

307 FIRE HYDRANTS

307.01 DESCRIPTION

[Refer to DC WASA Section 2642]

Work consists of furnishing and setting fire hydrants, (boot with ductile iron retainer gland,, standpipe and hydrant complete) adjusting hydrants to grade, relocating hydrants, converting fire hydrants to traffic type, plus constructing dry wells and thrust blocks complete, at locations indicated in the contract documents or as directed. Work includes restoration of landscape features and sodding per [610.05](#). Trench excavation and backfill, hydrant connecting pipe, restraint, water valve and water valve casing are not part of work.

- (A) **SET FIRE HYDRANT.** Work consists of furnishing and installing new traffic type fire hydrants, necessary tees, elbows, other fittings, and other incidental materials to complete work.
- (B) **RELOCATE FIRE HYDRANT.** Work consists of relocating fire hydrants at new location. Work includes furnishing of all items in (A) except for the fire hydrant. Work includes removal of the hydrant from its original location and reinstallation of existing hydrant, if traffic type, or installation of a new hydrant, furnished under (D), at new location. Work shall include installation of necessary fittings.
- (C) **ADJUST FIRE HYDRANT.** Work consists of adjusting fire hydrants to new grade at the existing location. Work includes removal of the existing hydrant and removal or addition of vertical pipe, and reinstallation of the existing hydrant, if traffic type, or installation of a new hydrant, furnished under (D), to new grade. Hydrant lowering may also require lowering of the dry well. However, when field conditions require lowering the connecting water line, work shall be considered as “Relocate Fire Hydrant”.
- (D) **FURNISH FIRE HYDRANT.** Existing fire hydrants to be relocated or adjusted, which are not traffic type or otherwise not suitable, shall not be reused. Work under this item consists of furnishing a new traffic type fire hydrant and reducer for use in completing the work specified in (B) or (C). Work includes delivering the existing hydrant to the Bureau of Water Services property yard at either 2nd Street and Bryant Street, N.W., or 18th Street and Minnesota Avenue, S.E., as directed, with a credit requisition furnished by the Chief Engineer and approved by an authorized representative of the DC WASA Utility Inspection Branch.
- (E) **CONVERT FIRE HYDRANT.** Work consists of replacing existing non-breakaway type fire hydrants with new traffic type fire hydrants at the original location and elevation. Work includes removal and hauling the existing hydrant, as specified in (D), and furnishing and installing complete the new hydrant.

Related work specified elsewhere may include but is not limited to:

[207](#): Trench Excavation and Backfill.

[302](#): Valve Casing.

[305](#): Pipe Water Main – Ductile Iron.

[306](#): Gate/Butterfly Valves.

Reference Codes and Specifications:

AWWA C502: "AWWA Standard for Dry-Barrel Fire Hydrants".

ASTM D1682: "Test Methods for Breaking Load and Elongation of Textile Fabric".

307.02 SUBMITTALS

Shop drawings per [105.02](#) shall be submitted for hydrants and joint details.

Affidavits, certifications, catalog and maintenance data shall be submitted per this section.

307.03 MATERIALS

Fire Hydrant – [810.02](#)

Gravel for Dry Well – Grading No. 57 aggregate per [803.02](#)

Filter Fabric – Woven filter fabric shall be composed of polypropylene monofilament yarns woven into sheets of approximately sixteen (16) mil thickness. The tensile strength of the fabric shall be per ASTM D1682. The weave of the fabric shall be dense and tight so the openings are barely visible.

Test results shall indicate the filter fabric can effectively retain particles coarser per opening of U.S. 140-sieve mesh for all conditions.

Tests shall also demonstrate that the filter permeability is between 3.3 and 3.8 x 100 centimeters per second.

Filter fabric shall be manufactured by Mirafi Company, P.O. Box 240967, Charlotte, N.C. or approved equal.

307.04 CONSTRUCTION REQUIREMENTS

Fire hydrant and dry well material, excavation, installation and backfill shall be included in this Section. Fire hydrant connection pipe excavation and backfill shall be included as part of trench excavation per [207](#).

All related work on hydrant water line including tests and chlorination shall be per applicable provisions of [305](#). Hydrants shall be set plumb with 4-inch nozzle normal to the curb line. When encountered, hydrant delivered with nozzle facing in the improper direction, District employees will rotate hydrant correctly when placing the hydrant into service.

Joint and joint restraint between boot and the connection pipe to the main shall be per [305.05\(D\)](#) and [\(I\)](#).

Dry wells shall be excavated to dimensions as shown in the contract documents. Filter fabric shall be placed in the excavated dry wells' interior bottom, interior side walls and placed on the top of the excavation and secured around the hydrant's fittings before completing backfill.

Any items disturbed during construction, including shrubs and lawns, shall be restored by the Contractor upon completion of work. Grassed areas shall be resodded as part of work per [610.05](#).

307.05 MEASURE AND PAYMENT

The unit of measure will be each.

Payment for Set, Relocate, Adjust, Furnish and/or Convert Fire Hydrant will be made at the respective contract unit price per each, which payment will include property restoration and sodding, and all labor, materials, tools, equipment and incidentals needed to excavate, backfill and complete work specified.

The installation of a hydrant connection pipe, a gate valve and a water valve casing will be paid under other pay items.