

<p>VIRGINIA- AMERICAN WATER COMPANY MATERIAL SPECIFICATIONS</p>	<p>Date: February 22, 2023</p>
<p>Item</p>	<p>Authorized Manufacturer</p>
<p><b>DUCTILE IRON PIPE (AWWA C151/A21.51)</b></p> <ul style="list-style-type: none"> <li>• Double coated cement lining with paint seal coat</li> <li>• Tar coated on outside</li> <li>• Press-on joint (NO MJ PIPE)</li> <li>• Thickness Class 52 for 4"- 16" under normal laying conditions</li> <li>• All buried ductile iron pipe &amp; fittings shall be polywrap encased. PolyWrap encasement (AWWA-C105), blue color, seamless 12mil thick high density cross laminated</li> </ul>	<ul style="list-style-type: none"> <li>• United States Pipe and Foundry</li> <li>• Griffin Pipe Products, Inc.</li> <li>• American (ACI PCO)</li> <li>• McWane, Inc.</li> </ul>
<p><b>DUCTILE IRON FITTINGS</b></p> <ul style="list-style-type: none"> <li>• Compact Ductile Iron Fittings AWWA C153/A21.53</li> <li>• Double thickness cement lining with paint seal coat</li> <li>• Tar coated on outside</li> <li>• 350 PSI working pressure</li> <li>• Mechanical joint (ALL MJ)</li> </ul>	<ul style="list-style-type: none"> <li>• United States Pipe and Foundry</li> <li>• American (ACIPCO)</li> <li>• McWane, Inc.</li> </ul>
<p><b>GATE VALVES 2"- 12" AWWA C509</b></p> <ul style="list-style-type: none"> <li>• Resilient-seated</li> <li>• Iron body suitable for buried service, Epoxy coated AWWA C550</li> <li>• 2" square operating nut</li> <li>• Open left (Alex &amp; PrinceWilliam District). *contact local engineer for other districts.</li> <li>• Non-rising stem with double O-Ring stem seal</li> <li>• 200 PSI working pressure and 400 PSI test pressure</li> <li>• 4"-12" valves: Mechanical joint</li> <li>• 2" valve: Screw Joint</li> </ul>	<ul style="list-style-type: none"> <li>• Mueller Co. MJ Gave Valve: Muller #A2360 MJ Tapping Sleeve: Muller #H615 MJ Tapping Valve: Muller #T2360-16-LN</li> <li>• American Flow Control MJ Tapping Sleeve: Series 2800-C</li> </ul>
<p><b>BUTTERFLY VALVES 16"- 24" AWWA C504</b></p> <ul style="list-style-type: none"> <li>• Rubber seated</li> <li>• Iron body suitable for buried service</li> <li>• Manual operator with 2" square operating nut</li> <li>• Class 150</li> <li>• Mechanical joint</li> </ul>	<ul style="list-style-type: none"> <li>• Henry Pratt Co.</li> <li>• Dezurik</li> </ul>
<p><b>FTRE HYDRANTS AWWA C502</b></p> <ul style="list-style-type: none"> <li>• Mueller Super Centurion 250</li> <li>• 5 1/4" valve with 6" mechanical joint inlet</li> <li>• 4 1/2 feet bury</li> <li>• Two 2 1/2" nozzles with 7 1/2 threads per inch</li> <li>• Prince William County: One 4 1/2" pumper nozzle with National Standard threads</li> <li>• Alexandria City: One 4" pumper nozzle with National Standard threads</li> <li>• 1 1/2" pentagon operating nut, open left</li> </ul>	<ul style="list-style-type: none"> <li>• Mueller Co. Dale City: Mueller #A423-500-087 Alexandria City: Mueller #A423-500-100 Other district: contact local engineer</li> </ul>
<p><b>VALVE BOXES</b></p> <ul style="list-style-type: none"> <li>• Cast iron, slide type adjustment, with "WATER" on the lid</li> <li>• 5 1/4" x 60" two piece with flared base</li> </ul>	<p>Bingham &amp; Taylor; Mueller Handley Ind; A.Y.McDo nald Quality Water Products; Clay &amp; Bailey</p>
<p><b>WATER FACILITY MISCELLANEOUS MATERIALS</b></p> <ul style="list-style-type: none"> <li>• Pennatex: food grade adhesive, either FORM-A-GASKET No.2 Sealant or Clear RTV Silicone Adhesive</li> <li>• Pipe Soap: Nontoxic vegetable soap, such as Tyton Joint Lubricant or Super Bell-Tite Lubricant</li> <li>• Chlorine tablets: Olin Pulsar CCH Tablets, 5G size, available chlorine - 65% (Calcium Hypochlorite)</li> <li>• Pipe Joint Compound: Nontoxic for water, Harvey's TFE Paste w/ Teflon or Rectorseal T Plus 2</li> <li>• Asphalt Coating: Koppers #50 Coal Tar or Orion H5-2 by Triple G Coatings Inc.</li> <li>• Concrete: 3000 PSI @ 28 days ASTM C-94, Slump 3"- 5"</li> <li>• All copper tube shall be Type K. All copper and brass fittings shall be lead free.</li> </ul>	

**DALE CITY SEWER PIPE (GRAVITY):** refer to PWCSA Utility Standard Manual 2021 Edition: Chapter 5.5

- Pipe & fittings:
  - Polyvinyl Chloride (PVC) C-900: meet AWWA C-900
  - DR rating as table below.
  - All joints shall be standard "Push-on" joints.
  - No pipe deflection is permitted in the joints or pipe.
  - Joints meet ASTM D-3139
  - Elastomeric Seals (Gaskets) meet ASTM F477.

The Applicant shall not design sanitary sewer mains at depths greater than the depths shown in Table 5-3.

**TABLE 5-3: Allowable Depth of Cover**

Pipe Diameter	Depth (ft)	
	ANSI/AWWA C900 PVC <sup>a</sup>	
	DR25	DR14
8	18	25
10	18	25
12	18	25
14	18	25
15	—	—
16	18	25
18	18	25
20	18	25
21	—	—
24	18	—
27	—	—
30	18	—

Applicant shall provide design calculations for pipe designed at depths greater than values shown in this table.

- PVC Fittings
  - meet ASTM D1784 and AWWA C907
  - Polyvinyl Chloride (PVC) C-900: meet AWWA C-900
  - Class 150, White Color

**Approved Manufacture:**

- Harco