

APPENDIX A

Approved Materials List (Capital & Developer Projects)

(Updated: September 2022)

PURPOSE AND GENERAL NOTES

The purpose of the Approved Materials List is to streamline the materials submittal and review process during construction. Contractors are strongly encouraged to use materials from the Approved Materials List as these will be expedited and do not require a full technical review by the District prior to material approval. All pipe materials shall be submitted for review and approval. However, Contractors must submit and identify that the proposed materials comply with the current Specifications and/or are on the approved list.

Use of “or equal” materials will require a formal and complete submittal subject to review by the District Engineer or the Engineer’s designee prior to approval. Any schedule delays as a result of a submittal or use of “or equal” materials will be the sole responsibility of the Contractor.

In the event of a conflict between approved/contract specifications and drawings and the Approved Materials List, the approved/contract specifications and drawings shall take precedence. All material descriptions provided in this Approved Materials List are for reference in conveying the intent of the approved list, and are not comprehensive specifications. Refer to the Standard Specifications and the approved contract specifications for complete material requirements.

All materials used for potable water systems must meet California Health and Safety Code 116875 (previously AB1953). All materials that come into contact with potable water must be NSF certified or approved (<http://www.nsf.org/>). All potable water material submittals must include evidence of NSF certification. Please contact District staff if any Model numbers listed are out of date or no longer available.

WATER

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>WATER PIPING - MAINS</u>		-
Description:	Polyvinyl Chloride (PVC) Pressure Pipe For mains up thru 16": AWWA C900 DR14 Pressure Class 305 PVC Mains 18" or larger: AWWA C900 DR18 Pressure Class 235	Diamond Plastics JM Eagle North American Pipe Corporation Northern Pipe Products Vinyltech
DSRSD Standard:	II-B1-1.01	
Description:	Ductile Iron (DI) Water Pipe For mains 4" and up: AWWA C151 Pressure Class 350 All cement mortar lined per AWWA C104	American (American Cast Iron Pipe Company) McWane Ductile US Pipe
DSRSD Standard:	II-B1-1.02	
<u>WATER PIPING – JOINT RESTRAINT</u>		-
Description:	Mechanical Joint Restraint for Polyvinyl Chloride (PVC) Pressure Pipe	EBAA Iron Series 2000PV Megalug
DSRSD Standard:	II-B1-1.01.01	
Description:	Mechanical Joint Restraint for Ductile Iron (DI) Water Pipe	EBAA Iron Series 1100 Megalug
DSRSD Standard:	II-B1-1.02.01	
Description:	Push-on Joint Restraint for Ductile Iron (DI) Water Pipe	FIELD LOK350®, TR FLEX® (with the TR FLEX Gripper Ring® for restraining field cuts)
DSRSD Standard:	II-B1-1.02.01	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>WATER PIPING – SERVICES</u>		-
Description:	Polyethylene (PE) Pressure Pipe Services up thru 3": AWWA C901 PE Pressure Pipe; Pressure Class 200; Copper Tubing Size (CTS) Services 4" and up: AWWA C906 PE Pressure Pipe, Pressure Class 200, Iron Pipe Size Services up thru 2": Copper Tubing Size (CTS) Services 3": Iron Pipe Sizes (IPS) Services 4" and up: Cast Iron Outside diameters (CIODs)	Interstate Plastic Centennial Plastics Performance Pipe Interstate Plastic Centennial Plastic Performance Pipe
DSRSD Standard:	II-B1-1.05	
<u>WATER FITTINGS GENERAL</u>		-
Description:	General Fittings for PVC and DI Pipe; AWWA C110 or AWWA C153; with flanged or mechanical joints	Sigma Corp Tyler Pipe Star Pipe
DSRSD Standard:	II-B1-1.01.02	
Description:	General Fittings for HDPE; AWWA C906; material designation of PE 3408; 345464C cell classification	Specified Fittings
DSRSD Standard:	II-B1-1.05.02	
<u>WATER FITTINGS - TAPPING TEES / SLEEVES (TAPS LARGER THAN 2")</u>		
Description:	For PVC and DI Pipe: stainless steel (Type 304) tapping sleeve assembly, complete with gaskets and bolts.	JCM 432 all stainless steel tapping sleeves
DSRSD Standard:	II-B1-2.02 Std Dwgs. W-17A, W-20, & W-20A	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
WATER FITTINGS - TAPPING SADDLES (TAPS 2" AND SMALLER)		
Description:	For PVC Pipe: bronze or brass assembly, complete with neoprene gasket wedge.	Mueller H13000 Series McDonald 3845
DSRSD Standard:	II-B1-2.08	
Description:	For DI Pipe: bronze or brass body and silicon bronze double straps	Mueller BR2B Series McDonald 3825
DSRSD Standard:	II-B1-2.08 Std. Dwg. W-7	
WATER FITTINGS – TRANSITION AND FLEXIBLE COUPLINGS		
Description:	Steel or ductile iron flexible couplings with FBE coating and stainless steel hardware	For Standard connections: Smith Blair 411 For PVC to Steel pipe connections: Smith Blair 413 For insulated connections: Smith Blair 416 Powermax 3506 with stainless bolts type 304 Hymax adapter with stainless steel fasteners
DSRSD Standard:	II-B1-2.10	
WATER VALVES- MAIN LINE (UP THRU 12")		
Description:	Gate Valve: AWWA C509 Ductile Iron, resilient seated-type with non-rising stems, FBE coated, and have "O" ring stuffing boxes	Clow Model 2639 Kennedy Valve Model KS-RW Mueller 2360 Series
DSRSD Standard:	II-B1-2.01 and II-B1-2.01.01	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>WATER VALVES- MAIN LINE (LARGER THAN 12")</u>		
Description:	Butterfly Valve: AWWA C504 Rubber seated, Class 250B, CCW Opening Rotation, FBE coated	Clow: Style 4500 (14"-24") & Style 1450 (30"-54") Mueller / Pratt HP250™
DSRSD Standard:	II-B1-2.01 and II-B1-2.01.02	
<u>WATER VALVES- SPECIALTY</u>		
Description:	Tapping Valve: AWWA C509 or C515 Ductile Iron, resilient seated-type with non-rising stems, FBE coated	Mueller Co. Model A-2361
DSRSD Standard:	II-B1-2.01	
Description:	Combination Air Valve (AWWA C512) single body with FBE coated body	A.R.I. D-040"
DSRSD Standard:	II-B1-2.01 and II-B1-2.01.03	
Description:	Pressure Reducing Valve (for irrigation systems served by ¾-inch to 3-inch water meters)	Zurn Wilkins Model 500 Series
DSRSD Standard:	IV-B1-2.05 Std. Dwg. W-31	
<u>WATER VALVES- SERVICE AND APPURTENANCE LINE (2" AND SMALLER)</u>		
Description:	Corporation Stops: Bronze Ball valve with AWWA inlet threads	Ford FB Series with AWWA inlet
DSRSD Standard:	II-B1-2.08 Std. Dwgs. W-7, W-15, , W16, W-26	
Description:	Straight Curb Stops: Bronze Ball valve with Wing lock	Ford B11 & B81 Series
DSRSD Standard:	Std. Dwgs: W-24A, W-24B, W-24C, W-24D	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
Description:	Angle Meter Stops (aka Angle Curb Stops): Bronze Ball valve with Wing Lock	Ford BA43 and BFA43 Series BA43-332W-Q-NL (3/4") BA43-444W-Q-NL (1") BFA43-666-W-Q-NL (1-1/2") BFA43-777W-Q-NL (2")
DSRSD Standard:	II-B1-2.08 Std. Dwg: W-7, W-15, W16, W-24A, W-24B, W-24C, W-24D	
METER EQUIPMENT		
Description:	For Fire Lines: Double Detector Check Radio-Read Meter	Neptune Sensus
DSRSD Standard:	Std. Dwg: W-23, W-23A	
Description:	AMR Meter Interface Units For Fire Lines: Radio-Read Meter	Datamatic Innov8 Smart Meter Register
DSRSD Standard:	Std. Dwg: W-23, W-23A	
HYDRANTS		
Description:	Fire Hydrant: Wet Barrel Type per AWWA C503 (1-4 ½ inch and 1-2 ½ inch outlets), for residential applications; and (1-4 ½ inch and 2-2 ½ inch outlets), for commercial.	Clow Model 960 for all
DSRSD Standard:	II-B1-2.03 Std. Dwg: W-6	
Description:	Hydrant for Recycled Water:	Clow Model 950 Clow Model 960 with RW threading
DSRSD Standard:	IV-B1-2.11 Std. Dwg: W-32	
Description:	Break Off Check Valve for Recycled Water Hydrant	Clow LP 619 Low Profile Break Off Check Valve
DSRSD Standard:	IV-B1-2.11 Std. Dwg: W-32	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>BOXES AND ENCLOSURES</u>		
Description:	Valve Box: For line valves and fire hydrants	Oldcastle Christy G5 for potable Water Oldcastle Christy G4 for Recycled Water
DSRSD Standard:	II-B1-2.06 Std. Dwg: W-1	
Description:	Valve Box: For Recycled Water Pressure Reducing / Pressure Relief For non-traffic areas	Christy Purple FL9 for non-traffic areas
DSRSD Standard:	II-B1-2.06 Std. Dwg: W-31	
Description:	Backflow Enclosure	To Be Approved by Construction Inspector
DSRSD Standard:	Std. Dwg: W-25	
Description:	Meter and Air Valve Boxes	SEE METER BOX SCHEDULE BELOW
DSRSD Standard:	Std. dwgs: W-15, W-16, W-23, W-23A, W-24A, W-24B, W-24C, W-24D	

Water Box Schedule						
Facility, inch	Traffic Areas			Non-traffic Areas		
	Oldcastle Christy Model No.	Inside Width, inch	Inside Length, inch	Oldcastle Christy/Fibrelyte Model No.	Inside Width, inch	Inside Length, inch
Meter, 5/8 – 1	B1324	13-¼	24	FL30T Series	13	24
Meter, 1-½ – 2	B1730	17	30	FL36T Series	17	30
Meter, 3 – 4	B2436	24	36	N40 box B40D steel checker plate lid	24	36
Meter, 6	B3048	30	48	N48 box B48D2 steel checker plate lid	30	48
2 meters per box W-24A/ W-24C	B2436	24	36	N40 box B40D steel checker plate lid	24	36

3 meters per box W-24B	B2436	24	36	N40 box B40D2 steel checker plate lid	24	36
Air Valve, 1	B1324	13-¼	24	N/A	N/A	N/A
Air Valve, 2	B1730	17	30	N/A	N/A	N/A
Meter Radio Transmitter for Backflow	N/A	N/A	N/A	B09	8-5/8	14

Note: Covers shall be verified by DSRSD as compatible with latest version of DSRSD's meter antenna requirements. 1.5-inch and 2-inch displacement-type meters may require a larger box than listed above due to necessity of additional fittings. Coordination with DSRSD is required prior to purchase and approval for those specific meter types.

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>HARDWARE / GASKETS / MISCELLANEOUS</u>		
Description:	Centering Ring (in valve riser)	Placer Waterworks Model # PW-CR Box Seat QWP by New Concept Tools
DSRSD Standard:	II-B1-2.06	
Description:	Pipe joint isolation kit	Advance Product Systems (APS) Voltaccept™ G-10 Type 'E' Gasket kit with Trojan gasket GPT LineBacker® 61™ G-10 Type 'E' flange isolation kit
DSRSD Standard:	II-B1-2.09	
Description:	Meter (3" & larger) to customer pipe connection flange adaptor	Uniflange® flange adaptor
DSRSD Standard:	II-B2-10	
Description:	Meter Flange Adaptor: Brass or Bronze	Ford Brass Meter Flanges CF31 Series
DSRSD Standard:	Std. Dwgs: W-16, W-16A	
Description:	Gaskets: For 2" Meter Flange	Ford Rubber Gasket GT141
DSRSD Standard:	Std. Dwgs.: W-24B, W-24D	
Description:	Valve/Vent Cover: for air release and vacuum relief valve, 2 "and smaller	Placer Waterworks: (for 1" CAV) PWAE118MDSR (for 2" CAV) PWAE218M (with name plate added)

ITEM		APPROVED MATERIALS / MANUFACTURERS:
DSRSD Standard:	Std. Dwgs.: W-15, W-16, W-27	
Description:	Threaded Air Vent Cap with Stainless Steel Screen	T Christy's Air Vent Cap: 1"- Model VC1 or VCM1 2"- Model VC2 or VCM2
DSRSD Standard:	Std. Dwgs.: W-15, W-16	
Description:	Meter Coupling Bushing: for 1" angle meter stop	Ford #BBIM-44-NL (1" Male Meter x 1" FIP)
DSRSD Standard:	Std. Dwg: W-24A	
Description:	Underground Marking/ Warning Tape for Recycled Water	Brady Identoline Presco Reef Industries Terra Tape Standard T.Christy's Enterprises
DSRSD Standard:	IV-B1-1.04	
Description:	Recycled Water Identification Tag	For valves, blow-offs & controllers: T. Christy ID.MAX.P2.RC006 For Fire Hydrant Sign: T. Christy
DSRSD Standard:	IV-B1-2.07 Std. Dwgs: W-31, W-32	
Description:	Bronze Coupling: For Service Lines 2" and smaller	Ford #C38-23-2-5-NL (3/4" MIP x Meter nut)
DSRSD Standard:	Std. Dwgs.: W-16, W-24A, W-24B, W-24C, W-24D	
Description:	Brass Bushing: For Service Lines 2" and smaller	Ford #C18-67
DSRSD Standard:	Std. Dwg.: W-24C	
Description:	Bronze Flanges: for meters 2' and smaller	Ford # 7F Ford # 6F
DSRSD Standard:	Std. Dwg.: W-24C	
Description:	Quick Coupling Valve and key for Recycled Water	Valve: Nelson Model 7645 Key: Nelson Model 7640
DSRSD Standard:	IV-B1-2.03	
<u>PAINT/ COATINGS</u>		
Description:	Hydrant Paint Rust Preventative Enamel	<u>For potable water system (Yellow):</u> Kelly Moore 1700-63 Sunburst Yellow Rust Preventative Enamel <u>For recycled water system (Purple):</u> Kelly-Moore Dura-poxy Color #70251-0608

ITEM		APPROVED MATERIALS / MANUFACTURERS:
DSRSD Standard:	II-B1-2.03	
Description:	Corrosion Protection PVC Tape Wrap	Scotchrap Tape No. 50
DSRSD Standard:	II-B2-2.06, W13, W14	
Description:	Bituminous Paint / Coal Tar Mastic	Carboline Bitumastic No. 50 Carboline Bitumastic No. 300 series Kop-Coat Bitumastic No. 50
DSRSD Standard:	II-B2-2.06, W13, W14	

SEWER

ITEM		APPROVED MATERIALS / MANUFACTURERS:
<u>SEWER PIPING- GRAVITY MAIN SEWERS</u>		
Description:	Polyvinyl Chloride (PVC) Pipe For mains up thru 15": ASTM D3034 SDR 26 For mains larger than 15": ASTM F679 SDR 26	Diamond Plastics JM Eagle North American Pipe Corporation Northern Pipe Products Vinyltech
DSRSD Standard:	III-B1-1.03	
Description:	Ductile Iron (DI) Water Pipe with epoxy lining For mains up thru 20": AWWA C151 Pressure Class 350, with Protecto 401™ Ceramic epoxy lining For mains larger than 20": AWWA C151 Pressure Class 250, with Protecto 401™ Ceramic epoxy lining	American (American Cast Iron Pipe Company) McWane Ductile US Pipe
DSRSD Standard:	III-B1-1.02	
<u>SEWER PIPING- SIDE SEWERS</u>		
Description:	Polyvinyl Chloride (PVC) Pipe ASTM D3034 SDR 26	Vinyl Tech Pipe North American Pipe
DSRSD Standard:	III-B1-1.03	
Description:	High-Density Polyethylene (HDPE) Pipe Services 4" and up: ASTM F714 or ASTM D3035	ISCO Industries JM Eagle Performance Pipe
DSRSD Standard:	III-B1-1.05	
<u>SEWER FITTINGS</u>		
Description:	Sewer Lateral Tap Saddle	Tap-Tite Romac Industries CB Sewer Saddle Geneco Sealtite Wye Gravity Sewer Saddle E_EX (for SDR26 lateral) Fernco Flexible Tap Sewer Saddle
DSRSD Standard:	III-B4-2	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
Description: DSRSD Standard:	Field cut couplings or Transition Couplings: Heavy rubber compression with stainless steel shear band and hardware III-B1-1; III-B4-3	Fernco Strongback 5000 RC Series Mission Rubber Flex-Seal® ARC
MANHOLE COMPONENTS		
Description: DSRSD Standard:	Coal Tar Paint III-B1-2	Carboline “Bitumastic Super-Service Black” Porter “Tarmastic 103” Tnemec “450 Heavy Tnemecol”
Description: DSRSD Standard:	Manhole Water Stop: III-B1-2	A-Lok Water-Stop Pipe to Concrete Structure Cold Joint Connector Fernco Large Diameter Concrete Manhole Adaptor (LDCMA) Christy Manhole Water-Stop Gaskets
Description: DSRSD Standard:	Manhole Coatings, in natural or manmade drainage courses or flood channels III-B1-2	Amercoat 64 primer Amercoat 320 protective coating
Description: DSRSD Standard:	Manhole Frame and Covers with side pick hole III-B1-2 Std. Dwg.: S-5	Phoenix Iron Works P1090, Clay and Bailey No. 2008BV, Neenah R-1736S
Description: DSRSD Standard:	Hinged Manhole Frame with locking Cover III-B1-2	PAMREX hinged manhole frame and locking cover
Description: DSRSD Standard:	Sand Trap for Manhole cleaning operations III-B3-7	Southwest Flexible Co. standard sand trap
Description: DSRSD Standard:	Manhole Joint Sealant Std. Dwg.: S-2	Henry Ram-Nek Joint Sealant Henry RUBR-NEK External Joint Wrap
OVERFLOW DEVICES		
Description:	Above-grade Sewer Overflow Relief Valve	<<APPROVED MANUFACTURERS TBD>>

ITEM		APPROVED MATERIALS / MANUFACTURERS:	
DSRSD Standard:	Std. Dwg.: S-8A		
Description:	Below-grade Sewer Overflow Relief Valve	Jones Stephens Sewer Popper™ Sewer Popper Cleanout & Relief Valve	
DSRSD Standard:	Std. Dwg.: S-8A		
<u>GREASE AND SAND TRAPS</u>			
Description:	Grease Interceptor	Jensen Precast of Sacramento, CA	
		Capacity (Gallons)	Jensen Model No.
		750	JP750EPE-G
		1000	JP1000EPE-G
		1200	JP1200EPE-G
		1500	JP1500EPE-G
		2000	JP2000EPE-G
		2500	JZ2500EPE-G
3000	JZ3000EPE-G		
DSRSD Standard:	Std. Dwg.: S-13 & S-14		
<u>BOXES AND ENCLOSURES</u>			
Description:	Grated box for Overflow Device	<u>In Traffic areas:</u> Oldcastle Christy V12 drain box with V12-71W C1 grate <u>In Non-Traffic areas:</u> Oldcastle Christy F08 box with V01-71C grate	
DSRSD Standard:	Std. Dwg.: S-8A		
Description:	Clean Outs	G-5 Christy with metal lid marked "SEWER"	
DSRSD Standard:	Std. Dwg.: S-10		
Description:	Sample Box	Jensen Precast of Sacramento, CA Jensen Model No.2432-Z	
DSRSD Standard:	Std. Dwg.: S-15		
<u>CATHODIC PROTECTION</u>			
Description:	Thermite Weld Materials	All welding materials and equipment shall be the product of a single manufacturer such as "Cadweld" by Erico Products, Inc., "Thermoweld" by Continental Industries, Inc., or approved equal.	

ITEM		APPROVED MATERIALS / MANUFACTURERS:
DSRSD Corrosion Control Standard:	1-4.08	
Description:	CP Test Stations	G-5 Christy with metal lid marked "CP TEST"
DSRSD Corrosion Control Standard:	1-4.05	
Description:	CP Terminal Boxes	Model "T-3" as manufactured by Tinker & Razor manufacturing Company or approved equal.
DSRSD Corrosion Control Standard:	1-4.05	
Description:	Weld Caps	Propoxy 20 Epoxy Putty by Hercules Chemical Company Scotchkote Liquid Epoxy Coating 323 by 3M Or approved equal
DSRSD Corrosion Control Standard:	1-4.10	
Description:	Wax Tape	Buried Fittings: Trenton Wax Tape #1 with protective top-coat or approved equal Above Grade or Vault Installed Fittings: Trenton Wax Tape #2 or approved equal
DSRSD Corrosion Control Standard:	1-4.17	
Description:	Concrete Wall Seals	Link Seal, or approved equal
DSRSD Corrosion Control Standard:	1-4.15	
Description:	Insulating Flange Tester	Model 601 by Gas Electric, or approved equal
DSRSD Corrosion Control Standard:	1-5.08	