

STANDARD SPECIFICATIONS

SECTION 15139

FIRE HYDRANTS

PART 1 - GENERAL

A. Description

This section includes the materials, installation and testing of fire hydrants.

Hydrants shall be supplied and installed per VWD standard drawings W-4 and W5, AWWA C 503 and as described herein.

B. Related Work Described Elsewhere

All related work specified elsewhere, or in other codes or standards, will be as last revised, unless a specific date of issuance is called out in opposition to later revision date(s).

Other sections of the technical specifications, not referenced below, shall also apply to the extent required for proper performance of this work.

1.	Trenching, Backfilling, and Compacting:	02223
2.	Concrete:	03300
3.	Painting and Coating:	09900
4.	Hydrostatic Testing of Pressure Pipelines:	15042
5.	Ductile Iron Pipe and Fittings:	15056
6.	Manual Valves:	15100

C. Approved Wet Barrel Hydrants

1. Residential Use
Per VWD Approved Material List, latest edition
2. Commercial and Industrial Use
Per VWD Approved Material List, latest edition

PART 2 - MATERIALS

A. Wet Barrel Hydrant

1. Hydrant Top Section

Per governing fire agency and District Approved Material List.

2. Bury Section

- a. The bury section shall be 6-inch Ductile Iron shortradius bury elbow and shall be cement lined in conformance with Section 15056. Bury inlet shall be 6-inch non-asbestos hub bell connection for ductile iron pipe or C900 PVC pressure pipe.
- b. A ground ductile iron cast iron spool shall be installed to position the hydrant flange 4-6 inches above the concrete pad (finish grade).
- c. All wet-barrel fire hydrant cast-iron buries are to be cement lined.
- d. When using a riser spool, bolts shall conform to ASTM A307, zinc plated.
- e. Bury section outlet and riser spool flanges shall be six-hole "San Diego" drilling.

C. Break-Away Bolts

1. Break-away bolts shall be used to join the spool section to the hydrant top section.
2. All bolts and nuts, shall conform to ASTM A307, zinc plated.

D. Valve

The shut-off valve shall be a resilient-seated gate valve per Section 15100, including the valve box. Butterfly valves will not be permitted on fire hydrant service.

E. Ductile Iron Pipe

Ductile iron pipe shall be per Section 15056.

F. Ductile Iron Pipe and Fittings

Ductile-iron Pipe and fittings shall be in accordance with Section 15056.

G. Concrete

Concrete pads and supports shall be Class B concrete conforming to Section 03300.

H. Gaskets

Gaskets shall be of rubber composition per Section 15056.

PART 3 - EXECUTION

A. General

1. Fire hydrant assemblies shall be installed in accordance with the standard drawing and as specified herein, and shall include the connection to the main, the fire hydrant, hydrant bury, shutoff valve, valve well and valve box, connection piping, concrete thrust blocks, concrete pad and appurtenances.
2. Refer to VWD standard drawings W-4 and W-5.

B. Location

Fire hydrant assemblies shall be located as shown on the plans or as approved by the District representative. The center of the fire hydrant shall be, except as otherwise approved by the District representative, located per VWD standard drawing W-5.

The flange elevation at the base of the hydrant shall be set 4-inches to 6-inches above the sidewalk or the concrete pad, or as approved by the District representative. Additional spools will not be permitted when correcting the flange elevation.

C. Trenching, Backfilling, and Compacting

1. All trenching, backfilling, compaction and other excavation shall be in accordance with Section 02223.
2. All backfill within 24 inches of a valve shall be imported sand.

D. Valve and Valve Box

The valve and valve box shall be installed in accordance with Section 15100.

E. Ductile Iron Pipe

Ductile iron pipe shall be installed in conformance with Section 15056.

F. Break-Away Bolts

Break-away bolts shall be installed with the threads away from the top of the hydrant.

G. Concrete

The concrete pad shall be Class B concrete and thrust blocker shall be Class A concrete and shall be placed per Section 03300.

H. Painting

All public fire hydrants shall be painted with one prime coat and two finish coats of yellow paint at the place of manufacture. Final painting shall be in accordance with Section 09900. The color shall be per VWD Approved Material List, latest edition.

I. Testing

Test hydrants at the same time that the connecting pipeline is pressure tested. See Section 15042 for pressure testing requirements.

END OF SECTION