DOMESTIC WATER

A. COPPER TUBING

a. 1-inch copper tubing, K-soft
   Approved Manufacturers:
   1) Cerro
   2) Mueller
   3) Halstead
   4) Cambridge Lee

b. Factory Coated Copper Tubing
   Approved Manufacturer:
   1) Kamco Aqua Shield

c. 1½-inch or 2-inch Copper Tubing, Rigid Pipe (Type “K” Soft in 20’ lengths)
   Approved Manufacturers:
   1) Cerro
   2) Mueller
   3) Halstead
   4) Cambridge Lee

B. SERVICE LINE FITTINGS

a. Corporation Stops
   1-, 1½- and 2-inch; IPTx110 Compression
   Approved Manufacturers:
   1) Mueller #B-25028
   2) AY McDonald #4704BQ
   3) Jones #J1935SG
   4) Cambridge Brass #301NL series
   5) Ford #FB1100-Q-NL
b. **Angle Meter Stops**

1-inch; 110 Compression x Swivel

Approved Manufacturers:
1) Mueller #B-24258-1 (no lip on swivel)
2) Ford #BA43-444WQ
3) Jones #J1963WSG
4) AY McDonald #4602BQ
5) Cambridge #210NL-H4T4

1½-inch; 110 Compression x Flange

Approved Manufacturers:
1) Mueller #B-24276
2) Ford #BFA43-666WQ
3) Jones #J1975WSG
4) AY McDonald #4602BQ
5) Cambridge #210NL-H6MF6

2-inch; 110 Compression x Flange

Approved Manufacturers:
1) Mueller #B-24276
2) Ford #BFA43-777WQ
3) Jones #J1975WSG
4) AY McDonald #4602BQ
5) Cambridge #210NL-H7MF7

c. **Ball Valves, Brass, for Meters Only**

1-inch, 1½-inch and 2-inch (all to be lever handle, with no lip on swivel)

Approved Manufacturers:
1) Mueller B-24351-1
2) AY McDonald #6101 MWHB3
3) Cambridge # 212NL Series
4) Ford #13-444W-NL w/HB24S (1”), #13-666W-NL w/HB67S (1 ½”), #13-777W-NL w/HB67S (2”)

d. Service Saddles
   For 12-inch pipe and smaller, copper alloy body and double strapped bronze
   Approved Manufacturers:
   1) Jones J-979
   2) Mueller BR2-B
   3) Ford 202B
   4) Smith-Blair 232
   5) Cambridge Brass 810

   For 18-inch pipe and larger, ductile iron service saddle epoxy coated or copper
   alloy body with triple stainless steel straps or extra wide single strapped stainless
   steel.
   Approved Manufacturers:
   1) Muller DR2S
   2) Smith-Blair 366
   3) Romac 202NS
   4) Ford
   5) Power Seal

e. Straight Couplings
   Approved Manufacturers:
   1-inch; 110 Compression
   1) Mueller H-15403
   2) Jones J609SG
   3) Cambridge 119NL-H4H4

   1½-inch; 110 Compression
   1) Mueller H-15403
   2) Jones J2609SG
   3) Cambridge #119NL-H6H6
2-inch; 110 Compression
Approved Manufacturers:
1) Mueller #H-15403
2) Jones #J2609SG
3) Cambridge #119NL-H7H7

C. METER BOXES
a. Meter Boxes for 1-inch, 1 1/2-inch, and 2-inch Service Lines (Nontraffic Areas)
   Approved Manufacturers:
   1) DFW Plastics Inc.
      a) Lid: DFW1640C-4 914P “CVWD” LID
      b) Box: DFW1640C4-12-BODY
   b) Meter Boxes for 1-inch, 1½-inch and 2-inch Lines (Traffic Areas)
      Approved Manufacturers:
      1) DFW Plastics Inc.
         a) Lid: DFW1640C-4 “CVWD” LID
         b) Box: DFW1640C4-12-BODY

D. FIRE HYDRANTS
a. Dry Barrel
   Approved Manufacturers:
   1) Muller A423
   2) Mc Wane - Kennedy K-81A & Clow F-2545
   3) American Darling (AFC) #B-84-B

b. Wet Barrel-Bronze Fire Hydrants
   Approved Manufacturers:
   1) James Jones #J-3765
   2) Mc Wane/Clow #2060
   3) AVK 2464
c. *Wet Barrel-Ductile Iron Fire Hydrants*
   Approved Manufacturers:
   1) James Jones #J4060
   2) Mc Wane/Clow #860
   3) AVK 24/90

d. *Wet Barrel - Check Valve Fire Hydrants*
   Approved Manufacturers:
   1) Mc Wane/Clow #40
   2) James Jones J-5000

E. **AIR AND VACUUM RELIEF VALVES AND FITTINGS**

a. *1-inch Air Relief Valves*
   Approved Manufacturers:
   1) Crispin Model #UL10
   2) Vent-O-Mat Model 025RBX2521
   3) ARI Model D-040-1"-P Threaded

b. *2-inch Air Relief Valves*
   Approved Manufacturers:
   1) *Crispin Model #UL20*
   2) Vent-O-Mat *Model 050RBX2521*
   3) ARI Model D-40-2"-P Threaded

c. *Copper Tubing Elbows 1-inch or 2-inch Compression x FIPT*
   Approved Manufacturers:
   1) Mueller IP H15533
   2) Jones J2621SG
   3) Ford L14-44-Q
   4) AY McDonald 4779Q
   5) Cambridge 105NL Series
d. Copper Tubing Elbows 1-inch or 2-inch Compression x Compression
   Approved Manufacturers:
   1) Mueller H-15526
   2) Jones J26115G
   3) Ford L44-77-Q
   4) AY McDonald 4761Q
   5) Cambridge 105NL Series

e. Copper Tubing Ball Valve 1-inch or 2-inch
   Approved Manufacturers:
   1) Mueller B25209
   2) Jones J1949S6
   3) Cambridge Brass 212NL – F4T4H (1 inch); 212NL –F7MF7H (2 inch)

f. Copper Tubing –Corporation Stop; 1-inch or 2-inch IPT x 110 Compression
   Approved Manufacturers:
   1) Muller B-25028
   2) Jones J1935SG
   3) AY McDonald 46704BQ
   4) Cambridge Brass 301NL series

g. Air/Vac Covers
   Approved Manufacturers:
   1) Armorcast
      P6002001-XXX; 24-inch
      P6002002-XXX; 20-inch
      P6002003-XXX; 12-inch
2) Pipeline Products Advantage Series
   COAC-1624
   COAC-1830
   COAC-2030
   COAC-2430

   h. Threaded Red Brass Fittings
      1) Per ASTM B43 and containing a maximum of 0.25% lead

F. PIPE
   a. Ductile Iron Pipe
      Approved Manufacturers:
      1) U.S. Pipe
      2) Mc Wane/Pacific States
      3) American CI

   b. CML&CMC Steel Pipe
      1) Northwest Pipe Company
      2) Ameron Water Transmission

G. PIPE FITTINGS
   a. Flanged to Mechanical Joint Pipe adaptors (Ductile Iron)
      Approved Manufacturers:
      1) U.S. Pipe
      2) Tyler Union
      3) Star
      4) Sigma
      5) Pipeline Components, Inc. (PCI)
      6) SIP Industries
b. **Pipe Restraints - Tyton Joint Restraining Gaskets (18 inches or smaller)**

   Approved Manufacturers:
   
   1) U.S. Pipe - Field Lok Gaskets
   2) Pacific States - Sure Stop 350
   3) Romac – Piranha Restraint Gasket
   4) Tyler Union - Sure Stop 350

c. **Pipe Restraints - MJ Restraint Joints with wedge-action cleats**

   Approved Manufacturers:
   
   1) Ebba Iron - Megalug
   2) Ford - Uniflange
   3) Star – Stargrip and 3000 series for DIP and 4000 series for PVC
   4) Romac - Romagrip
   5) Sigma – Onelok
   6) Tyler Union – TUF Grip Series 1500
   7) SIP Industries - EZ Grip

d. **Pipe Restraints - Manufactured Self Restraining Joints**

   Approved Manufacturers:
   
   1) U.S. Pipe - TR Flex
   2) Mc Wane/Pacific States – Thrust Lock
   3) Romac – Alpha Restraint Coupling
   4) Tyler Union - TUF Grip Series 200

e. **Flexible Expansion Joints**

   Approved Manufacturers:
   
   1) EBBA Flex Tend #408F21 (8-inch only)
   2) Star #SFPJ5008
   3) Romac – Flexijoint
f. Repair Coupling
   Approved Manufacturers:
   1) PowerSeal – Power Clamp, 3506 Powermax Cast Coupling, and 3490 Power Sleeve
   2) Smith Blair – Top bolt repair coupling
   3) Romac – Macro Coupling, 501 and XR501 Coupling

g. Flange Gaskets
   Approved Manufacturers:
   1) 1/16-inch Thick Laminated Nonasbestos Fiber, Cranite

h. Victaulic couplings and fitting for grooved end pipe
   Approved Manufacturers:
   1) Victaulic QuickVic Couplings 107N and 117N
   2) AGS W07 and W77 Couplings

H. VALVES

a. Gate Valves (Ductile Iron Body with Resilient Seal)
   Approved Manufacturers:
   1) American Flow 2500-1
   2) Mueller 2360 Series
   3) Clow F61
   4) American AVK Series 45 & 55

b. Butterfly Valves (Ductile Iron Body)
   Approved Manufacturers:
   1) Mueller Lineseal III Product line
   2) Dezurik
   3) Crispin
   4) Victaulic Vic-300 Master Seal 761, AGS Vic-300 W761, and AGS W709
a. *Single Check Detector Valves*
   Approved Manufacturers:
   1) Hersey EDC III
   2) Hersey EDC IV

b. *Reduced Pressure Principle Valves*
   Approved Manufacturers:
   1) Apollo Valves 1" RPLF 4A
   2) Apollo Valves 2" RPLF 4A
   3) Apollo Valves RPDA 4ALF
   4) Wilkins Backflow -1" 975XL-2
   5) Wilkins Backflow – 2" 975XL-2

c. *Double Check Valves*
   Approved Manufacturers:
   1) Wilkins Backflow -1" 950XL-2
   2) Wilkins Backflow -2" 950XL-2
   3) Apollo Valves - 1" DCLF 4A
   4) Apollo Valves - 2" DCLF 4A
   5) Apollo Valves DCDA 4ALF - 4"-12"
   6) Apollo Valves DCDA 4nALF - 4"-12"

d. *Valve Locking Devices (for Gate Valves)*
   Approved Manufacturers:
   1) Protech (for gate valves)
       A1200
       A2400
       A3600
       A4800
2) Protech (for butterfly valves)
   B1200
   B2400
   B3600
   B4800

e. Valve Wells
   Valve Well Triangular Lid
   Approved Manufacturers:
   1) Bingham and Taylor Mark V –
      a. Base - GRE10RTF
      b. Triangular Lid Water - CUL10LTCVWD-W
      c. Triangular Lid Reclaimed Water - CUL10LTCVWD-RW
      d. Triangular Lid Locking – I10LTIRWD-RW
   2) Brooks
   3) J&R Concrete #V4-T
   4) South Bay Foundry #4-T

f. Valve Well
   1) 8-inch PVC C-900 CL-150

g. Protective Coatings
   Approved Manufacturers:
   1) Polyethylene Wrap – V-Bio Enhanced
   2) Cement Mortar Coatings - Class E mortar with Type V cement
   3) Other Coatings - NO-OX-ID manufactured by SanChem, Inc.
   4) Pipe Tape -10 mil pipe-wrap tape

I. CONCRETE VAULTS
   a. 200 Series Vaults:
      Approved Manufacturers:
1) Jensens #K3048-FH45-27T (BR200-CVWD2)
2) J&R Concrete #3500-IW

b. 400 Series Vaults:
   Approved Manufacturers:
   1) Jensens #K3660-FH45-27T (BR400-CVW2)
   2) J&R Concrete #2640-IW

c. 500 Series Vaults:
   Approved Manufacturers:
   1) Jensens #K466-FH45-27T (BR500-CVW2)
   2) J&R Concrete #4660-IW

J. PIPE SPACERS
   Approved Manufacturers:
   1) Cascade CCS series
   2) CCS
   3) BWM

K. UTILITY MARKER POSTS
   Approved Manufacturers:
   1) Flexstake, Inc. (No. EZWC206W – white with reflective strip)

L. CONSTRUCTION METERS
   Approved Manufacturers:
   1) Sensus #125
   2) Performance Meter
   3) Badger

M. Ductile Iron Pipe Coating
   Approved Manufacturers:
   1) US Pipe V-Bio Poly Wrap
SANITATION (WASTEWATER)

A. PIPELINE PRODUCTS
   Approved Manufacturers:
   1) Clay Pipe
   2) Cast Fiberglass Reinforced Pipe - Hobas pipes in 18”-126”
   3) 8 through 12-inch diameter PVC – C900 DR25 CL165
      a.) JM Eagle
      b.) North American Pipe
      c.) Diamond Plastics Corporation
   4) 18 through 42 inch diameter PVC – C905 DR25 CL165
      a.) JM Eagle
      b.) North American Pipe
      c.) Diamond Plastics Corporation

B. ECCENTRIC PLUG VALVES
   Approved Manufacturers:
   1) Dezuric Series 100
   2) Pratt or Mueller
   3) Crispin K-Flo Model Number:
      800 Series 2-1/2” – 12”
      900 Series 14” – 48”

C. AIR-VAC VALVES
   Approved Manufacturers
   1) Vent-O-Mat
   2) ARI – D-025 Model D-025TP02LP

D. CONCRETE VAULTS
   Approved Manufacturers
   1) Brooks Series 500 Quickset
E. WET WELL AND VAULT COATINGS

Approved Manufacturers:
1) Sancon Epoxy 100
2) Kopper's Bitumastic 300-M
3) Engard 463

F. POLY LINING

Approved Manufacturers:
1) Scancon Polyurethane 100
2) Cosmic Quick Seal CIPP

G. CLEAN-OUTS

Approved Manufacturers:
1) Alhambra A-1240

H. EPOXY COATING & LINING

Approved Manufacturers:
1) 3M Primer & Skotchkote 206N

I. MANHOLE RING AND COVER

Approved Manufacturers:
1) South Bay Foundry #1253/A1254 “CVWD SEWER”
2) Alhambra #A1254
3) Norfolk Casting #NC 253 CVWD ASTM A48
4) CL 35B

J. MID-RANGE PIPE LOCATORS

Approved Manufacturers
1) 3M Electrical Products Division
2) Scotchmark Market Locator (EMS) #1258
K. UTILITY MARKER POSTS

Approved Manufacturers
1) Flexstake, Inc. (No. EZWC206W – white with reflective strip)

IRRIGATION (Canal Water)

A. PIPELINE MATERIALS

Approved Materials

a. 8 through 12-inch diameter PVC – C900 DR25 CL 165 psi
   Approved Manufacturers:
   1) JM Eagle
   2) North American Pipe
   3) Diamond Plastics Corporation

b. 18 through 42 inch diameter PVC – C905 DR25 CL 165 psi
   Approved Manufacturers:
   1) JM Eagle
   2) North American Pipe
   3) Diamond Plastics Corporation

c. 8 – 12 inch diameter PVC – C909 CL 235 psi
   16 inch diameter PVC – C909 CL 165 psi
   Approved Manufacturers:
   1) JM Eagle

d. 42 inch diameter and greater – Ductile Iron Pipe
   Approved Manufacturers:
   1) U.S. Pipe
   2) Mc Wane
   3) American CI
B. FLOW METER

Approved Manufacturers
1) Water Specialties Model ML-04-D with Flow-Com Digital Register or McCrometer Model SW500 with Flow-Com Remote Read Digital Register
2) 150 psi flanged tube meter
3) CFS flow indicator
4) Acre-foot totalizer with remote mount kit

C. PLUG VALVE

Approved Manufacturers
1) Dezuric Series 100
2) Pratt or Mueller
3) Crispin K-Flo Model Number:
   800 Series 2-1/2” – 12”
   900 Series 14” – 48”

D. VAULTS

Approved Manufacturers
1) Jensen - K466-FH48-08TH precast water vault with spring assisted galvanized traffic cover.

E. PIPE CONNECTOR

Approved Manufacturers
1) Weko-Seal: An internal joint sealing technology used to eliminate infiltration/exfiltration in piping ranging in sizes from 18" through 96"
2) Joints Caulder Repair Coupling
3) Fernco Large Diameter Series Coupling

F. AIR-VAC VALVES

Approved Manufacturers
1) ARI – D-025 Model D-025TP02LP
2) Crispin Model #UL2c
3) Vent-O-Mat

G. UTILITY MARKER POSTS

Approved Manufacturers
1) Flexstake, Inc. (No. EZWC206W – white with reflective strip)

ELECTRICAL AND TELEMETRY

A. AUTOMATIC TRANSFER SWITCH (ATS)

Approved Manufacturers
1) Eaton

B. EMERGENCY ELECTRIC GENERATING SYSTEMS

Approved Manufacturers
1) Caterpillar
2) Cummins

C. MOTOR CONTROL CENTERS (MCC)

Approved Manufacturers
1) Allen Bradley
2) Eaton
3) Square D

D. VALVE ACTUATORS (MOV)

Approved Manufacturers
1) Auma
2) EIM
3) Rotork

E. PROGRAMABLE LOGIC CONTROLERS (PLC)

Approved Manufacturers
1) GE RX3i’s programmed in GE Proficy ladder logic
F. VARIABLE FREQUENCY DRIVES (VFD)

Approved Manufacturers

1) US Drives