

## 5.3 APPROVED MATERIALS AND MANUFACTURERS - WATER

### 5.3.01 General

- A. This Section lists the acceptable materials and manufacturers for the pipes, valves, hydrants, fittings, and other appurtenances which must be provided when constructing public water systems in Goochland County, Virginia.
- B. Shop drawings must be submitted for all products to be supplied.

### 5.3.02 Underground Pipe

- A. Ductile Iron Pipe
  - 1. American Ductile Iron Pipe
  - 2. McWane Ductile
  - 3. U.S. Pipe & Foundry
  - 4. Griffin
- B. Ductile Iron Restrained Joint Pipe
  - 1. Griffin Snap Lock
  - 2. TR Flex
  - 3. American Ductile Flex Ring
- C. Polyvinylchloride (PVC) Pipe
  - 1. Diamond Plastics Corporation
  - 2. IPEX, Inc.
  - 3. North American Pipe Corporation
  - 4. National Pipe & Plastics, Inc.
- D. Polyethylene Pipe
  - 1. Flying W Plastics
  - 2. ISCO by A.H. McElroy, Inc.
  - 3. AGRU America, Inc.
  - 4. JM Eagle
  - 5. W.L. Plastics
- E. Copper Tubing
  - 1. Cambridge Lee Industries
  - 2. CERRO Flow Products

3. Kobe Wieland Copper Products
4. Mueller Brass Company
5. Wolverine Tube

### 5.3.03 Underground Fittings

#### A. Ductile Iron Mechanical Joint Fittings for PVC and DI pipe

1. The Harrington Corporation (HARCO)
2. SIGMA Corporation
3. Star Pipe Products, Inc.
4. Tyler Union
5. U.S. Pipe & Foundry Company

#### B. Polyethylene Pipe Fittings

1. Butt Fusion Fittings:
  - a. ISCO
  - b. AGRU
  - c. JM Eagle
  - d. Elofit
  - e. Integrifuse
2. Electro-fusion Fittings:
  - a. The Harrington Corporation (HARCO)
  - b. Friatec as manufactured by IPEX
  - c. Elofit
  - d. Integrifuse

#### C. Thrust Restraint

1. Restrained joint retainer glands for fittings, plugs, caps, tees, and bends with Ductile Iron Pipe
  - a. EBAA Iron Sales, Inc. - Megalug Series 1100
  - b. SIGMA – One Lok SLD
  - c. Star Pipe Products – Stargrip Series 3000
2. Ductile iron bell and spigot pipe joint restraints
  - a. EBAA Iron Sales, Inc. – Megalug Series
  - b. SIGMA – One Lok
  - c. Star Pipe Products – Stargrip Series 3100P
  - d. U.S. Pipe – Field Lok 350 gaskets may be used in lieu of other mechanical joint restraints.
3. Restrained joint retainer glands for fittings, plugs, caps, tees, and bends

with PVC Pipe

- a. EBAA Iron Sales, Inc. - Megalug Series 2000
  - b. SIGMA – One Lok SLC
  - c. Star Pipe Products – Stargrip Series 4000
4. PVC pipe bell and spigot joints
- a. EBAA Iron Sales, Inc. - Megalug Series 1500
  - b. SIGMA – One Lok
  - c. Star Pipe Products – Stargrip Series 4100P

#### 5.3.04 Above Ground or Exposed Piping

##### A. Ductile Iron Pipe

1. American Ductile Iron Pipe
2. Griffin Pipe Products
3. U.S. Pipe & Foundry

##### B. Ductile Iron Fittings

1. The Harrington Corporation (HARCO)
2. SIGMA Corporation
3. Star Pipe Products, Inc.
4. U.S. Pipe & Foundry Company

##### C. Flange Adaptors:

1. EBAA Iron Sales, Inc. – 2100 Megaflange
2. JCM model 301R

#### 5.3.05 Pipe Insulation and Heat Tracing

##### A. Pipe Insulation

1. Johns Manville Micro-Lok with AP-T Plus vapor retarder or approved equal.

##### B. Heat Tracing

1. Electric heat tracing systems and components shall be as manufactured by Chromalox or approved equal.

#### 5.3.06 Temporary Above Ground Pipe and Fittings

- A. Pipe and fittings shall be Bauer QD pipe and fittings or approved equal.

### 5.3.07 Gate Valves

- A. Gate valves 3 through 12 inches
  - 1. Mueller series 2360
  - 2. Kennedy series KS-RW
  - 3. M & H Valve Company series 7000 or approved equal.
- B. Gate valves 14 through 24 inches
  - 1. Mueller series 2361
  - 2. Kennedy series KS-RW
  - 3. M & H Valve Company series 7000 or approved equal.
- C. Buried gate valves 2 inches in size
  - 1. Muller series 2360 or approved equal.
- D. Above ground gate valves 2 inches and smaller
  - 1. Crane Figure 431UB or approved equal.

### 5.3.08 Butterfly Valves

- A. Butterfly Valves 16 inches and larger.
  - 1. Mueller Lineseal XP
  - 2. Kennedy series 4500
  - 3. M & H CL250

### 5.3.09 Ball Valves – Above Ground

- A. Ball valves 2 inches and smaller
  - 1. Crane figure 9201 (bronze body)
  - 2. Crane figure 9231 (stainless steel)

### 5.3.10 Check Valves

- A. Swing Check Valves
  - 1. 3 inch and larger:
    - a. APCO Series CVS 250
    - b. Val-Matic Series 7800

- c. Milliken Series 8501
  - 2. Smaller than 3 inches:
    - a. Crane figure 137 (bronze)
    - b. Crane Aloyco figure 49
- B. Silent check valves
  - 1. Golbe style silent check valves
    - a. Cla-Val 581 Series
    - b. APCO globe style series 600
    - c. Milliken series 821A

#### 5.3.11 Corporation Stops and Tapping Saddles for Underground Service

- A. Corporation stops
  - 1. Ford Ballcorp
  - 2. AY McDonald
- B. Tapping saddles
  - 1. Ford Style FC202
  - 2. Smith-Blair 317 Ductile Iron Service Saddle

#### 5.3.12 Above Ground or Exposed Taps

- A. Not used

#### 5.3.13 Valve Boxes

- A. Valve Boxes
  - 1. Bingham and Taylor
  - 2. Tyler Union
  - 3. Capitol Foundry
  - 4. Star Pipe
  - 5. SIGMA

#### 5.3.14 Combination Air Valves

- A. 1-inch size air release valves

1. APCO model 143C
2. Val-Matic model 201C.2
3. Cla-Val 36 Series
4. GA Industries Figure 945

B. 2-inch size air release

1. APCO model 145C
2. Val-Matic model 202C.2
3. Cla-Val 36 Series
4. GA Industries Figure 945

### 5.3.15 Reduced Pressure Zone (RPZ) Backflow Preventer

A. RPZ backflow preventer

1. Watts
2. Wilkins
3. Febco
4. Conbraco

### 5.3.16 Reduced Pressure Detector Assembly (RPDA) Backflow Preventer

A. RPDA backflow preventer

1. Watts
2. Wilkins
3. Febco
4. Conbraco

### 5.3.17 Double Check Detector Assembly (DCDA) Backflow Preventer

A. DCDA backflow preventer

1. Watts
2. Wilkins
3. Febco
4. Conbraco

### 5.3.18 Sample Taps

A. Threadless sample tap

1. Matco Norca

2. Kupferle

5.3.19 Sampling Stations

- A. Above Ground Sample Stations
  - 1. Kupferle Eclipse #88-SS
  - 2. Mueller Hydro-Guard with stainless steel piping components
- B. Below Ground Sampling Stations (where permitted)
  - 1. Mueller Hydro-Guard

5.3.20 Wall Sleeves

- A. Link-Seal as manufactured by Thunderline Corporation of Wayne, Michigan.

5.3.21 Flushing Hydrants

- A. 2-inch Main Guard Model #78 as manufactured by Kupferle Foundry Company
- B. 2-inch Aquarius “One-O-One” HH
- C. Mueller model A-411

5.3.22 Water Service Accessories

- A. Meter coppersettors for 5/8-inch thru 1-inch meters
  - 1. Ford series 270
  - 2. Mueller copper meter setter
  - 3. A.Y. McDonald series 727 & 728
- B. Meter coppersettors for all 1-½- thru 2 inch- meters
  - 1. Mueller 300 Ball Angle meter valve with setter B-2423
  - 2. A.Y. McDonald series 720
- C. Meter box
  - 1. Standard
    - a. SIGMA
  - 2. Meter box within paved drive location (may only be used with specific permission from DPU)
    - a. SIGMA

3. Meter box cover
  - a. SIGMA

#### 5.3.23 Hydraulic Operated Control Valves

- A. Hydraulic operated control valves, to include pressure reducing valves, pressure sustaining valves, altitude valves, pump control valves, surge relief valves, surge anticipator valves, flow control valves, or other similar-type hydraulically-controlled valves
  1. GA Industries
  2. Cla-Val

#### 5.3.24 Tapping sleeves

- A. Fabricated Stainless Steel Sleeves with Stainless Steel Bolts and Nuts
  1. Ford FAST (4"-30")
  2. J.C.M. Industries #432 ESS (4"-48")
  3. ROMAC SST III (4"-30")
  4. Smith Blair Model #662 (4"-30")

#### 5.3.25 Couplings

- A. Bolted, sleeve-type couplings, reducing or transition couplings, and flanged coupling adapters for above ground or exposed service
  1. Dresser Manufacturing Division of Dresser Industries
  2. Smith-Blair
  3. Ford Meter Box Company
  4. Cascade Waterworks Manufacturing Company (styles CRC and CRCA)

#### 5.3.26 Fire Hydrants

- A. Fire hydrants
  1. American Darling – Mark 73-5
  2. Clow Medallion
  3. Kennedy “K81D” (Dual rated AWWA/ULFM hydrant)
  4. M & H Style 929 Reliant
  5. Mueller Centurion A-421
  6. U.S. Pipe- Metropolitan 250 (Model 94)



- B. Fire hydrant paint
  - 1. Tnemec
  - 2. Rust-Oleum

#### 5.3.27 Tracer Wire

- A. Open Cut Direct Bury Tracer Wire
  - 1. Copperhead Industries – HS-1230 CCS
  - 2. Agave Wire Ltd – APHS-1201 High Strength CCS PE30
  - 3. Pro-Line Safety Products – PRO-TRACE 12 AWG HS-CCS-PE30
- B. Tracer Wire for HDD Installations
  - 1. Copperhead Industries – SoloShot 1045 EHS
  - 2. Agave Wire Ltd – BT-1001 Extra High Strength CCS
  - 3. Pro-Line Safety Products – PRO-TRACE HDD-CCS-PE45

#### 5.3.28 Connectors for Tracer Wire

- A. Wire Connectors for Direct Bury
  - 1. Copperhead Industries - SnakeBite
  - 2. Pro-Line Safety Products – PRO-TRACE TW
  - 3. Tracer Wire Technologies – Tracer-Lock Connector
- B. Wire Connectors for HDD Insallations
  - 1. Copperhead Industries - SC-PB-01
  - B.

#### 5.3.29 Tracer Wire Access Boxes

- A. 2 ½” shaft tracer wire access boxes
  - 1. P200 Test as manufactured by Bingham & Taylor

#### 5.3.30 Marking Tape

- A. 3.5 mil polyethylene tape, 3 inches in width, with a 14-gage metallic core
  - 1. Seton Safety and Identification
  - 2. Presco
  - 3. Pro-Line

### 5.3.31 Steel Casing Pipe

- A. No manufacturer specified

### 5.3.32 Pressure Gages

- A. Pressure Gages
  - 1. Ashcroft stainless steel case 1009

### 5.3.33 Pipe Supports

- A. Supports for pipes 2-½ inches and larger
  - 1. Standon Model S89 flange support
  - 2. Standon Model S96 cradle support
- B. Support for pipes 2 inches and smaller shall be manufactured by
  - 1. Unistrut Building Systems
  - 2. B-Line

### 5.3.34 Service Saddles

- A. Service saddles shall be as manufactured by
  - 1. Cascade
  - 2. Mueller
  - 3. Romac

END OF SECTION 5.3