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1. QUESTION: SPS 361.02 (1) / SPS 320.02 (1)

Which residential adult-care facilities are regulated by which building code criteria?

The following table summarizes the minimum provisions of the Department's building codes which are generally applied to residential adult-care facilities listed in the table, depending on the number of adult-care residents and on when and how the facility was constructed. (Various other types of residential adult-care facilities occur that are not addressed by this table, such as nursing homes, intermediate-care facilities, skilled nursing facilities, facilities serving people with developmental disabilities, hospitals, hospices, detoxification facilities, or facilities where care and housing is provided on less than a 24-hour basis.)

Application of the Pre- and Post-July 1, 2002, Fire Prevention Code and Commercial Building Code (CBC) and the Uniform Dwelling Code (UDC) for Residential Adult-Care Facilities in Non-Converted and Converted Buildings

	NON-CONVERTED BUILDING[a]				CONVERTED BUILDING[b]		
	Type of Facility	Number of Adult-Care Residents	Pre-7/1/02 Code	Post-7/1/02 Code	Number of Adult-Care Residents	Pre-7/1/02 Code	Post-7/1/02 Code
UDC	One- or 2-Family Dwelling	1–2	UDC	UDC	1–2	UDC, if post-6/1/80 building	UDC, if post-6/1/80 building
	Adult Family Home[c]	3–4[d]	Excluded from CBC and SPS 314; apply UDC	Excluded from CBC and SPS 314; apply UDC	3–4[d]	Excluded from CBC and SPS 314; apply UDC	Excluded from CBC and SPS 314; apply UDC.
CBC and SPS 314	Community-Based Residential Facility[i,L]	5–8	Comm 61.001 put these within the scope of UDC[e]	SPS 362.0400 (4) applies UDC[e]	5–8	Excluded from CBC; apply UDC[f]	R–4 occupancy; owner can apply UDC or CBC[f]
		9–16	Comm 57[e]	R–4, I–2 occupancy[e, j]	9–16/20[k]	Comm 61[f,g,h]	R–4, I–2 [f,g,j]
		>16	Comm 57[e]	I–1, I–2 [e, j]	>16/20 [k]	Comm 57[e]	I–1, I–2[e, j]

[a] This heading is for buildings that were constructed as an adult-care facility. The pre- and post-7/1/02 code columns refer to whether that construction occurred before or after July 1, 2002, and generally show which building code criteria apply.
[b] This heading is for previously constructed buildings that were subsequently converted to an adult-care facility. The pre- and post-7/1/02 columns refer to whether that conversion occurred before or after July 1, 2002, and generally show which building code criteria apply.
[c] Adult family homes are excluded from the CBC and SPS 314 by sections 101.01 (11) and (12) and 50.01 (1) of the Statutes.
[d] Can be more than 4 if all are siblings.
[e] Statutorily defined as a public building and as a place of employment.
[f] Specifically excluded from the statutory definition of public building – but statutorily defined as a place of employment, for the "safe place" purposes in section 101.11 of the Statutes.
[g] Building code specifically required by section 101.127 of the Statutes.
[h] For conversions that occurred before July 1, 1978, apply Ind 57.
[i] The Department of Health Services may have additional, more restrictive requirements, depending upon the classification of the CBRF covered by their license.
[J] Must be an I–2 occupancy if the residents are incapable of self-preservation.
[k] For conversions between 7/1/02 to 3/1/08, up to 20 residents were acceptable in an R–4 occupancy.
[L] Carbon monoxide alarms are required under either section SPS 362.1200 or 366.0500.

For additional information regarding Fire Prevention FAQ's, please visit:
https://dsps.wi.gov/Pages/Programs/FirePrevention/Default.aspx

2. QUESTION: SPS 362.0903 (9) Balconies

What suppression system type(s) is this section applicable to, what part of NFPA 13 should be adhered to, and what constitutes a roof or deck above?

This Wisconsin Amendment is only applicable to 13R systems that are installed in 4-story or less residential buildings of Type V construction. The design provisions such as the spacing, density, area, system type, etc. from NFPA 13 shall be adhered to. The intent of this section was not to adopt NFPA 13 Section 8.15.7 for when to apply sprinkler protection under exterior roofs or canopies.

A projection at a patio or deck serving dwelling units of greater than 2 feet within that story shall trigger the requirement for a sprinkler. The State will allow the typical 2' truss overhang with fascia board without sprinkler protection. Gutters shall not be taken into consideration when determining the dimension of the projection.

3. QUESTION: SPS 362.0907(2) Smoke Detectors at Stairs

Where is the smoke detector required to be located at open stairs and enclosed stairs as required per this code section?

The code section reads: The owner of a residential building the initial construction of which is commenced before, on or after May 23, 1978, shall install and maintain a functional smoke detector in the basement and at the head of any stairway on each floor level of the building and shall install a functional smoke detector either in each sleeping room of each unit or elsewhere in the unit within 6 feet of each sleeping area and not in a kitchen.

STATE'S COMMENTARY: For open stairwells, a smoke detector shall be placed on each level near the opening to the stairs. For enclosed stairwells, a smoke detector shall be placed on each level outside the door leading into the stairwell.

4. QUESTION: IBC Section 310/IBC Section 907.2.8.2

IBC 907.2.8.2 requires an automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 throughout all interior corridors serving sleeping units.

What about extended-stay R-1 occupancies with dwelling units served by interior corridors?

The 2015 IBC Commentary states the following, extending the definition of R-1 occupancies to include dwelling units where the length of stay is less than 30 days.

The most common building types classified in Group R-1 are hotels, motels and boarding houses. Group R-1 occupancies do not typically have cooking facilities in the unit. When a unit is not equipped with cooking facilities, it does not meet the definition of a "dwelling unit" in IBC Section 202. When this occurs, such units are treated as sleeping units for the application of code provisions. Sleeping units are required to be separated from each other by fire partitions and/or horizontal assemblies. A recent trend in development is the construction of "extended-stay hotels." While these units may have all of the characteristics of a typical dwelling unit (i.e., cooking, living, sleeping, eating, sanitation), the length of stay is still typically not more than 30 days. As such, these building would still be classified as Group R-1. If the length of stay is more than 30 days, these buildings would be classified as Group R-2.

STATE'S COMMENTARY: Per the verbiage of IBC 907.2.8.2, it is required that an automatic smoke detection system be installed throughout all interior corridors serving sleeping units and/or dwelling units, unless meeting an applicable exception.

5. QUESTION: IBC 903.3.5 Water Supplies

Is a well considered an acceptable water supply source for an automatic fire sprinkler system?

The water supply shall be connected to a reliable system and be capable of providing the required flow and pressure for the required duration of time per NFPA 13 or 13R.

STATE'S COMMENTARY: If meeting the requirements stated above, a high capacity well can be used for NFPA 13 and 13R automatic fire sprinkler systems. If the well is also supplying the domestic demand, a listed fire pump assembly would not be required. The pumps for the combination water system shall adhere to the same state standards as pumps in a community water system in order to be considered reliable. The State of Wisconsin Department of Natural Resources Requirements for the Operation and Design of Water Systems NR 811.26 requires redundant pumps and NR 811.27 requires emergency back-up electrical power for these water systems. If the well was supplying the automatic fire sprinkler system only, then a listed fire pump assembly would be required to be installed in accordance with NFPA 20.

6. QUESTION: IBC 907 Fire Alarm Systems

Is a sprinkler supervisory alarm system considered to be a fire alarm system?

Yes.

STATE'S COMMENTARY: Per NFPA 72 – 2013 edition, sprinkler system monitoring is considered a Supervising Station Fire Alarm System. Based upon this determination, the following is required:

1. A single pull station is required at a location acceptable to the authority having jurisdiction.
2. A smoke detector is required to protect the fire alarm control panel. If ambient conditions prohibit installation of an automatic smoke detector, an automatic heat detector shall be permitted per IBC 907.4.3.

8. QUESTION: IBC 907.8 Inspection Testing and Maintenance of Fire Alarm Systems

What are the requirements for licensing, if any, applicable to the inspection, testing and maintenance of fire alarm systems?

At this time, the State does not currently have a credential or license requirement for inspection, testing and maintenance of fire alarm systems. However, IBC Section 907.8 states that the "maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with Section 907.8 of the International Fire Code."

Section 907.8 of the IFC requires that "the maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with Section 907.8.1 through 907. 8.5 and NFPA 72." Please see the following excerpts from NFPA 72 – 2013 edition:

NFPA 72 (2013) 14.2.2.1 Performance Verification. To ensure operational integrity, the fire alarm system shall have an inspection, testing, and maintenance program.

14.2.2.1.1 Inspection, testing, and maintenance programs shall satisfy the requirements of this Code, and conform to the equipment manufacturer's published instructions

14.2.2.1.2 Inspection, testing, and maintenance programs shall verify correct operation of the system.

NFPA 72 (2013) 14.2.3 Responsibilities.

14.2.3.1 The property or building owner or the owner's designated representative shall be responsible for inspection, testing, and maintenance of the system and for alterations or additions to this system.

14.2.3.2 Where the property owner is not the occupant, the property owner shall be permitted to delegate the authority and responsibility for inspecting, testing, and maintaining the fire protection systems to the occupant, management firm, or managing individual through specific provisions in the lease, written use agreement, or management contract.

14.2.3.3 Inspection, testing, or maintenance shall be permitted to be done by the building or system owner or a person or organization other than the building or system owner if conducted under a written contract.

14.2.3.4 Where the building or system owner has delegated any responsibilities for inspection, testing, or maintenance, a copy of the written delegation required by 14.2.3.3 shall be provided to the authority having jurisdiction upon request.

14.2.3.5 Testing and maintenance of central station service systems shall be performed under the contractual arrangements specified in 26.3.3.

NFPA 72 (2013) 14.2.3.6* Service Personnel Qualifications and Experience. Service personnel shall be qualified and experienced in accordance with the requirements of 10.5.3.

* Further clarification may be found in Annex A 14.2.3.6 and A 10.5.3

9. QUESTION: IEBC 804.2.2 Level 2 Alterations

What are the criteria under which a Level 2 Alteration requires the work area to be protected with an automatic fire sprinkler system in non-high-rise buildings?

In buildings with occupancies in Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1, and S-2, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The work area is required to be provided with automatic sprinkler protection in accordance with the International Building Code as applicable to new construction; and
2. The work area exceeds 50 percent of the floor area**.**

Exception: If the building does not have sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump work, areas shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual

dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the International Building Code.

STATE'S COMMENTARY: First, it must be determined if the building in question would be required to be sprinklered under the provisions of the IBC for new construction. If the IBC does not require a sprinkler system for the space or building under consideration, neither will the IEBC.

Second, condition 2 requires that the square footage of the work area exceeds 50 percent of the floor area (not the building area).

The exception requires the building to have sufficient municipal water supply (and for buildings with multiple levels; sufficient supply to the floor). This condition was not intended to require a new water service pipe to be installed from the street to the building. Therefore, unless the current water supply for the building (not the municipal supply in the street) is sufficient to support a sprinkler system without the installation of a fire pump, the exception would not be met and a sprinkler system would not be required. Also, no sprinkler system would be required if a new riser must be constructed to bring water from lower floors.

10. QUESTION: NFPA 13 (2013) Section 8.15.7.3 Noncombustible/ Limited Combustible/ FRTW Projection Finishes

To what extent shall the exposed finish material installed on the roof, canopy, or porte-cochere be of noncombustible, limited-combustible, or fire retardant treated wood in order to omit sprinklers from below such projections?

All exposed finish materials installed below the projection must consist wholly of noncombustible, limited-combustible, or fire retardant treated wood as defined per NFPA 703. The extent of these materials does not include the roofing materials located on the top of the projection, the exposed finish on the exterior walls located under the projection, or any columns supporting the projection.

11. QUESTION: NFPA 13 (2013) 11.2.3.2.4 / 11.2.3.2.5 Dry Sprinkler Systems

If I have a dry-pipe sprinkler system under a pitched roof exceeding a slope of 16.7%, do I apply both area increases from Section 11.2.3.2.4 and Section 11.2.3.2.5?

Yes.

STATE'S COMMENTARY: NFPA 13- 11.2.3.2.4 and 11.2.3.2.5 would be applied cumulatively to the design area chosen from NFPA 13 Figure 11.2.3.1.1 in accordance with NFPA 13 Section 11.2.3.2.7. This is shown in the following example: The application area determined from Figure 11.2.3.1.1 is 1500 square feet. As required by Section 11.2.3.2.4, 1500 square feet is increased by 30% to 1950 square feet for the steeply pitched roof. As required by Section 11.2.3.2.5, the 1950 square feet is increased by 30% for the dry pipe system. Therefore, the original density chosen from Figure 11.2.3.1.1 must be applied over 2535 square feet. Be sure to ensure that there are no other design area modifications required for the system being installed.

12. QUESTION: NFPA 13 (2013) 24.1.3.2 – Mains smaller than 6 inches

When is a private service main supplying an automatic fire sprinkler system per NFPA 13 allowed to be constructed of pipe smaller than 6" in size?

For mains that do not supply hydrants, sizes smaller than 6 inches shall be permitted to be used subject to the following restrictions:

1. The main supplies only automatic sprinkler systems, open sprinkler systems, water spray fixed systems, foam systems or Class II standpipe systems.

2. Hydraulic calculations show that the main will supply the total demand at the appropriate pressure. Systems that are not hydraulically calculated shall have a main at least as large as the system riser.

STATE'S COMMENTARY: Per NFPA 13 – 24.1.3.3, when a single main less than 4 inches in diameter serves both the domestic and fire systems, the domestic demand shall be added to the hydraulic calculations for the fire system at the point of connection unless provisions have been made to isolate the domestic demand. The domestic demand should come from the plumbing contractor, but may also be calculated by using the method used in the 2013 Edition of NFPA 13R Tables A9.6 (a) and (b).

13. QUESTION: NFPA 72 (2013) 26.6.3.1 Performance Based Technologies

Can cellular communication be utilized as the *primary means of communication* for fire alarm control panels?

Yes.

STATE'S COMMENTARY: Cellular communication between the fire alarm control panel and the supervising station is acceptable when adhering to NFPA 72 (2013) 26.6.3.1 (Performance Based Technologies)

14. QUESTION: SPS 316.012 UL / FM Equipment Listing

Can UL or Factory Mutual listing be used as the basis of approval for Fire Alarm and Fire Pump equipment?

SPS 316.012 regulates the approval of electrical equipment in Wisconsin. It indicates, in part ,"Approval of materials, equipment, and products shall be based upon sufficient evidence that prove the material, equipment, or product meets the intent of the requirements of this chapter. Data, tests, and other evidence shall be provided by a qualified independent third party".

STATE'S COMMENTARY: Commodity equipment is typically listed by a Nationally Recognized Test Laboratory (NRTL). Authorities having jurisdiction accept evidence of listing as the basis of approval. Both UL and Factory Mutual are Nationally Recognized Test Laboratories. Factory Mutual is recognized by OSHA to evaluate many types of fire protection and fire alarm equipment using ANSI/UL standards. Additional information on this topic is found on OSHA's website. https://www.osha.gov/dts/otpca/nrtl/index.html

For additional information regarding Electrical and Lighting FAQ's, please visit:
http://dsps.wi.gov/Programs/Industry-Services/Industry-Services-Programs/Electrical-Lighting/Electrical-and-Lighting-Program-Frequently-Asked-Questions/

15. Question: NFPA 20 (2013) Section 10.7 Fire Pump Limited Service Controllers

Under what circumstances are limited service controllers permitted to be installed?

NFPA 20 (2013) 10.7.1 states the following: "Limited service controllers consisting of automatic controllers for across-the-line starting of squirrel-cage motors of 30 hp or less, 600 V or less, shall be permitted to be installed where such use is acceptable to the authority having jurisdiction."

Installation of limited service controllers is required to meet the following criteria:

A. The fire pump is the automatic water supply for an NFPA 13R automatic fire sprinkler system.
B. The fire pump is being utilized to boost the pressure of an existing public water system meeting the requirements of Wisconsin Administrative Code NR 810 or a community water system meeting the requirements of Wisconsin Administrative Code NR 811.

STATE'S COMMENTARY: Compromises associated with Limited Service Controllers (LSCs) include:

(1) The controller circuit breaker can trip if the fire is near (can't reset because breaker may be hot, even when using the manual/emergency handle).
(2) Substantially longer reset time if breaker trips due to distressed pump, and so forth. Tripping consistency and reset times are compromised on "hot-starts."
(3) Substantially longer "down time" (no fire protection) if breaker needs service/replacement due to no isolating switch. Most LSCs are SUSE (suitable for use as service equipment) rated and are so used.
(4) Sizing of breaker is different and can significantly exceed the 8 seconds to 20 seconds locked rotor current (LRC) trip time of a full-service fire pump controller depending on hot or cold starts.

16. Question: SPS 361.40 Supervision

A stand-alone fire suppression or fire alarm system is submitted for plan review. Does the SBD-118 application require a supervising professional signature?

Yes, unless the building contains less than 50,000 cubic feet of total volume or if the addition to an existing building does not cause the entire building to contain or exceed a volume of 50,000 cubic feet. A supervising professional is defined as a registered architect, professional engineer or designer of engineering systems.

SPS 361.40 Supervision.

GENERAL.

Except as provided in par. (b), the proposed construction of a project within the scope of this code shall be supervised by one or more Wisconsin registered architects or engineers, except that Wisconsin registered designers may supervise the installation of heating, ventilating and air conditioning systems, fire protection systems and illumination systems. The person responsible for supervision shall also be responsible for the construction and installation being in substantial compliance with the approved plans and specifications. If the supervising architect, engineer or designer is confronted with a nonconformance with the code during or at the end of construction, that party, together with the designing architect, engineer or designer shall effect compliance or shall notify the department of the noncompliance.

A project does not require supervision by a Wisconsin registered architect or engineer, if the project qualifies under one of the following conditions:

The building contains less than 50,000 cubic feet total volume.
An addition to an existing building does not cause the entire building to contain or exceed a volume of 50,000 cubic feet.
For the purposes of this paragraph, the utilization of fire walls to divide up a building does not create separate buildings.

DUTIES. Supervision of construction is a professional service, as distinguished from superintending of construction by a contractor, and means the performance, or the supervision thereof, of reasonable on-the-site observations to determine that the construction is in substantial compliance with the approved plans and specifications.

NAME OF SUPERVISING ARCHITECT, ENGINEER OR DESIGNER. Prior to the start of construction, the owner of the building or structure shall designate in writing to the authority that issued plan approval the name and Wisconsin registration number of the architect, engineer or designer retained to supervise construction of the building or structure.

COMPLIANCE STATEMENT. Prior to initial occupancy of a new building or addition, and prior to final occupancy of an alteration of an existing building, the supervising architect, engineer or designer shall file a written statement with the authority that issued plan approval certifying that, to the best of his or her knowledge and belief, construction of the portion to be occupied has been performed in substantial compliance with the approved plans and specifications. This statement shall be provided on a form prescribed by the department.

17. Question: SPS 361.40 Supervision

A fire protection plan comes in in which the building plan review was conducted by a delegated municipality. Is a supervising professional signature necessary for the fire protection plan submittal?

The SBD-118 form requires a supervising professional. If required per SPS 361.40, this signature would be necessary to process the submittal. A supervising professional is defined as a registered architect, professional engineer or designer of engineering systems.

18. Question: NFPA 13 (2013) 8.17.4.6 Backflow Preventer Full Forward Flow Tests

Is the proposal to reverse the check valve in the fire department connection as a means of flow testing the backflow device an acceptable arrangement?

No.

State's Commentary: This practice is only acceptable for existing systems that were installed per editions of NFPA 13 that did not require a means to flow test the backflow prevention device. However, this means is unacceptable for new systems because it is unlikely that property owners will undertake such effort and expense to conduct this important test. For systems with a smaller system demand, flow testing of the backflow prevention device can typically be accomplished through the main drain. A monitored control valve installed as a by-pass around the check valve to conduct the flow test out the fire department connection is also considered acceptable if the system flow demand can be achieved in this manner. For systems having larger system demands, a test header may need to be installed. It is important that a test header not be installed in a manner or location in which the test connection will be confused for a standpipe or wall hydrant connection.

19. Question: SPS 361.30(4)(b)2

What is the definition of an "alarm device" for the purpose of applying the exclusion for minor alterations from State of Wisconsin DSPS plan review as allowed per this code section?

SPS 361.30(4) EXCLUSION FOR MINOR ALTERATIONS. (a) This section does not apply for minor alterations where the building official agrees the nature of the work is such that review and approval of construction documents is not necessary to achieve compliance with this code.
(b) The submission and approval of fire protection system plans is not required for a project involving the alteration or addition of the following components:
1. Twenty or fewer sprinkler heads to an existing automatic fire sprinkler system.
2. Twenty or fewer alarm devices to an existing fire alarm system.

State Commentary: The definition of "alarm device" is the following: An "alarm device" includes both initiating devices and notification appliances. This includes, but is not limited to, all the following: fire alarm control panels, power supply panels, annunciators, horns, strobes, combination horn / strobes, speakers, combination speaker /strobes, smoke detectors, heat detectors, pull stations, and door holders. Relay modules or monitoring modules are not considered alarm devices.

Please note that this exclusion is for addition or alteration of alarm devices on an existing fire alarm system. **New Fire Alarm Systems** do not meet this exception and are required to be submitted to this department for review and conditional approval.