

**ITEM 615.6089 39 - UNDERGROUND BACKFLOW PREVENTER AND WATER METER
CONCRETE VAULT**

DESCRIPTION

This work shall consist of furnishing and installing the underground backflow preventer and water meter concrete vault in accordance with the contract documents and as directed by the Engineer.

MATERIALS

Double Check Valve Backflow Prevention Device: The Double Check Valve Backflow Prevention Device shall consist of two independently operating check valves. Check valves shall be constructed so they may be serviced without removing the valve body from the line. All Double Check Valve Backflow Prevention Devices shall be furnished complete with resilient seated shut off valves and test cocks. The assembly shall meet the requirements of ASSE Standard 1015 and AWWA Standard C510-92. The 75 mm Double Check Valve Backflow Prevention Device shall be manufactured by one of the following:

1. Model 709 DCDA
As manufactured by:
Watts Regulator Company
815 Chestnut Street
North Andover, MA 01845
2. Model DDCII
As manufactured by:
Hersey Meters
10210 Statesville Boulevard
Cleveland, NC 27013
3. Model 806YD
As manufactured by:
Febco
4381 N. Brawley Ave., Ste. 102
Fresno, CA 93722-3919

OR

4. Equal as approved in advance by the Engineer in coordination with
New York City Parks & Recreation Department

Water Meter: Shall be Combination main line turbine meter for measuring high flow rates, with automatic valve mechanism for diverting low rates of flow for measurement through integral bypass meter. The meter is to be suited for installation in a pipe without the need for any straight piping before or after the meter. The meter is to have the features required by the New York City Department of Environmental Protection for installation in Bronx, New York including the proper number of wheels registers and remote flow indicator. The meter is to be provided with wire for transmitting the flow indication from the meter to the remote flow indicator, which will be mounted as shown on the Drawings. The meter is to function without the need for an external power supply. Meter to be 75 mm size with bronze casing and flanged ends as manufactured by:

**ITEM 615.6089 39 - UNDERGROUND BACKFLOW PREVENTER AND WATER METER
CONCRETE VAULT**

1. Model Recordall Compound Meter

As manufactured by:
Badger Meter, Inc.
4545 W Brown Deer Road
PO Box 245036
Milwaukee, WI 53224-9536

2. Model MCTII

As manufactured by:
Hersey Meters
10210 Statesville Boulevard
Cleveland, NC 27013

3. Model C3000

As manufactured by:
Elster AMCO Water, Inc.
1100 SW 38th Avenue
PO Box 1852 (34478)
Ocala, FL 34474

OR

4. Equal as approved in advance by the engineer in coordination with
New York City Parks & Recreation Department

Pipe and Fittings: Copper water service pipe from the main shut-off valve located between the vault and service connection to the house control gate valve and from the Control Outlet gate valve to the manifold for the spray park vault or the capped end of the service terminated 1.5 m from the outside face of the proposed buildings shall meet the requirements of Subsection 722-06, Water Service Pipe, Service Valves and Fittings, NYSDOT Standard Specifications, May 4, 2006.

Insulation: The insulation shall be preformed one-piece fiberglass pipe insulation with a K-value of 0.22 @ 24°C mean temperature, factory applied, self-seal (SSL) jacket. The ends of pipe insulation shall be sealed off with a vapor barrier coating at all fittings and valves.

Fittings and valves shall be insulated with one piece pre-molded fitting and valve covers with polyvinyl chloride (PVC) jackets. Covers shall overlap the adjoining pipe insulation jackets and shall be sealed at all edges with vapor barrier adhesive. The ends of all covers shall be secured with pressure sensitive vinyl tape. The tape shall overlap the jacket and cover at least 25 mm.

Sump Pump: Shall have flow capacity of 3790 LPH minimum with head sufficient for discharge to the nearest sanitary sewer manhole. Sump pump shall be a submersible type with cast iron body and corrosion-resistant epoxy finish. The contractor shall submit manufacturer's specifications to the Engineer for approval.

**ITEM 615.6089 39 - UNDERGROUND BACKFLOW PREVENTER AND WATER METER
CONCRETE VAULT**

Valves: All valves of each type shall be from the same manufacturer. All Gate and ball valves shall meet the requirements of Subsection 722-04, Water Valves and Hydrants, NYSDOT Standard Specifications, May 4, 2006.

CONSTRUCTION DETAILS

The Work extends from the Gate Valve located between the water service connection and either the water meter concrete vault to the manifold for the spray park vault or the end of the water supply pipe 1.5 m from the outside face of the proposed buildings. All Work shall be done in strict accordance with the Plans, Specifications and directions of the Engineer and shall comply with the rules, regulations and requirements of all Regulatory Agencies having jurisdiction.

The Double Check Valve Backflow Prevention Device / Water Meter installation plans have been submitted to the D.E.P. Bureau of Water Supply and Waste Water Collection - Cross Connection Control Unit for approval. No work shall be done with regard to either device in the vault prior to receiving the approval of the aforementioned plans. Upon receiving approval, the plans shall be provided to the Contractor as a Supplemental Drawing, one week from the O.T.W. date.

The Contractor shall install all pipe, fittings, valves, and other sundries to complete the plumbing for the double check valve backflow prevention device and water meter. The Contractor shall connect the water lines as shown on the plan for a complete operating unit to the satisfaction of the Engineer.

The Contractor shall be responsible for obtaining all Certification necessary to comply with the NYC Bureau of Water Supply Cross Connection Control Unit and the NYS Department of Health regulations for Double Check Valve Backflow Prevention Device (after installation) including:

1. Certification by Backflow Prevention Device Tester,
2. Certification of Master Plumber responsible for the Double Check Valve Backflow Prevention Device & Water Meter installation, and
3. A Professional Engineer's or Registered Architect's Certification that the installation is in accordance with the Approved Plans.

The Contractor shall prepare and submit copies of NYS-DOH form Gen 215B to the NYS Department of Health and NYC Cross Connection Control Unit of the Bureau of Water Supply. The Owner shall receive copies in triplicate (3) of all such Submittals. The Owner's Design Division Environmental Engineering Section shall be copied on all such Submittals. In summation, the Contractor shall be held completely responsible to ensure that all Work is in compliance with NYS D.O.H., Gen. 215B.

SHOP DRAWINGS: The Contractor shall submit for approval, six (6) copies of Shop Drawings, Catalog Cuts or brochures of the following equipment:

1. Backflow Prevention Device
2. Water Meter and Strainer
3. Valves and Piping
4. Insulation and hangers
5. Dielectric Fittings and Unions

**ITEM 615.6089 39 - UNDERGROUND BACKFLOW PREVENTER AND WATER METER
CONCRETE VAULT**

METHOD OF MEASUREMENT

This work will be measured as the number of UNDERGROUND BACKFLOW PREVENTER AND WATER METER CONCRETE VAULTS satisfactorily furnished and installed.

BASIS OF PAYMENT

The unit price bid for UNDERGROUND BACKFLOW PREVENTER AND WATER METER CONCRETE VAULT shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.

DISAPPROVED BY EI 12001