

APPENDIX C

APPROVED MATERIALS LIST FOR POTABLE AND RECYCLED WATER FACILITIES

Item	Description	Manufacturer/Model
BACKFLOW PREVENTION ASSEMBLIES	Reduced Pressure Principal (RP) and Double Check Detector Assemblies (DCDA) for commercial installations and fire sprinkler systems.	List of Approved Backflow Prevention Assemblies, USC Foundation for Cross-Connection Control and Hydraulic Research, latest version
BOLTS AND NUTS, TYPE 316 SS	Hex-head machine, ASTM A193, Grade B8M bolts and ASTM A194, Grade 8M nuts	
BOLTS AND NUTS, A307	Hex-head machine, cadmium/zinc plated, ASTM A307, Grade A bolts and A307 2H heavy hex nuts	
BONDING AGENT, EPOXY	Epoxy resin-based bonding agent for bonding new mortar or concrete to existing concrete	Sika Sikadur 32 Hi-Mod
CASING END SEAL	Styrene butadiene rubber (SBR) sheet end seal, 1/4" thick. Use seamless end seals for new installations with stainless steel bands.	Advanced Products & Sys. Cascade Calpico Pipeline Seal & Insulator Powerseal Raychem
CASING SPACER	Stainless steel casing spacer, center restrained type with PVC liner and non-metallic anti-friction runners	Advanced Products & Sys. Cascade Waterworks Calpico, Inc. Pipeline Seal & Insulator Powerseal Raychem
CATHODIC TEST STATION BOX	Concrete body with ductile iron lid and lid ring. "CP TEST" shall be cast into the lid in 1" letters. For cathodic protection test stations, anode ground beds and insulated flange test stations.	Christy G5
CATHODIC WELDING	Exothermic weld kits for welding cathodic bond wires to steel pipelines	Cadweld, by Erico Products, Inc., Thermoweld by Continental Industries, Inc.
CHLORINE	Liquid (gas) or sodium hypochlorite solution. See Section 15041	
COATING, MASTIC	Cold applied coal tar or epoxy based single component, self-priming, heavy-duty protective exterior coating for buried concrete	Carboline Bitumastic 50 Devoe Devtar 5A Polykem 938 Tnemec HB Tnemecol 46-465, HB Tneme-Tar 46H-413
COATING, WATERPROOF	Epoxy resin based, cementitious, protective waterproofing for concrete.	Sika Top Seal 107 STO CR 241
COUPLING, C900 PVC, DEFLECTION	4" through 12" PVC for obtaining deflection only.	North American Specialty Products Fluid-Tite Romac Macro HP
COUPLING, C900 PVC CLOSURE OR REPAIR	4" through 12" solid PVC for closure or repair	North American Specialty Products Fluid-Tite
COUPLING, GROOVED	Use for above ground, ductile iron or steel pipe, restrained mechanical coupling joints, 4" or larger.	Grinnell #7001 Tyler 500 Vitaualic #44, #77
COUPLING, TRANSITION, FLEXIBLE	4" and larger steel or ductile iron construction for joining plain end pipe, epoxy coated with Type 304 or 316 stainless steel bolts and nuts. For use on AC, PVC, DI, or steel pipe	Ford FC1, FC2A, FC2W Romac 501, XR 501, Macro HP Smith-Blair 411, 413

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DISMANTLING JOINT	Liquid epoxy coating, NSF61 certified, restrained with tie rods, 150 psi working pressure.	Powerseal 3563 Romac DJ400
ELL – BURY	6" ductile iron bury ells, long radius, FLG x MJ/PO. Use short radius bury ells with District approval only.	Clow South Bay Foundry
ENCLOSURE – AIR/VACUUM VALVE	Enclosure for combination air-vacuum valve assembly, polyethylene. See "Valve Box" for below grade components. Color: Sandstone with blue color stripe (Potable) and purple color stripe (Recycled Water)	Pipeline Products: VCAS 1424 (2" valve) VCAS 1830 (4" valve) VCAS 2436 (6"-8" valves)
ENCLOSURE – WATER SAMPLE STATION	Enclosure for potable water sample station assembly, steel construction, blue epoxy powder coat finish.	Pipeline Products WTS-858
EPOXY ADHESIVE	High-modulus, low viscosity, epoxy resin based adhesive suitable for grouting bolts or dowels	Sika Sikadur 31 and Sikadur 35
EXPANSION JOINT	Flexible expansion joint for water pipeline bridge crossings or other applications with pipeline movement (expansion/contraction and/or deflection).	Dresser 63 EBAA Iron Flex-Tend Romac FJ Restraint Smith-Blair 611, 612
FIRE HYDRANT	Standard 6" wet barrel, bronze fire hydrants with six-hole bolt pattern, 200 psi. Outlets: 4" x 2.5", 4" x 2.5" x 2.5" or 4" x 4" x 2.5"	Clow 2060,2065 Jones 3700, 3775 AVK 2422, 2472, 2492
FIRE HYDRANT (> 200 psi)	Full submittal required.	
FIRE HYDRANT EXTENSION SPOOL	Ductile or cast iron spool with integrally cast flanges (flange drilling to match hydrant) and machined or cast break-off grooves.	South Bay Foundry
FITTING, DUCTILE IRON	Flanged, mechanical joint or push-on tees, bends, crosses, reducers, adapters, etc., for ductile iron and PVC pipelines 4" and larger. Manufactured per AWWA C110, C111, C153 with double thickness cement mortar lining.	American Griffin Sigma Corp. Star Tyler Union U.S. Pipe
FITTING, GROOVED	Ductile iron fittings for grooved end pipe, 4" through 24"	Grinnell Tyler G-B Victaulic
FITTING, PIPE RESTRAINT (Ductile Iron Pipe)	May be used in lieu of thrust blocks with District approval	EBAA Iron Series 1100 RomaGrip for Ductile Iron Sigma One-Lok SLDE for Ductile Iron Star Pipe – StarGrip Series 3000, 3100
FITTING, PIPE RESTRAINT (PVC Pipe)	May be used in lieu of thrust blocks with District approval	EBAA Iron Sigma One-Lok SLCE for PVC Star Pipe – StarGrip Series 4000, 4100, 4400
GASKET, FLANGE	1/8" thick full-face gasket for flat-faced flanges. Ring gasket for raised-face flanges. Aramid fiber bound with nitrile. No asbestos content. NSF 61 certified for potable water applications. Use Acrylonitrile Butadiene (nitrile, NBR) gaskets in environments potentially exposed to gasoline, petroleum products or hydrocarbons.	Garlock 3000 Klinger Thermoseal, Klingersil C-4401, Watersil Tripac 5000

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GASKET, MECHANICAL JOINT, PUSH-ON, TRANSITION	Conforming to AWWA C111. Gaskets for use in potable water systems shall be NSF 61 certified, SBR (Styrene Butadiene rubber) or Acrylonitrile Butadiene (nitrile, NBR). Use NBR gaskets in environments potentially exposed to gasoline, petroleum products or hydrocarbons.	American Ductile Iron Pipe Ferguson Enterprises, PROSELECT Star Pipe Products Tyler Union
GASKET, JOINT RESTRAINT	Rubber ring type with stainless steel locking segments vulcanized into the gasket. For use on PVC casing pipe.	US Pipe Field Lok 350 RieberLok
GREASE	For bolt corrosion protection on buried bolts, NO-OX-ID type. NSF 61 certified for potable water applications.	Sanchem NO-OX-ID Dearborn Chemical
GROUT	Non-shrink, cement based grout for crack repair, flooring mortar, dowel grouting, crack sealing and general binding.	Sika Sikagrout 212 STO Epoxy Binder CR633 STO Epoxy Gel CR635 STO N-S Grout CR732
INSULATING BUSHING	Nylon, 1-1/4" x 1", 1-1/2" x 1", 2-1/2" x 2" Not to be used in buried service installations. Engineer approval required.	F.H. Mahoney
INSULATING UNION	For piping connections with dissimilar metals such as service or appurtenance connections up to 2" on steel mains, MNPT x MNPT. Submittal required.	HART Dielectric (Insulated) D-3232 Series, Class 3000
JOINT SEALING COMPOUND	Butyl rubber joint sealant for use on pre-cast concrete vault and manhole sections.	Press-Seal Corp., EZ-Stik Premium ConSeal Concrete Sealing Products, CS-102
LUBRICANT, PIPE GASKET	Rubber gasket lubricant for use on rubber gasket pipe joints, NSF 61 certified for potable water.	Whitlam Blue Lube
MARKER POST	3.5" diameter, HDPE, white, pipeline marker post with 3.75" domed, polyethylene color enhancer per APWA uniform color code for type of service, 72" length.	Carsonite LineMarker
LINK SEAL, MODULAR	EPDM rubber for permanently sealing pipe penetrations in concrete vault walls, floors and ceilings against the entry of water or soil.	GPT Industries Garlock Advance Products and Systems: Innerlynx
METER	Supplied by CMWD	
METER BOX (1" Service & 2" Air Valve Assemblies)	12" x 20" x 12" polymer meter box and cover for 1" water services with 1" or smaller meters, and for angle stops for 2" air valve assemblies. Color: Gray for potable water and purple for recycled water.	Potable: Armorcast Box: A6000485-SA Cover: A6000484DQ Cover: A6000484TDQ (traffic rated) Drop-in Lid: A6000487T Recycled: Armorcast Box: A60004855A-PUR Cover: A6000484DQ-PUR Cover: A6000484TDQ-PUR (traffic rated) Drop-In Lid: A6000487T-PUR

APPENDIX C

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Item	Description	Manufacturer/Model
METER BOX (2" Service)	17" x 30" x 12" polymer meter box with 2-piece lid for 2" water service with 2" meter. Color: Gray for potable water and purple for recycled water.	Potable: Armorcast Box: A6001640PCX12 (in concrete surfaces) Box: A6001419SA (in soil surfaces) Cover: A6001643DZ Cover: A6001947TDZ (traffic rated) Drop-In Lid: A6000482T Recycled: Armorcast Box: A6001640PCX12-PUR (in concrete surfaces) Box: A6001419SA-PUR (in soil surfaces) Cover: A6001643DZ-PUR Cover: A6001947TDZ-PUR (traffic rated) Drop-in Lid: A6000482T-PUR
METER FLANGE	Brass meter flanges for 1-1/2" and 2" meters with slotted holes.	Ford CF Series Jones E-129 A.Y. McDonald 609F
MORTAR, REPAIR	Two component, low shrinkage, cement based with high compressive and bonding strength	Sika: Sika Top 122, 122 Plus, 123 STO CR 735, CR 740 Tnemec Series 217, 218
PAINT (Hydrants & Valve Boxes)	Paint for District (public) fire hydrants and valve box lids. Prime coat required on all above ground metal surfaces per Section 09900.	Sherwin Williams Steel Spec: Alkyd Safety Yellow (2 coats)
PAINT (Private Hydrants)	Paint for private fire hydrants. Prime coat required on all above ground metal surfaces.	Sherwin Williams Steel Spec: Alkyd, Safety Red (2 coats)
PAINT (Potable Water Appurtenances)	Paint for metallic backflow assemblies, vent pipes, meters, regulators, vault piping, air valves. Prime coat required per Section 09900.	Sherwin Williams Steel Spec: Alkyd, Sand Dune (2 coats)
PAINT (Recycled Water Appurtenances)	Paint for metallic backflow assemblies, vent pipes, meters, regulators, vault piping, air valves and valve box lids. Prime coat required per Section 09900.	Sherwin Williams Steel Spec: Alkyd, Purple, Pantone #522C (2 coats)
PIPE, COPPER TUBING	1" Type K Soft seamless rolled tubing. 2" Type K Soft seamless straight lengths. 1" and 2" Type K Rigid seamless straight lengths. Use Type K Soft with compression fittings.	Cerro Halstead Lee Mueller Phelps-Dodge
PIPE, DUCTILE IRON	For 4" and larger pipelines, manufactured per AWWA C111 C115, C150, C151. Double thickness cement mortar lining.	American Pipe Griffin Pacific States U.S. Pipe
PIPE, PVC AWWA C900	For 4" and larger pipelines and valve box casing. DR18 and DR14.	Certainteed Diamond Plastics IPEX JM Eagle North American Pipe Pacific Western VinylTech
PIPE, CML&TC STEEL	Cement mortar lined and tape coated with cement mortar overcoat. Steel cylinder per AWWA M11 and Section 15061. Submittal required.	American Northwest Pipe Co. Southland Pipe Corp. West Coat Pipe

APPENDIX C

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Item	Description	Manufacturer/Model
PIPE SUPPORT	Fabricated steel construction and adjustable for support of piping and flanges. Hot-dip galvanized or Type 316 stainless steel per Spec 15000.	Pipeline Products, Model PS-2 Heavy Duty Eaton, B-Line Series B3088ST & B3093
POLYETHYLENE ENCASEMENT	Polyethylene sleeve per AWWA C105 for buried ductile iron or steel pipe, and for recycled water identification. Clear sleeve for potable water, purple for recycled water. 12-mil.	Northtown Company T. Christy Enterprises Trumbull Industries
POLYETHYLENE WRAP	Polyethylene sheet or tape wrap for buried fittings and valves, 8-mil. Clear for potable water, purple for recycled water.	Northtown Company T. Christy Enterprises Trumbull Industries
PRIMER, WAX TAPE	Surface primer for application of petrolatum wax tape.	Carboline Denso Paste Trenton Tem-Coat
SEALANT	Solvent-based rubber sealant for bonding metal, dries to a flexible seal. Solvent resistant.	3M Scotch-Seal 800
SERVICE SADDLE (DI Pipe)	Cast brass ASTM B62 body with silicone bronze double straps, iron pipe thread sizes 1" and 2", NSF 61 certified.	A.Y. McDonald 3826 Ford 202B Jones J-979 Mueller BR2B Romac 202B
SERVICE SADDLE (AC and C900 PVC Pipe)	Bronze or brass saddle with stainless steel, four bolt strap(s), iron pipe thread outlet sizes 1" and 2", NSF 61 certified. For installation on AC pipe, field verify pipe outside diameter.	A.Y. McDonald 3856 Ford 202BS Jones J-969 Mueller BR2S Romac 202BS
TAPE, OUTER WRAP	Adhesive plastic outer wrap for wax tape coating systems for buried service. For separation of tape coating system and soil.	Polyken 960 Trenton Poly-Ply
TAPE, UTILITY	10 to 50-mil x 2" wide general utility tape for corrosion protection of above and below ground pipes and fittings and pipe penetrations through concrete equipment pads.	Calpico Northtown Polyken 900 Scotchwrap 3M 50, 51
TAPE, WARNING/ IDENTIFICATION	6" wide, warning/identification (non-metallic) tape for buried pipelines and conduit runs with continuous warning per Section 15000 and Section 16640. Tape for recycled water shall be purple.	Calpico T. Christy Ent. Terra Tape Thor, ElastTec Northtown
TAPE WARNING/ IDENTIFICATION (Recycled Irrigation)	3" wide, warning/identification (non-metallic) tape for buried irrigation pipelines. Purple color with continuous warning "Caution Reclaimed Water Main Buried Below"	Calpico T. Christy Ent. Terra Tape Thor, ElastTec Northtown
TAPE, WAX (Above-ground)	Petrolatum saturated synthetic fabric tape for use on above-ground couplings, flanges, fittings, etc.	Trenton #2 Wax-Tape
TAPE, WAX (Underground)	Petrolatum saturated synthetic fabric tape for use on buried service couplings, flanges, fittings, etc. Primer and outer wrap required.	Carboline Densyl Tape Trenton #1 Wax-Tape and Wax-Tape Primer
TAPPING SLEEVE (AC, DI & C900 PVC Pipe)	Use on 6" to 12" wet taps, stainless steel construction, flanged outlet. No size-on-size taps. Submittal required.	Ford Style FAST PowerSeal 3480-AS or 3490-AS Romac SST/SST3 Smith Blair 663

APPENDIX C

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Item	Description	Manufacturer/Model
VALVE – AIR/VACUUM (2-inch and smaller)	Reinforced nylon body and base	ARI D-040 (up to 250 psi)
VALVE – AIR/VACUUM (3-inch and larger)	Epoxy lined and coated, stainless steel hardware. Model selection based on specific application. Submittal required.	ARI D-060 HF, D-060-C HF NS, D-070
VALVE – BUTTERFLY (150 psi)	18" and larger, AWWA C504, Class 150B. Thermosetting or fusion bonded epoxy lined and coated. ANSI/ASME B16.1 Class 125 FLG x FLG	M&H 1450, 4500 Mueller Lineseal III Pratt Groundhog
VALVE – BUTTERFLY (250 psi)	18" and larger, AWWA C504, Class 250B. ASTM A536 ductile iron body and disc, Type 316 SS disc edge. Thermosetting or fusion bonded epoxy lined and coated. ANSI/ASME B16.1, 250-lb drilling, FLG x FLG	M&H 1450, 4500 (Class 250) Mueller Lineseal XP 250 Pratt Triton HP-250
VALVE – CORPORATION STOP (MIP x COMP.)	Bronze, Compression x MIP thread ball valve (T-head only) 1" and 2" full opening.	Ford FB1100Q NL Jones E-1957G Mueller B-25028N AY McDonald 74704BQ
VALVE – CORPORATION STOP, (MIP x MIP)	Bronze, MIP x MIP Thread Ball Valve (T-Head only), 1" and 2", full opening.	Ford FB500 NL, Jones E-1943 Mueller B-2969N (2") Mueller B-20013N (1")
VALVE – GATE, RESILIENT WEDGE (RWGV)	4" through 16", non-rising stem, low zinc bronze or stainless steel stem, encapsulated wedge per AWWA C509 or C515, ductile iron body and bonnet, fusion bonded epoxy lined and coated and certified holiday-free. 250 psi rating.	American FC, Series 2500 AVK 45 Clow F-6100 Ductile Iron Kennedy KEN-SEAL II Mueller 2361, 2362 M&H Style 4067, 7000, 7068 U.S. Pipe Metroseal & Metroseal 250
VALVE – METER STOP, ANGLE (1-inch)	Brass angle meter stop (ball valve) with 90-degree lock wing, Compression inlet x Swivel Meter Nut outlet. No lead.	A.Y. McDonald 74602BQ Ford BA43-444WQ-NL Jones E-1963WSG Mueller B-24258N
VALVE – METER STOP, ANGLE (1-inch)	Brass angle meter stop (ball valve) with 90-degree lock wing, <u>Flare</u> inlet x Swivel Meter Nut outlet. No lead. Use with District approval only.	A.Y. McDonald 74602B Ford BA23-444W-NL Jones E-1964W Mueller B-24255N
VALVE – METER STOP, ANGLE (2-inch)	Brass angle meter stop (ball valve) with 90-degree lock wing, Compression inlet x Meter Flange outlet. No lead.	A.Y. McDonald 74602BQ Ford BFA43-777WQ-NL Jones E-1975WSG Mueller B-24276N
VALVE – METER STOP, ANGLE (2-inch)	Brass angle meter stop (ball valve) with 90-degree lock wing, <u>Flare</u> inlet x Meter Flange outlet. No lead. Use with District approval only.	A.Y. McDonald 74602B Ford BFA23-777W-NL Jones E-1973W Mueller B-24277N
VALVE – METER STOP, STRAIGHT (2-inch and smaller)	Brass, straight, with locking tabs, 300 psi. No lead. 3/4" and 1": FIP inlet x Meter Swivel Nut outlet. 2": FIP inlet x Meter Flange outlet.	Jones 3/4" E-1903 Jones 1" E-1908, 2" E-1913 Ford 3/4" B13-332W Ford 1" B13-444W-NL Ford 2" BF13-777W-NL AY McDonald 76101MW w/SHDLB

APPENDIX C

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VALVE –METER STOP, CUSTOMER SIDE	3/4" and 1" brass customer shut-off (ball) valve, Swivel Meter Nut inlet x FIP outlet, lockable tabs, with lever handle. No lead.	A.Y. McDonald 76101MW w/SHDLB Ford B13-332W w/HT34, B13-444W w/HT34 Jones E-1908W Mueller B-24351
VALVE – METER STOP, CUSTOMER SIDE	2" brass customer shut-off (ball) valve, Meter Flange inlet x FIP outlet, lockable tabs, with lever handle. No lead.	A.Y. McDonald 76101MW w/SHDLB BF13-777W w/HB-67S Jones E-1913W Mueller B-24337
VALVE, PRESSURE RELIEF AND SUSTAINING	Epoxy coated interior/exterior, stainless trim, bronze pilots, model specified for each project. Submittal required.	Cla-Val
VALVE BOX (Potable Water)	For gate valves & butterfly valves. Lids marked "CMWD" and "Water"	E.J. Brooks Company (Brooks) Service 4-TT J&R Concrete Products V4-T
VALVE BOX (Normally Closed)	Lids marked "CMWD" and "Water"	Brooks Service 3-RT
VALVE BOX (Recycled Water)	Lid marked "CMWD" and "Recycled Water". See Standard Dwg W13.	South Bay Foundry SBF 1208N Bingham & Taylor Mark V (Domestic)
VALVE BOX (Potable & Recycled Water)	2" Blow Off or Manual Air Release. Lids marked "CMWD" and "Water" or "Recycled Water"	South Bay Foundry SBF 12" gate cap and frame
VALVE BOX (Potable & Recycled Water)	4" or 6" Blow-Off Assembly pipe outlet. Lids marked "CMWD" and "Water" or "Recycled Water"	South Bay Foundry SBF 12" gate cap and frame
VALVE STEM EXTENSION (Fiberglass)	Use when depth to valve operating nut is greater than 7 feet. Three-part fiberglass valve extension.	Pipeline Products, Fiberplas FPU-210, FPT-200, FPL-220
VALVE STEM EXTENSION (Steel)	Use when depth to valve operating nut is between 5 and 7 feet. Round or square, 1-1/2" steel tube, welded construction, with top centering ring and AWWA 2" operating nuts at top and bottom. Galvanized finish.	Pipeline Products SX-908
WIRE, TRACER	#14 AWG solid copper UF type wire, with cross linked polyethylene insulation. Color: white or yellow.	Baron Cosberg Industries Paige Regency Wire
WIRE, TRACER CONNECTOR	Direct bury silicone-filled capsule tube with standard wire nut or silicone-filled wire nut connectors for tracer wire connections.	3M DBR-6 King 4 King 5 King 6