

**CHAPTER 251
FIRE PROTECTION SYSTEMS**

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251-1. Adoption of State Code. Except as otherwise provided in this chapter, the city of Milwaukee adopts s. SPS 361.05, Wis. Adm. Code, as amended, and ss. 145.01(1), (2), and (4), 145.15(4), 145.165, and 145.175, Wis. Stats., as amended, as part of this code.

251-3. Definitions. In this chapter:

1. "NFPA" means the National Fire Protection Association.
2. "Sprinkler system" means an automatic fire sprinkler system.

Note: See also the definitions section of NFPA 13.

251-5. General Regulations. **1. CONTROL AND SUPERVISION.** The commissioner shall have jurisdiction over the methods of installation and materials used in any part of a sprinkler or standpipe system on the system side of the main control valve of the fire protection system. All water service piping between the main control valve and the water supply main in the street shall be installed as specified in the Milwaukee water works code.

2. REQUIREMENTS. a. New Construction. Sections 251-5, 251-7 and 251-9 apply to all buildings and structures, and all additions to buildings and structures, upon which construction was commenced after November 12, 1973.

b. Existing Buildings. The requirements of this section and s. 251-7 with respect to inspections, tests and specifications apply to all fire protection systems in all existing buildings which have exterior fire department connections. When circumstances justify, the commissioner may require tests of these systems which are in addition to tests required by this chapter.

251-7. Permits, Plan Examination, Tests and Inspections. **1. PERMITS REQUIRED.** No person shall install, alter, repair or remove any sprinkler system or other fire protection system without first having procured a permit from the department of city development and having paid the fees prescribed in s. 200-33.

2. PLAN EXAMINATION. a. Items Required. Except as provided in par. e, prior to issuance of a permit to install or alter a sprinkler system or other fire protection system, 4 sets of installation drawings and one set of hydraulic calculations shall be submitted to the department of city development for review along with the required plan examination fee prescribed in s. 200-33. Automatic fire sprinkler plans shall contain the information required by the applicable NFPA standard.

b. Plan Preparation. Plans for sprinkler systems shall be prepared by an architect, professional engineer or licensed fire protection designer. The plans shall be stamped or sealed, signed, and dated in accordance with the requirements of the Wisconsin departments of regulation and licensing, and commerce.

c. Preliminary Plans. Preliminary plans submitted for approval shall be subject to the provision set forth in s. 200-26-3.

d. Plans on Job Site. Automatic fire sprinkler plans shall be kept on the job site as required by the state of Wisconsin building code.

e. Exemption. For alterations to existing sprinkler systems involving the addition of fewer than 21 heads, plan examination is not required.

3. TESTS. a. General Requirements. The owner or agent shall conduct all tests as required herein in the presence of a representative of the commissioner and pay the testing fees prescribed in s. 200-33. Notice of a test shall be provided to the department at least 24 hours prior to the test.

b. Types of Tests. b-1. New Piping. All new sprinkler system piping, Class I and Class III standpipe system piping, and fire department pumper connection piping to any other fire protection system, excluding underground water service piping from the water main to the first control valve of the system, shall be tested hydrostatically in accordance with current NFPA standards.

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b-2. Vacant Buildings. When a building which has been vacant for one year or longer is reoccupied, a hydrostatic test shall be conducted on the sprinkler system or standpipe system in such building. The test shall include all piping except underground piping from the water main to the first control valve of the system.

b-3. Systems Exposed to Severe Weather. When the interior of a building has been exposed to a temperature of 32 degrees fahrenheit or lower, a hydrostatic test which is in accordance with current NFPA standards shall be conducted on the sprinkler or standpipe system in such building.

b-4. Class II Standpipe Systems. A hydrostatic test in accordance with current NFPA standards shall be conducted on a Class II standpipe system when such system is part of a sprinkler system or has a fire department connection.

b-5. Exposed Dry Systems. All exposed dry standpipe systems shall be tested once every 3 years at 200 pounds per square inch pressure for a period of one hour.

b-6. Concealed Dry Systems. All concealed dry standpipe systems shall be hydrostatically tested once each year.

b-7. Additions and Alterations. Additions and alterations to existing sprinkler systems shall be hydrostatically tested when any or all of the following apply:

b-7-a. More than 15 sprinkler heads are being added.

b-7-b. More than 15 existing sprinkler heads are being relocated.

b-7-c. More than 15 new sprinkler heads are being installed below dropped ceilings.

b-7-d. New fire protection water supply piping is being installed.

b-7-e. Existing fire protection water supply piping is being relocated or added to.

b-8. Newly Installed Systems. All newly installed dry sprinkler systems and deluge systems or valves shall be trip-tested as prescribed in applicable NFPA standards. All newly installed fire protection systems shall be tested to determine that they are properly installed and meet applicable performance standards.

c. Standards. Hydrostatic tests shall be conducted in accordance with the applicable NFPA standard, as adopted by reference in s. 251-1.

d. Final Approval. Final approval of the installation of any sprinkler system or standpipe system shall be contingent on the installer furnishing the department of city development with a contractor's material and test certificate in accordance with the currently-adopted edition of NFPA 13.

4. INSPECTIONS. It shall be the responsibility of the owner or agent of the owner of any fire protection system listed in s. 200-33-52-c to have such system inspected. The inspection shall be performed by a representative of the commissioner periodically and in accordance with current NFPA standards. Fees for these inspections shall be paid to the city by the owner in accordance with s. 200-33. Any reinspection required because of noncompliance with orders issued shall be subject to the reinspection fee prescribed in s. 200-33.

251-9. Fire Department and First Aid Standpipe Systems. 1. CONTROL VALVES. Standpipe control valves shall be located no higher than the first story and shall be properly identified.

2. CONNECTION TO DOMESTIC WATER SUPPLY. Where a fire protection standpipe connection to a domestic water supply is permitted, it shall be made after the water meter and ahead of the first domestic branch, unless otherwise approved by the commissioner of city development. The connection shall be equipped with an approved indicating valve, a backflow protection device, a pressure gauge and a drain valve.

251-11. Automatic Fire Sprinkler Systems.

1. WATER SUPPLY. a. General Requirements. Water supply connections, piping, and tanks shall be installed according to Milwaukee water works regulations. Recessed indicating valves shall be prohibited. Sprinkler systems containing a total of 20 or fewer sprinkler heads may be connected to domestic water piping if adequate pressure and flow are available.

b. Connection to Domestic Water Supply. Where a sprinkler system connection to a domestic water supply is permitted, such connection shall be made after the water meter and ahead of the first domestic branch, unless otherwise approved by the commissioner of city development. The connection shall be

equipped with an approved indicating valve, a backflow protection device, a pressure gauge and a drain valve.

2. SPRINKLER ALARMS. a. Installation. The sprinkler contractor shall be responsible for the installation of an alarm bell and identification sign.

b. Location. The alarm bell, identification sign and fire department connection may be located only on an exterior building wall which fronts on a street. These items shall be located in close proximity to one another, so that the alarm will indicate the location of the fire department connection to the fire department.

Note: See s. 236-11-4-d-2 for the fire protection requirements for spray booths.

Note: See NFPA 25 for sprinkler head replacement requirements.

3. TESTING OF AUTOMATIC FIRE SPRINKLER SYSTEMS. Automatic fire sprinkler systems shall be inspected and tested annually in accordance with NFPA 25 and NFPA 72. This does not preclude non-licensed individuals from conducting the daily, weekly, monthly, quarterly or semiannual inspection and testing activities for automatic fire sprinkler systems required under NFPA 25 and NFPA 72.

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Abbreviations:

am = amended
cr = created

ra = renumbered and amended
rc = repealed and recreated

rn = renumbered
rp = repealed

<u>Section</u>	<u>Action</u>	<u>File</u>	<u>Passed</u>	<u>Effective</u>
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251-01	am	86-675	7/29/86	8/16/86
251-01	am	891008	10/10/89	10/28/89
251-1	am	971589	2/10/98	2/27/98
251-1	am	020467	8/1/2002	8/20/2002
251-1	am	050735	10/18/2005	11/4/2005
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251-7-1	am	980963	12/18/98	1/1/99
251-7-2-a	am	980963	12/18/98	1/1/99
251-7-2-b	am	961523	2/11/97	2/28/97
251-7-3-b-5	am	941797	6/6/95	6/23/95
251-7-3-d	am	980963	12/18/98	1/1/99
251-9-2	am	980963	12/18/98	1/1/99
251-11-1-b	am	980963	12/18/98	1/1/99
251-11-3	cr	071256	2/5/2008	3/1/2008
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