

Searsport Water District Material Specifications

The Searsport Water District (District) reserves the right to accept or reject materials when in the best interests of the District. All items are required to be manufactured in the USA or Canada (North America).

NOTE: Any reference to a particular standard shall mean the latest revision.

1. BLANK FLANGES

250 lbs. Class 125 bolt hole (C115/A21.15). **Manufactured in North America.**

2. BRASS FITTINGS FOR TYPE "K" COPPER TUBING

3/4-inch through 2-inch brass fittings shall, **have a lead content as low as possible for the fitting in question. The vendor shall supply the District with the lead content of the fittings,** conforming to ANSI/AWWA C800 for type "K" soft copper shall be compression fitting on the copper end. **Manufactured in North America.**

A. BRASS GOODS (MISCELLANEOUS)

Shall be 125 lbs., brass shall, **have a lead content as low as possible for the fitting in question. The vendor shall supply the District with the lead content of the fittings,** with iron pipe threads when used for connecting water services. Items included are bushings, couplings, elbows, nipples, plugs, and tees. **Manufactured by Mueller.**

B. CORPORATION STOPS

1-inch shall, **have a lead content as low as possible for the fitting in question. The vendor shall supply the District with the lead content of the fittings,** ball valve type construction with inlet CC thread and compression pack joint on the outlet, heavy patterns, and conforming to AWWA/ANSI C800. **Manufactured by Mueller.**

1 1/2-inch and 2-inch shall, **have a lead content as low as possible for the fitting in question. The vendor shall supply the District with the lead content of the fittings,** with inlet iron pipe thread and compression pack joint on the outlet, heavy patterns, and conforming to AWWA/ANSI C800. **Manufactured by Mueller.**

C. CURB STOPS

Shall, **have a lead content as low as possible for the fitting in question. The vendor shall supply the District with the lead content of the fittings,** ball valve type, or approved equal with compression pack joints on either end. Open left, no drain, heavy patterns, and conforming to AWWA/ANSI C800. Curb stop shall be Model 300 valve with Mueller 110 Conductive Compression Connections for CTS. **Manufactured by Mueller.**

3. COPPER TUBING

Shall be type "K" soft copper (ASTM B88). **Manufactured in North America.**

4. COPPER METER SETTERS

Meter setters for 5/8 x 5/8-inch and 3/4-inch meters shall have compression pack joint connections on the inlet and outlet ends suitable for 3/4-inch copper tubing. Meter setters for one-inch meters shall have female iron pipe thread connections on the inlet and outlet ends. Two meter gaskets shall be supplied with each horn. Meter setters must be purchased from the District and installed by Contractor according to District Specifications.

5. **DUC LUGS AND TIE BOLTS**

Tie bolts with hexagonal nuts shall be Star Supply Corp. or approved equal. Duc lug bolts shall be Star Supply Corp. or approved equal. **Manufactured in North America.**

6. **FLANGED ADAPTERS**

Flanged adapter couplings shall have either a ductile iron ASTM A536 or gray iron ASTM A126 body. Bolt circle, bolt size, and spacing shall conform to ANSI 150 lbs. flange drilling. Grade 30 gasket with either a malleable iron ASTM A47 or ductile iron ASTM A536 follower. Anchor studs shall be installed for a minimum working pressure of 125 psi. Bolts and nuts shall be ductile iron ASTM A536, Rockwell 912, or approved equal. **Manufactured in North America.**

7. **HYDRANTS**

Shall be compression type conforming to AWWA/ANSI C502. Hydrants approved are Mueller Super Centurion 250 meeting the following requirements:

1. Break flange construction. Flange to be located 6" above finish grade.
2. 5 1/4-inch main valve
3. Non self-draining - drain hole plugged
4. Two 2 1/2 inch hose nozzles (National Standard Thread)
5. One 4 1/2 inch pumper nozzle (National Standard Thread)
6. Inlet connection - mechanical joint
7. Inlet connection size - six inch
8. Direction of opening - left
9. Operating nut - 1 1/2 inch pentagon pattern (National Standard)
10. Trench depth - as specified
11. Hydrant color – red
12. Packing - "O" ring
13. Nozzle cap chains
14. Stainless steel nuts and bolts
15. Supplied with mechanical joint accessories, high strength low alloy steel bolts and heavy hexagon nuts conforming to ANSI/AWWA C111/A 21.11.
16. Hydrant lengths shall be field determined based on depth of main at proposed location of hydrant.

Hydrants shall be given a primer coat of paint and an enamel finish coat, both of a type specified for metal finishes. Hydrants shall be red. Hydrant extensions shall only be allowed where the overall length of the hydrant exceeds 8'-6". All hydrant extensions shall be manufactured by Mueller.

8. **HYDRANT TEE'S**

Mechanical joint Hydrant tee's shall be used with all hydrants and conform to AWWA C-153, C-111, and C-104. Tie rodding will not be allowed. **Manufactured in North America.**

9. **PIPE**

Pipe shall be concrete lined ductile iron Class 52 for all sizes.

Ductile iron: (2-inch diameter and larger). Pipe shall be ductile iron centrifugally cast with push-on joints conforming to AWWA/ANSI C151/A21.51. Pipe shall be Class 52, double cement lined and bituminous coated conforming to AWWA/ANSI C104/A21.4. Ten (10) percent of the pipe shall be suitable for field cutting and marked as such. In areas of corrosive soils, as determined by District, Contractor shall provide 8ml polyethylene encasement of ductile iron pipe in the field.

In areas of hydrocarbon contaminated soils, as determined by District, Contractor shall provide hydrocarbon resistant gaskets. **Manufactured in North America.**

10. PIPE COUPLINGS

Sleeve shall be ductile iron ASTM A536, and shall have smooth inside taper for uniform gasket seating. Gasket shall be grade 30. Follower flanges shall be ductile cast iron ASTM A536. Bolts shall be high strength low alloy steel with heavy, semi-finished hexagon nuts to ANSI/AWWA C111/A21.11 standards. **OD range shall be approved by the Searsport Water District.** Mueller coupling or approved equal. **Manufactured in North America.**

11. PIPE FITTINGS

Pipe fittings shall have mechanical joint ends conforming to ANSI/AWWA C1/A21.11, double cement lining and bituminous coating conforming to ANSI/AWWA C104.A21.4.

Fittings shall be supplied with mechanical joint accessories unless specified others, with high strength low alloy steel bolts and heavy hexagon nuts conforming to ANSI/AWWA C111.A21.11.

Long body fittings shall be Class 350 ductile iron conforming to ANSI/AWWA C110/A21.10.

Compact body fittings shall be Class 350 ductile iron conforming to ANSI/AWWA C153/A21.53.

Manufactured in North America.

12. REPAIR SLEEVES

Shall have single band of 304 stainless steel with malleable iron ASTM A47 grade 32510 lugs, grade 30 gasket and 316 stainless steel bolts and nuts conforming to bolt and nut dimensions included in AWWA/ANSI C111.A.21.11. **Manufactured in North America.**

13. RETAINER GLANDS

Mechanical joint retainer glands shall be Mega lug series 1100 heavy duty ductile iron body, constructed according to ASTM A536 65-45-12 ductile iron for use on water mains and tested in accordance with AWWA C600.

Mega lugs are not a replacement for thrust blocks. **Manufactured in North America.**

14. SERVICE BOXES, COVERS, AND RODS

Service boxes shall be Erie style with arch pattern, one-inch in diameter, constructed from SC #40 Black Steel, adjustable in length from six feet to seven feet, and have 5/8-diameter stainless steel rod 36-inches in length with stainless pins. One-inch caps shall be extra heavy with brass pentagon plug and coarse "rope" thread to fit a one-inch Erie style box. All caps shall have the word "WATER" clearly cast in top and be constructed of a magnetic material. **Manufactured in North America.**

15. SERVICE BOX FOOT PIECE

Service box foot pieces shall be cast iron and fit all standard one-inch Erie style service boxes and fit over curb stops larger than one inch. **Manufactured in North America.**

16. SERVICE SADDLES

Shall be constructed of ductile iron with epoxy or nylon coating and with stainless steel bands, nuts, and washers. Body casting shall be wrap-around design of high tensile ductile iron conforming to ASTM A536. Gasket shall be of 3 1/2-inch diameter and constructed of Buna-N, grooved to conform to pipe surface and bonded in place for easy installation. Finish shall be NCA-1477 nylon fused coat, 10-12 mils thickness, with approximate dielectric strength of 1,000 V/mil or epoxy coated. Ford 202N or approved equal. **Manufactured in North America.**

17. **TAPPING SLEEVES**

Mechanical joint ductile iron tapping sleeve: shall have mechanical joint end seals conforming to AWWA C111, with outlet flange conforming to AWWA C207, class D with ANSI 150 lb. drilling recessed for tapping valve. Tapping sleeve shall fit AWWA standard of 1908, Class AB-CD cast iron pipe. Manufactured by Mueller, or approved equal. Acceptable for cast iron and ductile iron pipe.

Gasket material shall be grade 30 or approved equal, and shall have a smooth inside taper for uniform seating. Acceptable for ductile iron pipe. **Manufactured in North America.**

18. **TAPPING VALVES**

Tapping valves shall be epoxy coated with 200 psi working pressure, non-rising stem, "O" ring, open left, flanged end conforming to AWWA C207, Class D, ANSI 150 lb. drilling, mechanical joint end conforming to AWWA C111, two-inch ductile iron operating nut with stainless steel bolt, metropolitan design conforming to AWWA C500 or resilient seated gate valve conforming to ANSI/AWWA C509, manufactured by Waterous Series 500, Mueller A2360, or approved equal.

Tapping valves shall be supplied with mechanical joint accessories, and 316 stainless steel bolts and nuts conforming to bolt and nut dimensions included in ANSI/AWWA C111/A21.11.

Tapping valve seal plates and bonnets shall have 316 stainless steel bolts and nuts. **Manufactured in North America.**

19. **VALVES**

Valves shall be epoxy coated and supplied with mechanical joint accessories, 316 stainless steel bolts and nuts conforming to bolt and nut dimensions included in ANSI/AWWA C111.A21.11.

Valve seal plate and bonnet shall have 316 stainless steel bolts and nuts.

Butterfly Valve: (Where approved by Utility). Shall be a valve with a steady state working pressure of 150 psig, and a maximum steady-state differential pressure of 150 psi, open left, mechanical joint ends, non-rising stem, two-inch ductile iron operating nut with 316 stainless steel bolt, conforming to AWWA/ANSI C504. Manufactured by Mueller or approved equal.

Gate Valve: Shall be 200 psi working pressure, non-rising stem, "O" ring, open left, mechanical joint, two-inch ductile iron operating nut with 316 stainless steel bolt, resilient seated gate valve conforming to ANSI/AWWA C509, manufactured by Waterous Series 500, Mueller A 2360, or approved equal. **Manufactured in North America.**

20. **VALVE BOXES**

Shall be cast iron, two piece, sliding type with a non-flange top section, no inside stops, and an outside shaft diameter of six inches. Bottom section shall be belled base. Length of top section shall be minimum of 24 inches. Middle and bottom section length as needed. Boxes shall have the word "WATER" clearly cast into the cover. **Manufactured in North America.**