

PART 1 - PRODUCTS

1.01 MATERIALS

- A. Underground Piping & Appurtenances: All underground piping and appurtenances shall conform to appropriate sections of District's "Standard Specifications & Drawings for the Installation of Water Mains". All underground piping 4" and larger shall be polyethylene wrapped Class 50 or higher Ductile Iron Pipe from the public water main to the meter pit.
- B. Piping Inside Pits: Pipe installed inside the pit shall be a minimum thickness of Class 53 flanged ductile iron pipe for 3" and larger piping. The pipe shall extend through the pit walls.
- C. Fittings: All fittings and accessories shall be Ductile Iron, rated for a minimum of 200 psi working pressure or as specified herein. The fittings and accessories shall be new and unused. (NOTE: Certain areas of the Northern Kentucky Water District require materials used, to be of a higher working pressure than 200 psi.) All pipe fittings inside the meter pit shall be flanged.
- D. 2" and Smaller Service Branch Lines: Type K or L copper conforming to ASTM B88. Valves, fittings, and nipples shall be brass.
- E. Gate Valves 3" & Larger, Inside Pit: Conforming to AWWA Standard C509. Outside stem and Yoke (OS&Y), ductile iron body, left hand open, resilient wedge, wheel operated, flanged connection, gate valves. Clow Resilient Wedge Gate Valve or approved equal. Valves installed as part of a back flow prevention assembly shall be approved by the F.C.C.C.R., U.S.C.
- F. Valves 2" % Smaller: All 2" and smaller valves shall be ball valves.
- G. Glands, Gaskets, Bolts & Nuts: Conforming to AWWA C111.
- H. Bypass Lines on 3" & Larger Meter Lines: A bypass line of equal or one size less than the domestic line shall be installed on all domestic meter services 3" or larger. Minimum bypass line size is 3".
- I. Meters: As purchased from Northern Kentucky Water District.
- J. Pressure Reducing Valves: On domestic lines, pressure reducing valve will be required to be installed when the static system pressures is at or above 125 psi. They will be installed before the meter and are installed to protect the meter only. The District will not be liable for any damage due to pressure conditions caused by or arising out of the failure or defective condition of such pressure regulator or for damage that may occur through the installation, maintenance, or use of such equipment. Pressure reducing valves shall be installed at least 5 pipe diameters away from the meter. Cla-Val Model 690-48 shall be installed on 3" and larger lines. This may also include electronic devices, sight gauge, or any other such devices per District requirements. 0 thru 300 psi gauges shall be provided on the inlet and outlet sides of the pressure reducing valve.

- K. Back flow Prevention Assembly: All assemblies shall be listed and approved by the Foundation for Cross-Connection Control Research, University of Southern California (F.C.C.C.R.,U.S.C.) and the District. The testable assembly consists of the back flow prevention unit and two approved shut-off valves. Valves shall be full port ball valves for 2" and smaller and outside stem and yoke, resilient wedge, left hand open, gate valves for 3" and larger. Assemblies shall be delivered completely assembled by the original manufacturer with all components as approved by F.C.C.C.R.,U.S.C. The assembly shall not be separated or altered in anyway. The type of back flow prevention assembly to be installed shall be determined by the N.K.W.D. (see Back flow Prevention Device Assembly Standard Drawings Figure II-a for general guidelines). All approved back flow devices shall be tested and certified that it works properly after system activation. Special permission must be obtained from the District to install a reduced pressure back flow prevention assembly in a pit.


- L. Booster Pumps: Booster pumps 3" and larger installed on water lines shall be equipped with a Pump Suction Control Valve and/or a Low Pressure Cut-off Device which is designed to modulate the pump discharge or shut-off the booster pump when the pressure on the suction-side of the pump drops to 20 psi.

These devices shall be designed to prevent water hammer to the public water system. Pump Suction Control Valve and/or a Low Pressure Cut-off Device shall be inspected and tested for proper operation at the time of installation and at least annually thereafter. The property owner shall maintain a complete record of all test, inspections and repairs to the devices. The devices shall not be bypassed, made inoperative, or removed without authorization from the District.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Pipe Laying: Conforming to AWWA Standard C600. Maintain a minimum pipe cover of 3'-0" with continuous pipe support for entire length. All underground piping and appurtenances shall be installed according to appropriate sections of District's "Standard Specifications & Drawings or the Installation of Water Mains".
- B. Pit Components: Adequately supported by solid concrete blocks or supports set on the floor slab. 2" or smaller domestic service lines may be supported by brackets mounted on the pit wall.
- C. Anchorage: Inlet valves on 3" or larger piping shall be securely anchored to the pit wall when piping is sleeved through the wall. Additional rodding may be required at the discretion of the District.
- D. Disinfection: The interior of all surfaces in contact with the potable water system, tapping sleeve, valves, couplings and pipe shall be swabbed with a 5 % hypochlorite solution prior to installation.
- E. Valve Box Protection: The valve box over the tapping sleeve if located outside of a hard paved area shall have a minimum 2'x2'x4" square pad cast around the lid. Refer to standard drawing No. 105.
- F. Flushing of Mains: Lines shall be flushed at a rate 2.5 ft/s.

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| BY DATE | | | | |
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| N. KY. WATER DISTRICT | | PIPING SPECIFICATIONS FOR PIT CONSTRUCTION | | |
| DRAWN BY: SAR | | | | |
| APPROVED:  | | | | |
| DATE: 2/1/2021 | | | | |
| STANDARD DRAWING NO: 203 | | | | |