by the fire alarm system, 10 inch, 120VDC alarm bell, horn/strobe (clear) shall be provided above the fire department connection.

##### 903.4.2.1.2 Interior appliances



Interior audible and visible alarms supervised by a fire alarm system shall be provided in accordance with Section 907.5 and subsections.

**Insert as additional section:**

**903.4.2.2 Interior appliances**

Interior and visible alarms supervised by a fire alarm system shall be provided in accordance with Section 907.5 and subsections.

**Insert as additional section:**

**903.4.2.3 Inspector test valve accessibility**

Fire sprinkler inspectors test valves shall be accessible at all times and located no more than 6 feet above the finished floor. On multiple riser systems test valves shall be marked as to which riser area it tests.

**903.4.3 Floor control valves.**

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

**Delete this section and insert the following for local jurisdiction:**

Indicating control valves and water flow switches shall be provided at the point of connection to the riser on each floor in multiple story buildings.

**903.4.3.1 Sprinkler control valves**

**Add as additional section:**

All new and existing sprinkler control valves shall be equipped with electronic supervision (tamper switches) in accordance with NFPA 72. All new tamper switches installed shall have the capability to self-restore. All supervisory signals shall be automatically transmitted by a two-way private radio alarm system to Remote Supervisory Stations or U.L. listed Central Stations complying with Chapter 26 of NFPA 72, which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the District's designated dispatch center..

**903.4.4 Additional Detection Features**

**Add as an additional section:**

Where automatic sprinkler provide protection to an area with an approved flow switch interconnected to the fire alarm system, and is easily identifiable as to the location, additional automatic detectors are not required. When a building has numerous rooms protected by the zone sprinkler system, the *fire code official* may require additional smoke detectors for a more rapid means to identify the location of smoke or fire.

**903.6.1 Interior alterations or remodeling**

**Add as an additional section:**

Existing buildings or structures that are remodeled, and that meet any of the criteria listed below, shall provide fire protection as detailed in 903.2:

1. If alteration costs 50% or more of the reproduction cost of the building or structure, the entire building or structure shall comply with the requirements of the construction as defined in this code. The reproduction cost shall be determined by using the recognized standards of an authoritative technical organization. For the purposes of calculating percentages of reproduction cost, the cost of alteration shall be construed as the total actual combined cost of all alterations within any period of 30 months.

2. A 2-hour fire separation wall will be installed for a project that results in an increase or decrease in the total number of tenant spaces within the building or structure.
3. A project that entails a change in Use Group for any part of the building.

### **903.6.2 Increasing existing gross floor area by 25% or more up to 50%**

#### **Add as an additional section**

Fire protection for additions that increase the existing gross floor area of a building or structure by 25% shall provide fire protection for the entire building or structure as detailed in 903.2 or provide an Underwriter Laboratory (UL) listed two hour *approved fire wall* separation assembly that extends continuously from the foundation through the roof as defined in section 202 of the IFC, between the existing building and the new addition.

#### **Insert as additional section:**

### **903.7 Exterior Control Valve Room Access**

Provide an outside access door to the sprinkler riser valve room and fire pump room.

### **903.8 Hydraulic Nameplate**

#### **Add as an additional section:**

By each hydraulically calculated area, on each drawing, provide a copy of the hydraulic nameplate.

### **903.9 Fire pump test header**

#### **Add as an additional section:**

Provide an outside test header on all fire pump installations. An OS&Y control valve shall be provided on all fire pump test headers.

### **903.10 Fire hose valves – Warehouse and/or storage Fire Areas**

#### **Add as an additional section:**

In all warehouse storage areas exceeding 50,000 square feet, and where storage exceeds twelve (12) feet high, provide inside 2 ½” fire hose. Locate the valves at each door entrance to the warehouse and/or storage area. Provide additional 2 ½” fire hose valves so that no portion of the warehouse and/or storage area is more than 120’ maximum travel distance to a fire hose valve. Show the location of all obstructions and/or racks on the drawing.

Fire hose valves system piping shall be:

1. A separate riser piping system.
2. The 2 ½” valves shall be supplied by a minimum of 4” with 2 ½” drops to each valve.

### **903.11 Hydraulic calculations**

#### **Add as an additional section:**

Provide a minimum 5-psi minimum safety factor in the fire protection system hydraulic calculation. The system demand shall be 5-psi minimum below the seasonal low water flow test supply. The safety factor will allow for low pressures in the water supply. By each hydraulic calculated area, on each drawing, provide a copy of the hydraulic nameplate. This will make it easier to check the hydraulics of the sprinkler system for future building or storage changes.

### **904.12.6.4– Kitchen Exhaust Hood & Duct**

#### **Add as additional section**

All new automatic fire extinguishing systems for commercial cooking systems installed after the effective date of this ordinance shall automatically transmit activation fire alarm signals to Remote Supervisory Stations or U.L. listed Central Stations complying with Chapter 26 of NFPA 72, which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the Channahon Fire Protection District's designated dispatch center.

#### **904.14 – Hood and duct systems**

All hood and duct extinguishing systems for commercial kitchen areas requiring such a system, shall be approved UL 300 system for the following:

1. New Construction
2. Remodeling rehab of existing systems
3. Appliance line changes including the installation of high efficiency/high recovery fryers

#### **904.14.1 – Hood extinguishing agent**

All existing commercial kitchen systems requiring a hood and duct system shall be required to have at least one, 6 liter, type K extinguisher.

#### **Section 904.3.5 Monitoring**

*The language in Subsection 904.3.5 shall be stricken in its entirety and replaced with the following:*

All automatic fire extinguishing systems shall be monitored by a fire alarm system installed and maintained in accordance with NFPA 72, Chapter 26 and as defined by Illinois State Law providing for wireless transmission of fire alarm signals which manually or automatically retransmit trouble, supervisory and full fire alarm signals to the Channahon Fire Protection District's designated dispatch center.

#### **Section 905.2.1 General**

##### **Add as an additional section:**

Standpipes for fire hose connections shall be supplied from a separate riser. Two and one half (2 ½) inch valves shall be supplied by a four (4) inch riser with two and one half (2 ½) inch drops to each valve.

#### **Section 905.3 Required installations**

##### **Add the following paragraph to section 905.3:**

All required standpipe systems shall be supplied by a separate riser. The supply riser shall be hydraulically designed to supply 2 ½" hose drops. The riser system shall be equipped with a separate control valve and flow switch. The standpipe shall be a 2 ½" and all locations shall be approved by the Code Official. All standpipe and sprinkler risers shall have separate control valves and flow switches per floor.

#### **Section 905.3.1 Height.**

##### **Delete this section, excluding the exceptions, and insert the following:**

Class III standpipe systems shall be installed throughout new constructed buildings more than two (2) stories in height or more than two (2) stories below the level of the fire district vehicle access so that all areas on those floors are within 120 feet of a standpipe. . There shall be an approved fire district connection at grade and hose connections located at each floor level.

#### **Exceptions 1 through 5 shall remain**

**Add as additional sections: 905.12 through 905.14**

### **905.3.9 Fire Hose Valve Locations – Warehouse Storage**

#### **Add as an additional section:**

In all warehouse storage areas exceeding 50,000 square feet, and where storage exceeds 12' high, provide inside 2½" fire hose valves. Locate the valves at each service door entrance to the warehouse and/or storage area. Provide additional 2½" fire hose valves so that no portion of the warehouse and/or storage area is more than 120' maximum travel distance to a fire hose valve. Show the location of all obstructions and/or racks on the drawing.

The fire hose valves system piping shall be:

- a. A separate riser piping system.
- b. The 2½ " valves shall be supplied by a minimum of 4" with 2½ " drops to each valve.

### **905.9 Valve Supervision**

#### **Add as an additional sentence:**

Valves controlling fire hose connections shall be the field adjustable type approved by the authority having jurisdiction.

### **905.12 Piping design**

#### **Add as an additional section:**

The riser piping, supply piping and the water service piping shall be sized to maintain a residual pressure of at least 65 psi (448kPa) at the topmost outlet of each riser. The piping size shall be based on the capacity of the automatic water supply system or, where as automatic water supply is neither required nor provided to maintain the residual pressure of 65 psi, the pipe size shall be on a pressure of 150 psi available at the fire district connection.

Exception: One – and two – family dwellings

### **905.13 Riser sizing**

#### **Add as an additional section:**

The riser size shall be based on the hydraulic calculations for a minimum flow of 500 gallons per (gpm) (378 L/min.).

Exceptions:

1. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the riser shall be sized to satisfy total demand.
2. For occupancies Use Group B, I, R1, or R2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3, each riser shall be sized for a minimum flow of 250 gpm (945 L/min.).
3. Risers that are sized in accordance with the pipe schedule requirements of NFPA 14 listed in Chapter 35 are not subject to this requirement.

### **905.14 System pipe sizing**

#### **Add as an additional section:**

The system piping, including the horizontal or common feeder lines, shall be sized for a minimum flow of 500 gpm (1892 L/min.). Where more than one standpipe riser is required or provided, all common system

pipng shall be sized for a minimum flow of 500 gpm (1892 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

Exceptions:

1. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the supply piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) plus the sprinkler demand for first riser, plus 250 gpm (945 L/min.) for each additional riser, and the total shall be required to exceed 1,250 gpm (4731 L/min.).
2. For occupancies in Use Group B, I, R-1, or R2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3, all common supply piping shall be sized for a minimum flow of 250 gpm (945 L/min.) for the first riser plus 250 gpm (945L/min.) for each additional riser, and the total shall not be required to exceed 750 gpm (2838 L/min.).

#### **907.1.4 Exceptions for Small Fire Alarm Systems**

**Add as an additional section:**

All fire alarm systems shall be of the addressable type.

#### **Section 907.2 Where required-new buildings and structures.**

**Delete this section and insert the following:**

An approved fire alarm system providing for automatic wireless transmission of fire alarm signals by a two-way private radio alarm system to Remote Supervisory Stations or U.L. listed Central Stations complying with Chapter 26 of NFPA 72, which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the District's designated dispatch center and are installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by another section of this code.

Not fewer than one manual fire alarm box shall be provided in an *approved* location to initiate fire alarm signal or fire alarm system employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

The fire alarm shall be provided as follows:

- A. A complete fire alarm system consisting of smoke detection, heat detection, pull stations and audio/visual notification devices shall be installed in all use groups.
- B. All fire alarm systems shall use alarm, supervisory and trouble fire signals that are distinctly different and are automatically transmitted by a two-way private radio alarm system to Remote Supervisory Stations or U.L. listed Central Stations complying with Chapter 26 of NFPA 72, which manually or automatically retransmit trouble, supervisory, and full fire alarm signals to the District's designated dispatch center..
- C. Fire alarm control panels shall be located in the fire sprinkler control room, where applicable, or where approved by the *fire code official*.
- D. Fire alarm control panels shall be of the addressable type.
- E. All new nonresidential multiple tenant buildings shall be "ring by tenant" activated by the fire, a fire sprinkler system flow switch for the tenant space or automatic fire detection and shall include a weatherproof clear outside strobe over the entrance to each tenant space as approved by the fire code official. All outside strobes shall be seventy five (75) candela minimum.

F. Exception:

- a. Group R –single and multi-family dwellings less than 5,000 square feet of living space; attached & detached, shall not be fire suppressed if three stories or less; or structures covered under the IBC.
- b. Occupancy Group U buildings as an accessory building to other occupancy classifications and is under 12,000 square feet.

**907.2.2.4 Where required-new buildings and structures**

**Add as a new section:**

Buildings and structures not provided throughout with an automatic sprinkler system. A fire alarm system utilizing automatic fire detectors and manual fire alarm devices shall be provided throughout all buildings not provided with an automatic sprinkler system complying with NFPA 13 or NFPA 13R.

**907.4.2.5 Protective covers**

**Revise this section as follows:**

Listed manual fire alarm box protective covers *shall be provided for all installed manual fire alarm boxes* to prevent malicious false alarms or to provide the manual fire alarm box with protection from physical damage.

**907.5 Occupant notification systems**

**Revise this section as follows:**

A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. *The activation of any of the following devices shall result in occupant notification:*

1. Automatic fire detectors.
2. Automatic sprinkler system waterflow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems *when installed in buildings or structures that are provided with occupant notification.*

**907.5.2.3.4 Multi-tenant Group M.**

**Add as an additional section:**

In single story, multi-tenant Group M buildings shall be “ring by tenant” activated by **a fire sprinkler system flow switch for each space, or manual and automatic fire detection** and shall include a weatherproof clear outside strobe over the entrance to each tenant space as directed by the fire department. All outside strobes shall be 75 candela minimum.

**Section 912.2.1 Visible location**

**Insert the following:**

An approved sign mounted in a location specified by the *fire code official* shall be installed and maintained near the fire district connection. Such sign shall have the letters “FDC” at least 6 inches high to indicate the location. All such signs shall be subject to the approval of the *fire code official*

**912.3 Fire hose threads**

**Revise this section as follows:**

All fire department connections shall be as specified by the responsible fire protection district.

**SECTION 913- FIRE PUMPS**

**Section 913.4.1 Test outlet valve supervision**

Fire pump test outlet valve shall be supervised in the closed position

**Insert the following:**

- A. Provide an OS&Y control valve on all fire pump test headers.
- B. Provide an outside test header on all fire pump installations.

**913.4.2 Fire pump test header**

**Add as an additional section:**

- a. Add-provide an OS&Y control valve on all fire pump test headers.
- b. Provide an outside test header on fire pump installations.

**1008.3.3 Rooms and Spaces**

**Add as a new number 6:**

All rooms containing the building fire sprinkler and standpipe riser(s) and fire alarm control panel(s).

**Chapter 80**

**Revise all listed NFPA standards in IBC Chapter 35 and IFC Chapter 80 to include the latest edition available as of the effective date of the adoption of the 2015 IBC and IFC.**