

Minneapolis Fire Department, Fire Prevention Bureau Policy # 5-2

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Issue

An adequate water supply for fire-fighter is to be provided for every building or facility.

Code requirements

The fire code requires an adequate, on-site water supply for new buildings and facilities.

Problem

The MSFC gives general guidelines and does not list specific requirements for water supplies. This policy lists specific MFD requirements.

MFD acceptable compliance

Fire hydrants that receive water from the Minneapolis Water Works system are the only acceptable water supply.

1. Location and number of hydrants:
 - a. All parts of the exterior of a new building or facility are to be within 400 feet of a hydrant which is located on a fire vehicle access road. (MSFC)
 - i. Exception: The distance between hydrants may be up to 600 feet for buildings protected throughout by a sprinkler system. (MSFC)
 - b. The spacing and number of hydrants is to be based on a MSFC Appendix.
 - c. Hydrants are to be located within 15 feet of a fire vehicle access road, but no closer than 40 feet of a building of combustible construction or of openings in buildings of noncombustible construction. A 4½ inch outlet is to face, and be perpendicular to the fire vehicle access road. Hydrants that are located in or near drive lanes or parking spaces are to be protected by bollards (the bollards are to be located at least three (3) feet from the hydrant). There is to be no parking within 10 feet of the front of hydrants.
 - d. Fire department connections (Siamese connections) that serve sprinkler and standpipe systems are to be located within 150 feet of a city fire hydrant as measured along a fire vehicle access road, (a city hydrant is one that is directly connected to a city water main and maintained by the Minneapolis Water Dept.).

2. Amount of water and pressure requirements: Each hydrant is to provide at least 1,000 gpm at 20 psi with as many hydrants flowing as necessary to meet the fire flow requirements as determined in the MSFC Appendix for fire flow.
3. Types of hydrants:
 - a. City hydrants: May only be painted by the city.
 - b. Private hydrants:
 - i. Piping supplying a hydrant is to be at least six (6) inches.
 - ii. Each hydrant is to have a shutoff valve allowing it to be isolated from the rest of the system.
 - iii. The underground piping system is to meet the requirements of NFPA standard #24.
 - iv. Water supplies to private hydrants are to be separated from the city water supply by a listed OS&Y valve, a detector check valve with bypass meter, and a listed indicating gate valve.
 - v. When the supply from the city water system also supplies sprinkler or standpipe systems, a listed indicating gate valve shall isolate the hydrant system from the other systems. A check valve is to be installed in the supply piping downstream of the hydrant system and upstream of the other systems to prevent water from entering the hydrant system when the fire department pumps into the fire department connection of the sprinkler or standpipe system.
 - vi. Each hydrant is to have at least one (1) 4 1/2 inch outlet with Minneapolis thread pattern (5 9/16 inch O. D. and 4 threads per inch).
 - vii. The operating nut is to be a standard pentagonal style.
 - viii. Private hydrants are to be painted yellow.
 - c. Wall hydrants:
 - i. May be provided only when approved by the Minneapolis Fire Dept.
 - ii. Must have at least two (2) 2 1/2 inch National Standard thread male outlets.
 - iii. The outlets are to be controlled by a wall post indicator valve with the operating wheel on the outside of the building.
 - iv. A permanent "Wall Hydrant" sign is to be mounted over the connection.

4. Maintenance of private hydrants

- a. The property owner is to maintain a three (3) foot clear circumference around each hydrant and maintain no parking within 10 feet of the front of the hydrant.
- b. The fire department must be notified when a hydrant is out of service.
- c. Hydrants are to be serviced and tested every five (5) years. Results of the tests are to be documented and sent to the MFD Fire Prevention Bureau.

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