

All products that come into contact with drinking water shall be certified for conformance with American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 or Standard 14 for health effects. Products containing brass or bronze shall also be certified for conformance with ANSI/NSF Standard 61-Annex G or ANSI/NSF Standard 372 for "lead-free" lead content requirements. Certifications to be made by an ANSI approved third party certification program or laboratory.

This list will be updated periodically. Materials must be on the current edition of this list at the time of use. Contact the Manager of Engineering of the Water Bureau @ (585) 428-7567 for verification of current edition of this list.

PRODUCT	CITY MANUFACTURER MODEL/STYLE SPEC.		CERT. LAB & STANDARD	DESCRIPTION/COMMENTS	
Bituminous Coating	S900 S962 S966 S968	Polyguard	CA-9 Mastic, Corrosion Control Coating, single component, cold applied, solvent release bitumen coating	N/A	
		Denso	Bitumen Mastic, Corrosion protection; high build single component cold applied liquid bituminous coating.	N/A	
Restraint Devices (Ductile Iron Pipe)	S900	EBAA Iron, Inc.	Megalug Series 1100 (M.J. Fitting to DI Pipe), Megalug Series 1700 (D.I. Push-On Pipe Harness)	N/A	MEGA-BOND <sup>®</sup> coating on body and wedges, fluorocarbon coated M.J. hardware.
		Ford Meter Box Co.	Uniflange Series 1400 (M.J. Fitting to D.I. Pipe), Uniflange Series 1450 (D.I. Push-on Pipe Harness)	N/A	E-coating on body and wedges, fluorocarbon coated M.J. hardware.
		Infact Corporation	Foster Adapter	N/A	For restraint of M.J. ductile iron water main, fittings and valves to M.J. ductile iron water main, fittings and valves (excluding hydrants)
		HYMAX (A Mueller Brand)	HYMAX Grip, 4"-12" diameter	NSF 61 & 372	Fusion Bonded Epoxy coating, Type 304 stainless steel hardware.
		U. S. Pipe (A Quikrete Company)	Field Lok 350 <sup>®</sup> Gasket	NSF 61 & 372	For restraint of push-on joint ductile iron pipe joints.
Restraint Devices (AWWA C900 PVC Pipe)	S900	EBAA Iron, Inc.	Sizes ≤ 12" Nominal Diameter. Megalug Series 2000PV or 19MJ00 (M.J. Fitting to PVC Pipe), Series 2500 or 2600 (PVC Pipe to PVC Fitting), Series 1500 or 1900 (PVC Push-On)	N/A	MEGA-BOND <sup>®</sup> coating on body and wedges, fluorocarbon coated M.J. hardware.
		Ford Meter Box Co.	Sizes ≤ 12" Nominal Diameter. Uniflange Series 1500 (M.J. Fitting to PVC Pipe), Series 1360 (PVC Pipe to PVC Fitting), Series 1390 (PVC Push-On)	N/A	E-coating on body and wedges, fluorocarbon coated M.J. hardware.
		HYMAX (A Mueller Brand)	HYMAX Grip, 4"-12" diameter	NSF 61 & 372	Fusion Bonded Epoxy coating, Type 304 stainless steel hardware.
		Tyler Union	Sizes ≤ 12" Nominal Diameter. TUF Grip Series 2000 (M.J. Fitting to PVC Pipe), Domestic Version Only.	N/A	TUF-Bond <sup>™</sup> coating on gland and e-coating for wedge, and wedge bolts; fluorocarbon coated M.J. hardware.

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Restraint Devices (AWWA C909 PVCO Pipe)	S900	EBAA Iron, Inc.	Sizes ≤ 12" Nominal Diameter. Megalug Series 19MJ00 (M.J. Fitting to PVCO), Series 2600 (PVCO to PVC Fitting), Series 1900 (PVCO Push-on)	N/A	MEGA-BOND <sup>®</sup> coating on body and wedges, fluorocarbon coated M.J. hardware. See PVCO pipe M.J. torque recommendations.
		Ford Meter Box Co.	Sizes ≤ 12" Nominal Diameter. Uniflange Series 1500 or Series 1309 (M.J. Fitting to PVCO Pipe), Series 1369 (PVCO Pipe to PVC Fitting), Series 1399 (PVCO Push-On)	N/A	Fluorocarbon coated M.J. hardware. See PVCO pipe M.J. torque recommendations.
		HYMAX (A Mueller	HYMAX Grip, 4"-12" diameter	NSF	Fusion Bonded Epoxy coating, Type 304 stainless steel
		Brand)		61 & 372	hardware.
		Tyler Union	Sizes ≤ 12" Nominal Diameter. TUF Grip Series 2000 (M.J. Fitting to PVC Pipe), Domestic Version Only.	N/A	TUF-Bond <sup>™</sup> coating on gland and e-coating for wedge, and wedge bolts; fluorocarbon coated M.J. hardware.
T-Bolts and Nuts	S900	Birmingham Fastener Manufacturing	Fluorocarbon Coated T-Head Bolts and Nuts, Blue	N/A	
		Trumbull	T-Head Bolts and Nuts; corrosion-resistant, high-	N/A	
		Manufacturing	strength, low-alloy steel in accordance with		
		U U	ANSI/AWWA C111/A21.11, that has a baked-on		
			ceramic-filled fluorocarbon resin, Blue		
Warning Tape	S900	Presco	3" Wide Detectable Underground Warning Tape	N/A	Blue, imprinted with "CAUTION BURIED WATER LINE BELOW".
		Pro-Line Safety Products	3" Wide Detectable Underground Warning Tape	N/A	Blue, imprinted with "CAUTION WATER LINE BURIED BELOW".
		Terra Tape	3" Wide Sentry Line Detectable	N/A	Blue, imprinted with "CAUTION WATER LINE BURIED BELOW".
Fittings - Ductile Iron	S901	AMERICAN Cast Iron	M.J. Full Body (AWWA C110) or Compact (AWWA	UL	Double thickness cement mortar lining w/ asphalt coating.
		Pipe Company	C153), SBR gaskets. Nitrile gaskets to be used in	61 & 372	
			potential petroleum contaminated soils.		
		U. S. Pipe (A Quikrete	M.J. Full Body (AWWA C110) or Compact (AWWA	NSF	Double thickness cement mortar lining w/ asphalt coating.
		Company)	C153), SBR gaskets. Nitrile gaskets to be used in	61 & 372	
		Tular Union	potential petroleum contaminated soils.		Enour costed or double thickness compart morter lining w/
		Tyler Union	M.J. Full Body (AWWA C110) or Compact (AWWA	UL	Epoxy coated or double thickness cement mortar lining w/
			C153), SBR gaskets. Nitrile gaskets to be used in potential petroleum contaminated soils.	61, 372 &	asphalt coating.
Fittings - PVC	S901	Harrington	PVC C907 Pressure Fittings, Injection Molded, 4"-	Annex G NSF	Colored blue
ниндэ - г <b>ч</b> е	5501	Corporation - HARCO	12"	61	
		IPEX	Blue Brute AWWA C907 PVC Injection Molded, 4"-	NSF	Colored blue
			12"	61 & Annex G	

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Petrolatum/Petroleum Wax Tape System	S901	Petro Coating Systems (PCS)	Primer Paste, Petro Mastic, Standard Temperature Petrolatum Tape	N/A	
		Chase Construction Products	Tapecoat Enviroprime, Tapecoat Envirotape	N/A	
	S901	Denso	Denso Paste, Densyl Mastic or Denso Profiling Mastic, Densyl Tape	N/A	
		The Trenton Corporation	Wax Tape Primer, Fill-Pro PM-GP, #1 Wax Tape	N/A	
Pipe - Anchor Pipe	S901	U. S. Pipe (A Quikrete Company)	Anchor x Anchor w/ Welded Ring; Anchor x Anchor w/ Snap Ring. Both have rotating glands for any orientation.	N/A	Anchor Pipe shall be epoxy coated or cement mortar lining w/ asphalt coating. Anchor pipe couplings are "plain end" mechanical joint fittings, with a rotating follower gland on each end.
Pipe - Ductile Iron	S901	McWane Ductile	Tyton Joint Pipe, 4"-36", SBR gaskets. Nitrile gaskets	UL	Class 52 (domestic system) and Class 56 (Holly system),
			to be used in potential petroleum contaminated soils.	61	double thickness cement lined asphalt coated.
		U. S. Pipe (A Quikrete	Tyton Joint Pipe, 3"-64", SBR gaskets. Nitrile gaskets	NSF	Class 52 (domestic system) and Class 56 (Holly system),
		Company)	to be used in potential petroleum contaminated soils.	61 & 372	double thickness cement lined asphalt coated.
		American Ductile Iron	Fastite Joint Pipe, 4"-64", SBR gaskets. Nitrile	NSF	Class 52 (domestic system) and Class 56 (Holly system),
		Pipe	gaskets to be used in potential petroleum contaminated soils.	61 & 372	double thickness cement lined asphalt coated.
Pipe - PVC	S901	IPEX	Blue Brute, 4"-12", SBR gaskets. Nitrile gaskets to be	NSF	AWWA C900, DR 14, Pressure Class 305. Note
			used in potential petroleum contaminated soils.	61 & 372	recommended bolt torques for M.J. fittings. Domestic and Holly system.
		JM Manufacturing -	Blue Brute C900, 4"-24", SBR gaskets. Nitrile gaskets	NSF	AWWA C900, DR 14, Pressure Class 305. Note
		JM Eagle	to be used in potential petroleum contaminated	61 & 372	recommended bolt torques for M.J. fittings. Domestic and
			soils.		Holly system.
		National Pipe &	Dura-Blue C900, 4"-12", SBR gaskets. Nitrile gaskets	NSF	AWWA C900, DR 14, Pressure Class 305. Note
		Plastics Inc.	to be used in potential petroleum contaminated soils.	61 & 372	recommended bolt torques for M.J. fittings. Domestic and Holly system.
Pipe - PVCO	S901	IPEX	Bionax CIOD Gasketed PVCO Pressure Pipe, 4"-30"	NSF	AWWA C909, Pressure Class 235 (domestic system only)
				61 & 372	SBR gaskets unless otherwise noted. Note recommended bolt torques for M.J. fittings.
		JM Manufacturing -	Ultra-Blue PVCO C909, 6" - 12" for Pressure Class	NSF	AWWA C909, Pressure Class 235 (domestic system only)
		JM Eagle	235	61 & 372	SBR gaskets unless otherwise noted. Note recommended bolt torques for M.J. fittings.

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Polyethylene Tube Encasement	S901	All American Poly	8 mil minimum thickness, linear low-density polyethylene	N/A	AWWA C105/A21.5
		Repcor, Inc.	8 mil minimum thickness, linear low-density polyethylene	N/A	AWWA C105/A21.5
		Infinity Plastics, LLC	8 mil minimum thickness, linear low-density polyethylene	N/A	AWWA C105/A21.5
		AA Thread Seal Tape Inc.	8 mil minimum thickness, linear low-density polyethylene	N/A	AWWA C105/A21.5
		Trumbull Manufacturing	8 mil minimum thickness, linear low-density polyethylene	N/A	AWWA C105/A21.5
Tracer Wire (Open Cut)	S901	Pro-Line Safety Products	PE 30 Tracer Wire, #12 AWG solid, 30 mil blue HDPE insulation	N/A	
		Performance Wire and Cable	#12 AWG solid, 30 mil blue HMWPE insulation	N/A	
		Kris-Tech Wire Company	#12 AWG solid, 30 mil blue HMWPE insulation; ASTM	N/A	
Tracer Wire (Trenchless)	S901	Copperhead Industries LLC	Soloshot Extra High Strength #12 AWG solid, steel core, copper clad, 45 mil blue HDPE insulation.	N/A	
		Performance Wire and Cable	(2) #12 AWG solid, 45 mil blue HMWPE insulation	N/A	
		Pro-Line Safety Products	Pro-Trace HDD-CCS PE45, #12 AWG solid, steel core, copper clad, 45 mil blue HDPE insulation	N/A	
Tracer Wire Splices (Connection of Service Wire to Main Wire)	S901	King Innovation	Dryconn Direct Bury Lug Aqua	N/A	For use in connecting service tracer wire with main tracer wire without cutting main wire.
		Blackburn	Bronze Split Bolt Connector, Range for Equal Main and Tap Conductor = #10 Str #12 Solid, Model No. E9H25	N/A	
Tracer Wire Splices (Single Wire Continuation)	S901	3M Company	Direct Bury Splice Kit DBR/Y-6	N/A	For use in connecting adjacent single wire along main run
		King Innovation	Dryconn DBSR Aqua	N/A	For use in connecting adjacent single wire along main run
		Pro-Line Safety Products	Pro-Trace TW Connector	N/A	For use in connecting adjacent single wire along main run
Tracer Wire Termination Boxes	S901	Bingham & Taylor	Style P445 DT for unpaved surfaces, w/"Water Test" cover,	N/A	Furnish with terminal board having min. of 2 stainless steel terminal connections.
Gate Valves (16"-24")	S903	Clow Valve Company	AWWA C515 Resilient Wedge, M.J.x M.J., Model 2638, 16"-24"	NSF	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.

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Gate Valves (3"-12")	\$903	Clow Valve Company Kennedy Valve Mueller Company U.S. Pipe Valve & Hydrant (Sub. Of Mueller Water	AWWA C509 Resilient Wedge, M.J.x M.J., Model 2639, 4"-12" AWWA C509 Resilient Wedge, M.J.x M.J., Model KS- RW, 2"-12" AWWA C509 Resilient Wedge, M.J.x M.J., Model A- 2361 & 2362 (3"-12") AWWA C509 Resilient Wedge, M.J.x M.J., Model C- USP2 (4"-8")	NSF 61 & 372 NSF 61 & 372 UL 61, 372 & Annex G UL 61, 372 & Annex G	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated. Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated. Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated. Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.
Large Diameter Butterfly Valves (24" - 36")	S903	Products) Henry Pratt Company	Groundhog Buried Service Butterfly Valve, 24" - 36", AWWA C504, Pressure Class 150B, mechanical joint, with Pratt MDT actuator (MDT-4S for 24", MDT-5 for 30" and MDT-5S for 36"). 8 mil min. dry film thickness epoxy coated interior and exterior. Open right.	UL 61 & Annex G	Gland hardware to be fluorocarbon coated. Furnish with Henry Pratt Torque Guard Limiter with shear pin located near road surface set to 450 ftlbs. and 10 ft. extension rod that can be cut in the field. Hardware attaching actuator to body shall be stainless steel. Bi-directional leakage tests at 150 psi and certified performance tests to be submitted with valve.
		Val-Matic Valve and Manufacturing Corp.	Series #2000, Buried Service Butterfly Valve, 24" - 36", AWWA C504, Pressure Class 150B, mechanical joint with actuator (LS-4A for 24", LS -5A for 30" and 36"). 8 mil min. dry film thickness epoxy coated interior and exterior. Open right.	UL 61	Gland hardware to be fluorocarbon coated. Furnish with Aunspach Controls Model D86-250 Valve Over Torque Protector with shear pin located near road surface set to 200 ftlbs. and 10 ft. extension rod that can be cut in the field. Hardware attaching actuator to body shall be stainless steel. Bi-directional leakage tests at 150 psi and certified performance tests to be submitted with valve.
Tapping Sleeves (Ductile or Cast Iron)	S904	Mueller Company	H615/H616 (≤ 24"). Sleeve shall be ordered to fit outside diameter (O.D.) of pipe being tapped.	UL 61 & Annex G	Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D). Hardware to be fluorocarbon coated.
		U.S. Pipe Valve & Hydrant (Sub. Of Mueller Water Products)	T-28. Sleeve shall be ordered to fit outside diameter (O.D.) of pipe being tapped.	UL 61 & Annex G	Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D). Hardware to be fluorocarbon coated.
		Tyler Union	Tyler Mechanical Joint Tapping Sleeve. Sleeve shall be ordered to fit outside diameter (O.D.) of pipe being tapped.	UL 61 & Annex G	Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D). Hardware to be fluorocarbon coated.

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Tapping Sleeves (Stainless Steel)	S904	Ford Meter Box Co.	Model FTSS Stainless Steel Tapping Sleeve (main sizes ≤ 16" with outlet sizes ≤ 12"). Stainless steel test plug, flange and hardware. Furnish with coated stainless steel nuts to prevent seizing and galling.	UL 61 & Annex G	Not to be used when nominal size of tap is equal to nominal size of main. Only $\leq$ 12-inches are allowed on Holly water mains. Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D).
		Mueller Company	Model H-304 Stainless Steel Tapping Sleeve (main sizes ≤ 24" with outlet sizes ≤ 12"). Stainless steel test plug, flange and hardware. Furnish with coated stainless steel nuts to prevent seizing and galling.	NSF 61 & 372	Not to be used when nominal size of tap is equal to nominal size of main. Only $\leq$ 12-inches are allowed on Holly water mains. Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D).
		PowerSeal Pipeline Products Corporation	Model 3490AS Stainless Steel Tapping Sleeve (main sizes ≤ 24" with outlet sizes ≤ 8"). Stainless steel test plug, flange and hardware. Stainless steel nuts to have fusion bonded coating to prevent seizing and galling.	Water Quality Association 61	Not to be used when nominal size of tap is equal to nominal size of main. Only $\leq$ 8-inches are allowed on Holly water mains. Pipe O.D. measurements are recommended when tapping pit cast iron pipe (Classes A thru D).
Tapping Valves	S904	Clow Valve Company	AWWA C509, Model 2639, Figure F6114, M.J. x Tapping Flange, Resilient Wedge Tapping Valve, 3"- 12"	NSF 61 & 372	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.
		Kennedy Valve	AWWA C509, KS-FW, M.J. x Tapping Flange, Resilient Wedge Tapping Valve, 4"-12"	NSF 61 & 372	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.
		Mueller Company	AWWA C509, Model T-2362, M.J. x Tapping Flange Resilient Wedge Tapping Valve, 2"-12"	UL 61, 372 & Annex G	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.
		U.S. Pipe Valve & Hydrant (Sub. Of Mueller Water Products)	AWWA C509, Model T-USP2, M.J. x Tapping Flange Resilient Wedge Tapping Valve, 2"-12"	UL 61, 372 & Annex G	Open right, stainless steel bonnet bolts & nuts. Gland hardware to be fluorocarbon coated.
Cutting - In Valves	S905	Clow Valve Company	AWWA C509, Model 2639, Figure F-6111 Cutting-in Resilient Wedge Gate Valve, 4"-12"	NSF 61 & 372	Open right, stainless steel bonnet bolts & nuts. Gaskets for standard & oversized pipe. Gland hardware to be fluorocarbon coated.
		Kennedy Valve	AWWA C509, Model KS-FW, 8576SS Std. Resilient Wedge Gate Valve, 4"-12"	NSF 61 & 372	Open right, stainless steel bonnet bolts & nuts. Gaskets for standard & oversized pipe. Gland hardware to be fluorocarbon coated.
		Mueller Company	AWWA C509, C-2362 Resilient Wedge Cut-In Valve, 4"-8"	UL 61, 372 & Annex G	Open right, stainless steel bonnet bolts & nuts. Gaskets for standard & oversized pipe. Gland hardware to be fluorocarbon coated.
		U.S. Pipe Valve & Hydrant (Sub. Of Mueller Water Products)	AWWA C509, C-USP2 Resilient Wedge Cut-In Valve, 4"-8"	UL 61, 372 & Annex G	Open right, stainless steel bonnet bolts & nuts. Gaskets for standard & oversized pipe. Gland hardware to be fluorocarbon coated.

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Cutting -In Sleeves	S905	McWane Ductile	M.J. x P.E. Dual Purpose Cutting-in Sleeve	UL 61 & 372	Furnish with appropriate gaskets to connect to standard and oversized iron pipe. Hardware to be fluorocarbon coated
		Mueller Company	H-840/H-841 Cutting-in Sleeve	UL 61 & Annex G	Furnish with appropriate gaskets to connect to standard and oversized iron pipe. Hardware to be fluorocarbon coated
		Ferguson	Mechanical Joint Ductile Iron C110 Cut-In Sleeve	UL 61, 372 & Annex G	Furnish with appropriate gaskets to connect to standard and oversized iron pipe. Hardware to be fluorocarbon coated
Insertion Coupling - PVC	S906	Harrington Corporation - HARCO	Injection Molded Repair Coupling, 4"-12"	NSF 61	
		Multi Fittings - IPEX	Injection Molded Repair Coupling, 4"-12"	NSF 61 & Annex G	
Insertion Sleeve - Ductile Iron Mechanical Joint (Less Than 24" Diameter)	S906	McWane Ductile	M.J. Dual Purpose Solid Sleeve, Long Body, less than 24" diameter.	UL 61 & 372	Double thickness cement mortar lining w/ asphalt coating. Hardware to be fluorocarbon coated.
		Tyler Union	M.J. Dual Purpose Solid Sleeve, Long Body, less than 24" diameter.	UL 61, 372 & Annex G	Epoxy coated or double thickness cement mortar lining w/ asphalt coating. Hardware to be fluorocarbon coated
		U. S. Pipe (A Quikrete Company)	M.J. Dual Purpose Solid Sleeve, Long Body, less than 24" diameter; class 350.	UL 61, 372 & Annex G	Epoxy coated or double thickness cement mortar lining w/ asphalt coating. Hardware to be fluorocarbon coated.
		HYMAX (A Mueller Brand)	HYMAX 2 with Flip Gasket, 3"-12" diameter	NSF 61 & 372	Fusion Bonded Epoxy coating, Type 304 stainless steel hardware.
		Smith-Blair, Inc.	OMNI CAST Coupling System Style 441, Straight 2" - 16", Reducing 2"-8"	UL 61 & 372	Flexi-Coat Fusion-Bonded Epoxy Finish. Bolt & Nut Type 304 Stainless Steel hardware with fluoropolymer coated nuts.
Insertion Sleeve - Bolted Sleeve Type Coupling (24" Diameter and Larger)	S906	Smith-Blair, Inc.	Style 411 (Straight), Style 413 (Transition), Style 415 (Reducing), length of center sleeve to be ≥ 10"	UL 61, 372 & Annex G	Epoxy coated. Hardware to be fluorocarbon coated
		U. S. Pipe (A Quikrete Company)	Solid Sleeve (Straight), 30" to 48" diameter.	UL 61, 372 & Annex G	Epoxy coated or double thickness cement mortar lining w/ asphalt coating. Hardware to be fluorocarbon coated.
Valve Box	S909	Bibby Ste-Croix, USA	5¼", I5B Cast-Iron Adjustable Slide Risers, V856, V858, or V862, 3" flange on top section approximately 5.75" below top of top section.	N/A	"Water" Cover
		Bingham & Taylor	5¼", Cast-Iron-I5B, 2-Piece Slide Type, 3" flange on top section approximately 6" below top of top section.	N/A	"Water" Cover
		Bingham & Taylor	For Repaving; Rite Hite Adapter, Slide Type, Adjustable from 2.5"-12", Slide 8, CUL5A-RH	N/A	"Water" Cover

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Pitometer Ball Valve (for Ductile/Cast Iron Pipe or PVC/PVCO Pipe)	S911	Ford Meter Box Co.	B81-455-NL, 1" valve with 1¼" MIP inlet x 1¼" FIP outlet and multi-directional HP-4 brass angled handle, brass cotter pin & 5/8" stainless steel operating rod.	UL 61 & Annex G	Provide brass bushing on inlet, 1½" MIP x 1¼" FIP (Ford C18- 56). For PVC/PVCO pipe, the ball valve shall be 1-1/2 inch cast bronze, rubber seats and O-rings with 1-1/2 inch – 1-1/4 inch reducer on outlet end FPT.
Pitometer Corporation Stop (for Ductile/Cast Iron Pipe or PVC/PVCO Pipe)	S911	A.Y. McDonald	73148B, ball style, 1½" AWWA inlet x 1½" FIP outlet.	Truesdail 61, 372 & Annex G	For cast or ductile iron pipe, must be installed in service saddle on water mains less than 16" diameter and use 1 <sup>3</sup> / <sub>8</sub> " min. diameter hole cutter. For PVC/PVCO pipe, must be installed in service saddle for all water mains and use 1 <sup>3</sup> / <sub>8</sub> " min. dia. shell cutter.
		Cambridge Brass	301-A6F6-NL, Ball Style, 1½" AWWA inlet x 1½" FIP outlet	CSA 61, 372 & Annex G	For cast or ductile iron pipe, must be installed in service saddle on water mains less than 16" diameter and use 1%" min. diameter hole cutter. For PVC/PVCO pipe, must be installed in service saddle for all water mains and use 1%" min. dia. shell cutter.
		Ford Meter Box Co.	FB1600-6-NL Ball Style, 1½" AWWA inlet x 1½" FIP outlet	UL 61 & Annex G	For cast or ductile iron pipe, must be installed in service saddle on water mains less than 16" diameter and use 1%" min. diameter hole cutter. For PVC/PVCO pipe, must be installed in service saddle for all water mains and use 1%" min. dia. shell cutter.
		Mueller Company	B-20045N Ball Style, 1½" AWWA inlet x 1½" FIP outlet	UL 61, 372 & Annex G	For cast or ductile iron pipe, must be installed in service saddle on water mains less than 16" diameter and use 1%" min. diameter hole cutter. For PVC/PVCO pipe, must be installed in service saddle for all water mains and use 1%" min. dia. shell cutter.
Pitometer Tap Valve Box	S911	Bibby Ste-Croix, USA	7" Valve Box, 3 Piece Screw Type, 3" flange on top section approximately 5.75" below top of top section.	N/A	"Water" Cover, #6 Base
		Bingham & Taylor	7" Shaft, 3 Piece Screw Type, Fig. No. 5001, 3" flange on top section approximately 5.75" below top of top section.	N/A	"Water" Cover, No. 6 Round Base.
Corporation Stop (AWWA x Copper Flare) for Copper Services	S912	A.Y. McDonald	74701B Ball Style: ¾", 1", 1½", 2"	Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight.
		Cambridge Brass	301NL Ball Style: ¾", 1", 1½", 2"	CSA 61, 372 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight.
		Ford Meter Box Co.	FB600-NL Ball Style: ¾", 1", 1½", 2"	UL 61 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight.
		Mueller Company	B-25000N Ball Style, ¾", 1", 1½", 2"	UL 61, 372 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight.

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Corporation Stop (AWWA x PE Compression) for Polyethylene Services	S912	A.Y. McDonald	74701BQ Ball Style: 1", 1½", 2"	Truesdail 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. Maximum lead content of 0.25% by weight. 1½" for new services only.
		Cambridge Brass	301NL CB Comp. Ball Style, 1", 1½", 2"	CSA 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. Maximum lead content of 0.25% by weight. 1½" for new services only.
		Ford Meter Box Co.	FB1000-Q-NL Ball Style, 1", 1½", 2"	UL 61 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. Maximum lead content of 0.25% by weight. 1½" for new services only.
		Mueller Company	B25008N 110 Comp. Ball Style: 1", 1½", 2"	UL 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. Maximum lead content of 0.25% by weight. 1%" for new services only.
Drilling Machines & Shell Cutters for Small Service/Pito Tap Connections to PVC/PVCO Pipe	S912	Ford Meter Box Co.	Model 77 Drilling Machine w/PVC shell cutters: ½" cutter for 1" saddle, 1¾" cutter for 1½" saddle (pito tap), 1¾" cutter for 2" saddle.	N/A	PVC Shell cutters to have 2 slots min. and shall be capable of retaining the cut coupon
		Mueller Company	E-5 Drilling Machine w/PVC shell cutters: <sup>7</sup> / <sub>8</sub> " cutter for 1" saddle, 1-7/16" cutter for 1½" saddle (pito taps), 1¾" cutter for 2" saddle.	N/A	PVC Shell cutters to have 2 slots min. and shall be capable of retaining the cut coupon
		Reed Manufacturing	CDTM2100 Series Drilling Machine w/PVC shell cutters: <sup>7</sup> / <sub>8</sub> " cutter for 1" saddle, 1-7/16" cutter for 1 <sup>1</sup> / <sub>2</sub> " saddle (pito tap), 1 <sup>3</sup> / <sub>4</sub> " for 2" saddle.	N/A	PVC Shell cutters to have 2 slots min. and shall be capable of retaining the cut coupon
Service Saddle (Ductile Iron/Cast Iron Pipe)	S912	A.Y. McDonald	Model 3825 double bronze strap, AWWA taper threads, EPDM gasket. Not for use in potential petroleum contaminated soils.	Truesdail 61	Standard brass NSF 61 certified for all sizes. See specification/detail for table showing when saddles are required.
		Cambridge Brass	Series 810 double bronze strap, AWWA taper threads, Nitrile gasket. For use in both potential petroleum contaminated soils and non-petroleum contaminated soils.	CSA 61	Standard brass NSF 61 certified for all sizes. See specification/detail for table showing when saddles are required.
		Ford Meter Box Co.	Style 202B double bronze strap, AWWA taper threads, EPDM gasket. Not for use in potential petroleum contaminated soils.	UL 61	Standard brass NSF 61 certified for all sizes. See specification/detail for table showing when saddles are required.
		Mueller Company	BR2B Series double bronze strap, AWWA taper threads, Nitrile gasket. For use in both potential petroleum contaminated soils and non-petroleum contaminated soils.	NSF 61	Standard brass NSF 61 certified for all sizes. See specification/detail for table showing when saddles are required.

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Service Saddle (PVC/PVCO Main)	S912	A.Y. McDonald	Model 3895 brass hinged/Model 3805 brass bolted, for C900 PVC, AWWA taper thread outlet, EPDM gasket.	Truesdail 61	Standard brass NSF 61 certified for all sizes. Service saddles required for all taps on PVC/PVCO pipe.
		Cambridge Brass	Series 800 brass hinged for C900, AWWA taper thread outlet, Nitrile gasket	CSA 61	Standard brass NSF 61 certified for all sizes. Service saddles required for all taps on PVC/PVCO pipe.
		Ford Meter Box Co.	Style S90 Design A brass hinged or bolted for C900 PVC, AWWA taper thread outlet, EPDM gasket	UL 61	Standard brass NSF 61 certified for all sizes. Service saddles required for all taps on PVC/PVCO pipe.
		Mueller Company	S-13000/H13000 Series hinged or bolted for C900 PVC, AWWA taper thread outlet, Nitrile gasket	NSF 61	Standard brass NSF 61 certified for all sizes. Service saddles required for all taps on PVC/PVCO pipe.
Service Tubing - Copper	S913	Cambridge-Lee Industries, LLC	Copper Water Tube, Type K, ASTM B88, ¾", 1", 1½", 2"	NSF 61 & 372	
		Cerro Flow Products, Inc.	Copper Water Tube, Type K, ASTM B88, ¾", 1", 1½", 2"	NSF 61 & 372	
		Wieland Copper Products, Inc.	Copper Water Tube, Type K, ASTM B88, ¾", 1", 1½", 2"	UL 61 & Annex G	
		Mueller Industries	Streamline Copper Water Tube, Type K, ASTM B88, ¾", 1", 1½", 2".	NSF 61 & 372	
		Great Lakes Copper, Inc.	Copper Water Tube, Type K, ASTM B88, ¾", 1", 1½", 2".	NSF 61 & 372	
Service Tubing - Polyethylene	S913	Charter Plastics	SDR-9 CTS O.D., PE 4710, 250 psi, Blue Ice tubing, 1", 1½", 2", blue outer layer.	NSF 61,14	
		Endot Industries	SDR-9 CTS O.D., PE 4710, 250 psi, EndoPure Tubing, 1", 1½", 2", blue outer layer.	NSF 14 & Annex G	
		Oil Creek Plastics	SDR-9 CTS O.D., PE 4710, 250 psi, Aqua-Jet Tubing, 1", 1½", 2", blue outer layer	NSF 14	
		Advanced Drainage Systems (ADS)	SDR-9 CTS O.D., PE 4710, 250 psi, Potable Water Service Tubing, 1", 1½", 2", blue outer layer.	NSF 14	
Service Tubing - PEX (Cross-Linked Polyethylene)	S913	Rehau	SDR-9 CTS O.D., AWWA C904, PEXa, 200 psi/73.4°F @ 0.63 Design Factor, Material Designation Code 3306, MUNICIPEX Water Service Pipe, 1", 1½", 2", blue outer layer.	NSF 14, 61, 372	

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Service Tubing/Pipe Couplings to Connect New Copper Water Service to Existing Service	S913	A.Y. McDonald	74758 series (3 part - flare copper x flare copper), 74758C-55 series (flare copper x pack joint iron), 74758C-66,67,68 series (flare copper x pack joint lead). 74758Q series (McQuick Compression CTS PE x McQuick Compression CTS PE, McQuick Compression CTS PE x flare copper, McQuick Compression CTS PE x pack joint iron or 74758 series pack joint CTS PE x pack joint iron), Mac-Pak series (pack joint CTS PE x pack joint lead).	Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight. Stainless steel inserts required for all sizes.
		A.Y. McDonald	NL Service Fitting (s): 74764Q (Q CTS compression x Q CTS compression x FNPT) & 74753Q (Q CTS compression x MNPT)	Truesdail ANSI 61/372	Standard brass NSF 61 certified for all sizes. See specification/detail for table showing when saddles are required. No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight.
		Ford Meter Box Co.	C22-NL-series (3 part - flare copper x flare copper), C25-NL series (flare copper x pack joint iron through 1"), C45-NL-series (pack joint copper x pack joint iron for 1½" and 2"), Lead-Pak series (flare copper x pack joint lead, through 1" and pack joint copper x pack joint lead for 1½" & 2"). C44-Q-NL series (Quick Joint CTS PE x Quick Joint CTS PE and Quick Joint CTS PE x Quick Joint copper), C45-NL series (pack joint CTS PE x pack joint iron), Lead-Pak series (pack joint CTS PE x pack joint lead).	UL 61 & Annex G	No Lead Brass required for all sizes. Maximum lead content of 0.25% by weight. Stainless steel inserts required for all sizes.
		Uponor	PEX water service tubing shall be copper tube size (CTS), SDR 9, PEXa, pressure class 200 psi/73.4°F @ 0.63 design factor, material designation 3306, with blue outer layer, in conformance with the requirements of ANSI/AWWA C904, in sizes 1 inch, 1- 1/2 inch and 2 inches.	UL	PEX water service tubing shall bear permanent identification markings that will remain legible during normal handling, storage, installation and service life and that will not reduce strength or otherwise damage tubing. (PE 4710 or PEX 3306), pressure class, AWWA designation number (C901 for PE or C904 for PEX)
Curb Box	S914	Bibby Ste-Croix, USA Bingham & Taylor	<ul> <li>2½" Service Box, Screw Type with H.D. screw top,</li> <li>Fig. 95E, complete.</li> <li>2½" Cast Iron Top/Injection Molded Plastic White</li> <li>Bottom Combination Curb Box, Screw Type, Item</li> </ul>	N/A N/A	"Water" Cover, extends to 66 inches. Furnish enlarged base (Code V313) for use with 1½" & 2" curb stop. "Water" Cover, extends to 64 inches. Furnish enlarged base (Fig. No. 4980) for use with 1½" & 2" curb stop.
		Bingham & Taylor	No. CIP2B110015FWWH94RPBP, complete. 2½" Cast Iron Curb Box, Screw Type, Fig. No. 4901-B, Size No. 94F, complete.	N/A	"Water" Cover, extends to 66 inches. Furnish enlarged base (Fig. No. 4980) for use with 1½" & 2" curb stop.

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE		CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Curb Stop (Copper Flare x Copper Flare) for Copper Services	S914	A.Y. McDonald	76100: ¾", 1", 1½", 2" w/dielectric insulator on outlet	Furnish	Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes.
		Cambridge Brass	202NL: ¾", 1", 1½", 2". w/dielectric insulator on outlet	Furnish	CSA 61, 372 & Annex G	No Lead Brass required for all sizes.
		Ford Meter Box Co.	B22-SI-NL: ¾", 1", 1½", 2". w/dielectric insulator on outlet	Furnish	UL 61 & Annex G	No Lead Brass required for all sizes.
		Mueller Company	B-25204N: ¾", 1", 1½", 2". w/dielectric insulator on outlet	Furnish	UL 61, 372 & Annex G	No Lead Brass required for all sizes.
Curb Stop (PE Compression x PE Compression) for Polyethylene Services	S914	A.Y. McDonald	76100Q: 1", 1½", 2"; 74701BQA for 1' Connection	" with Anode	Truesdail 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. 1½" for new services only.
		Cambridge Brass	202NL CB Comp.: 1", 1½", 2"		CSA 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. 1½" for new services only.
		Ford Meter Box Co.	B44-Q-NL: 1", 1½", 2"		UL 61 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. 1½" for new services only.
		Mueller Company	B-25209 110 Comp., 1"; B-25209N, 2"		UL 61, 372 & Annex G	No Lead Brass and stainless steel inserts required for all sizes. 1½" for new services only.
Inside Meter Setter (for relocating water meter on existing service)	S915	Ford Meter Box Co.	No Lead Handyhorn (HH-NL Series) o Pretzelhorn (PH-NL Series) setters w/ pack joint connections		UL 61 & Annex G	No Lead Brass required for all sizes. Handyhorns (5/8", 5/8"x3/4" and 3/4" meter sizes); Pretzelhorns (5/8", 5/8"x3/4", 3/4" and 1" meter sizes)
		A.Y. McDonald	No Lead Handyhorn (742 Series) or N Pretzelhorn (746 Series) setters w/ in joint connections		Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes. Handyhorns (5/8", 5/8"x3/4" and 3/4" meter sizes); Pretzelhorns (5/8", 5/8"x3/4", 3/4" and 1" meter sizes)
Temporary Bypass Pipe	S916	North American Specialty Products	Certa-Lok Yelomine Pipe; 2" through joint PVC Pressure Piping System, mir class = 200 psi (SDR 21)		NSF 14, 61 & 372	
Hydrants	S917	Clow Valve Co.	Clow Medallion 5-1/4" Fire Hydrant, I furnished with optional upper stem ja installed.		N/A	5-6" min. bury depth for dom. system and 6'-0" min. for Holly system. One 4½" pumper con. & two 2½" hose connections. Furnish with factory applied polyester coated "Super-Coat" finish.
		Kennedy Valve	Guardian K81D		N/A	5-6" min. bury depth for dom. system and 6'-0" min. for Holly system. One 4½" pumper con. & two 2½" hose connections. Furnish with factory applied polyester coated finish.
		U.S. Pipe Valve & Hydrant (Sub. Of Mueller Water Products)	Metropolitan M-94		N/A	5-6" min. bury depth for dom. system and 6'-0" min. for Holly system. One 4½" pumper con. & two 2½" hose connections. Furnish with factory applied epoxy primer and polyurethane enamel coated finish.

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Water Meter Vault - Precast Concrete	S920	Kistner Concrete Products, Inc.	Precast concrete, design loading: A.A.S.H.T.O. HS-20- 44 with 30% impact and equivalent soil pressure of 130 psf. Bituminous coated exterior.	N/A	Furnish with galvanized ladder, "Ladder-Up" safety post, sump, access and pipe openings, aluminum hatch or cast iron manhole frame and cover.
		Lakelands Concrete Products, Inc.	Precast concrete, design loading: A.A.S.H.T.O. HS-20- 44 with 30% impact and equivalent soil pressure of 130 psf. Bituminous coated exterior.	N/A	Furnish with galvanized ladder, "Ladder-Up" safety post, sump, access and pipe openings, aluminum hatch or cast iron manhole frame and cover.
Water Meter Vault - Aluminum Hatch for Lawn Areas	S920	Bilco	Aluminum hatch, Model J-2AL (30"), J-4AL (36"), J- 5AL (42") and JD-2AL (48"). All models furnished with stainless steel hardware.	N/A	These models are designed for pedestrian rating of 300 lb./ft <sup>2</sup> min. If higher loads are anticipated, furnish models that satisfy anticipated loads.
		East Jordon Iron Works	Aluminum hatch, Model H30301601 (30"), H36361601 (36"), H42421601 (42") and H48481701 (48"). All models furnished with stainless steel hardware.	N/A	These models are designed for pedestrian rating of 300 Ib./ft <sup>2</sup> min. If higher loads are anticipated, furnish models that satisfy anticipated loads.
Water Meter Vault - Cast Iron Manhole Frame and Cover	S920	Neenah Foundry	Model R-1740-B (30" clear), R-1740-D (36"clear), R- 1741-E (42" clear), R-1741-F (48"clear)	N/A	Heavy duty cast iron frame and self-sealing cover. 42" and 48" clear sizes furnished with removable offset inner lid.
Water Meter Vault - Interior Rising Stem Gate Valves	S920	Clow Valve Company	AWWA C509, Model 2639, Figure F-6136 OS&Y, flanged ends, Resilient Wedge Gate Valve, 4"-12"	NSF 61 & 372	Open left, stainless steel bonnet bolts & nuts. Furnish with hand wheel.
		Kennedy Valve	AWWA C509, Model KS-FW, Fig. No. 8068A OS&Y, flanged ends, Resilient Wedge Gate Valve, 4"-12"	NSF 61 & 372	Open left, stainless steel bonnet bolts & nuts. Furnish with hand wheel.
Water Meter Plate Strainer	S920	Badger Meter, Inc.	Badger Bronze Plate Strainers, flanged ends, cast bronze, low lead alloy (LL-NS) 3", 4" and 6".	NSF 61, Annex G & 372	
		Neptune Technology Group	Neptune Plate Strainers 3"-10", flanged ends.	NSF 61, Annex G & 372	
Water Meters (3" to 10") Compound, Turbo and Fire Service	S920	Varies	Varies	Varies	Meters are to be purchased from and picked up at the Water Bureau. Up to 6 week lead time for large meters.
Water Meter Vault - Locking Bleed Valve Assembly	S920	Ford Meter Box Co.	3/4" tapping saddle w/F.I.P outlet threads (Cat. #202B-IP3-NL ); 3/4" curb stop w/M.I.P. ends & padlock wings (Cat. #B88-333W-NL)	N/A	No Lead Brass required.
Water Meter Vault - Modular Seal for Pipe Openings in Vault Walls	S920	Pipeline Seal & Insulator, Inc.	Link-Seal Modular Seals, Model S-316 with EPDM seal elements and 316 Stainless Steel hardware.	N/A	
Bell Joint Clamp	S923	Dresser	Style 60	N/A	Furnish with fluorocarbon coated or stainless steel bolts & nuts.
		Smith Blair	Model 274	N/A	Furnish with fluorocarbon coated or stainless steel bolts & nuts.

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Water Meter Pit (1" & Smaller) for Lawn Areas	S924	Ford Meter Box Co.	Series PD No Lead Brass Plastic Pit Setter, tile diameter as required for meter size. 54" minimum service line bury depth. Lockwing angle ball valve meter swivel inlet. Lockwing angle ball valve meter swivel outlet except for yard hydrants which shall have angle cartridge dual check valve outlet.	N/A	Furnish with Ford Wabash Double Lid Covers having recessed lid with 2" hole (for electronic meter read) and plastic inner lid, Model W32-T for 18" tile I.D., W3-T for 20" tile I.D. and W4-T for 21" tile I.D.
		A.Y. McDonald	Series 780W No Lead Brass Plastic Pit Setter, tile diameter as required for meter size. 54" minimum service line depth. Lockwing angle ball valve meter swivel inlet. Lockwing angle ball valve meter swivel outlet except for yard hydrants which shall have angle cartridge dual check valve outlet.	N/A	Furnish with A.Y. McDonald recessed cover with 2" center hole (for electronic meter read) and plastic inner lid, riser and frame, Model 74M32WTCX800 for 18" tile I.D. and 74M4WTCX800 for 21" tile I.D.
Water Meter Pit (1½" & 2") for Lawn Areas	S924	Ford Meter Box Co.	Series PM No Lead Brass Plastic Pit Setter, 36" tile diameter, 54" minimum service line bury depth. Lockwing angle ball valve meter swivel inlet and outlet.	N/A	Meter bypass not allowed without prior approval of Water Bureau. Furnish with Ford Monitor Cover with 2" hole (for electronic meter read) with inner frost lid, Model MC-36- MB-T.
		A.Y. McDonald	Series 780 No Lead Brass Plastic Pit Setter, 36" tile diameter, 54" minimum service line bury depth. Lockwing angle ball valve meter swivel inlet and	N/A	Meter bypass not allowed without prior approval of Water Bureau. Furnish with A.Y. McDonald Monitor Cover with 2" hole (for electronic meter read) with inner frost lid, Model
Water Meters (5/8" - 2")	S924 S915	Varies	Varies	Varies	Meters are to be purchased from the Water Bureau.
Yard Hydrant	\$925	Woodford	Model W34 Freezeless Yard Hydrant w/cast iron, above ground lockable operating head and lift handle, 3/4" brass male hose nozzle, 1" galvanized	N/A	Shutoff valve shall operate below the frost line and be capable of draining when closed. Furnish with 5 foot bury depth.
Thermite Weld Equipment/Mold	S962	Erico	Cadweld Weld Molds, CAHBA1L-PS - #4 AWG to iron pipe, CAHBA1G-PS - #8 thru #12 AWG to iron pipe	N/A	For attaching wire to ductile or cast iron pipe and fittings ≤ 24" dia. Use adapter sleeve (CAB-133-1H) for wire sizes 10 AWG and 12 AWG.
		Thermoweld	Thermo Mold CS-33 M159-PS - #4 AWG to iron pipe, CS-33 M156-PS - #8 thru #12 AWG to iron pipe	N/A	For attaching wire to ductile or cast iron pipe and fittings ≤ 24" dia. Use adapter sleeve (#38-0200-00) for wire sizes 10 AWG and 12 AWG
Thermite Weld Metal	S962	Erico	Cadweld CA25XF19 or CA25PLUSXF19 for #8 thru #12 AWG and CA45XF19 or CA45PLUSXF19 for #4 AWG	N/A	For attaching wire to ductile or cast iron pipe and fittings ≤ 24" dia. Use adapter sleeve (CAB-133-1H) for wire sizes 10 AWG and 12 AWG.
		Thermoweld	Thermoweld cartridge size 25Cl for #8 thru #12 AWG and 45Cl for #4 AWG	N/A	For attaching wire to ductile or cast iron pipe and fittings ≤ 24" dia. Use adapter sleeve (#38-0200-00) for wire sizes 10 AWG and 12 AWG.
Joint Bond Wire	S962	Kalas Manufacturing	Cathodic Protection Cable, #4 or #8 AWG stranded copper wire with 0.110" thick HMWPE insulation.	N/A	Use #8 wire for pipe diameter sizes ≤ 12" and #4 wire for pipe diameter sizes > 12"
		Houston Wire & Cable Co. (HWC)	Cathodic Protection Cable, #4 or #8 AWG stranded copper wire with 0.110" thick HMWPE insulation.	N/A	Use #8 wire for pipe diameter sizes ≤ 12" and #4 wire for pipe diameter sizes > 12"

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Exothermic Weld Protection System	S962 S966 S968	Royston	Handy Cap IP pre-primed for sealing wires sizes as large as #8 AWG. Handy Cap XL IP for sealing wire sizes #6, #4 and #2 AWG.	N/A	Tapecoat Omniprime is required when application temperature is below 40°F.
		Thermoweld	Thermocap PC pre-primed	N/A	
Ground Clamps - Bronze (for attaching anode lead wire to copper tube)	S966	Galvan Electrical	GC2, 1¼" to 2" copper tube	N/A	All bronze body and screws, UL rated for direct burial
		Garvin Industries	GCB8125200, 1¼" to 2" copper tube	N/A	All bronze body and screws, UL rated for direct burial
Wire Connection Copper Tube Nuts (for attaching anode lead wire to copper tube)	S966	A.Y. McDonald	4700A Flare Nut with Anode (3/4", 1") 4700QA CST Q-Comp Nut with Anode (1")	Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes.
		AY McDonald	No-Lead Cambridge 74758QA 1" Coupling "Q" CTS x 1" "Q" CTS w/ Anode Nut	Truesdail 61, 372 & Annex G	No Lead Brass required for all sizes.
		Ford Meter Box Co.	No Lead Brass Thaw Wire Copper Tube Nuts, CTN-3- THW-NL (3/4") and CTN-4-THW-NL (1")	UL 61 & Annex G	No Lead Brass required for all sizes.
Magnesium Anodes (High Potential)	S966	Corrpro Companies, Inc.	High Potential Cast Magnesium Anode in prepackaged bags w/backfill and #12 AWG solid wire TW,THWN or THHN jacket	N/A	Open circuit voltage potential = 1.70-1.77 volts vs. CU/CUSO4 reference electrode, Backfill 75% Gypsum, 20% Bentonite, 5% Sodium Sulfate
		Galvotec Alloys	SuperMAG High Potential Cast Magnesium Anode in prepackaged bags w/backfill and #12 AWG solid wire TW,THWN or THHN jacket	N/A	Open circuit voltage potential = 1.70-1.77 volts vs. CU/CUSO4 reference electrode, Backfill 75% Gypsum, 20% Bentonite, 5% Sodium Sulfate
		Stuart Steel Protection	High Potential Cast Magnesium Anode in prepackaged bags w/backfill and #12 AWG solid wire TW, THWN or THHN jacket	N/A	Open circuit voltage potential = 1.70-1.77 volts vs. CU/CUSO4 reference electrode, Backfill 75% Gypsum, 20% Bentonite, 5% Sodium Sulfate
Cathodic Protection Test Station (Paved Surface)	S968	Bingham & Taylor	7" Shaft, 3 Piece Screw Type, Fig. No. 5001	N/A	"Water" Cover, No. 6 Round Base. Furnish with terminal board with 7 stainless steel terminal connections.
Cathodic Protection Test Station (Unpaved Surface)	S968	Bingham & Taylor	Complete 6" Shaft by 24" depth CP Test Box Item P5B668DT24CPT7T for unpaved surfaces, w/"Water Test" cast cover,	N/A	Furnish with terminal board having 7 stainless steel terminal connections.
Reference Electrodes (Copper- Copper Sulfate)	S968	Electrochemical Devices, Inc.	Model UL, Longlife Underground Reference Cu/CuSO4 Electrode, w/50' #14 AWG HMWPE, 30 yr. design life	N/A	Stability = +/- 5 mV, current drain of 0.01 micro Amps continuous, gelled element and backfill in cotton bag, 25 lbs.
Reference Electrodes (Silver-Silver Chloride)	S968	Electrochemical Devices, Inc.	Model UL, Longlife Underground Reference Ag/AgCl Electrode, w/50' #14 AWG HMWPE, 30 yr. design life	N/A	Stability = +/- 5 mV, current drain of 0.01 micro Amps continuous, gelled element and backfill in cotton bag, 25 lbs.

PRODUCT	CITY SPEC.	MANUFACTURER	MODEL/STYLE	CERT. LAB & STANDARD	DESCRIPTION/COMMENTS
Detector Check Valves for Holly Fire Services	Misc.	Mueller Company	Model EDC IV, spring loaded, fusion bonded epoxy coating on exterior and interior of cast iron body, trim kit for bypass meter with 3/4" brass or copper pipe and fittings	N/A	UL Listed/FM approved for fire service. Bypass meter and couplings to be purchased from the Water Bureau.
		FEBCO (A WATTS Brand)	Series 800, spring loaded, fusion bonded epoxy coating on exterior and interior of ductile iron body,		UL Listed/FM approved for fire service. Bypass meter and couplings to be purchased from the Water Bureau.
		brand)	trim kit for bypass meter with 3/4" brass or copper		
Pipe Repair Clamp	Misc.	PowerSeal Pipeline Products Corporation	Model 3121SST (up to 12-inches diameter), Model 3122AS (12-inches to 16-inches diameter), Model 3123AS (greater than 16-inches), type 304 stainless steel lug single panel, 1/4" thick SBR gasket, type 304 stainless steel armor plate recessed and bonded to the gasket, type 304 stainless steel bolts, nuts, and lugs, 24-inches minimum width.	N/A	
		HYMAX (A Mueller Brand)	HYMAX Versa Coupling (up to 70-inches diameter), Type 304 stainless steel, EDPM gasket, Type 304 stainless steel armor plate recessed and bonded to the gasket, Type 304 stainless steel bolts and nuts, polycarbonate lugs for 1.5" to 12" diameter, type 304 stainless steel lugs for 14"-70", 11-inches minimum width	N/A	
		Ford Meter Box Co.	Model FS1 (up to 12-inches diameter), Model FS2 (12-inches to 16-inches diameter), Model FS3 (greater than 16-inches), type 304 stainless steel band, lifter bar, and sidebar, 1/4" thick SBR gasket, type 304 stainless steel armor plate bonded to the gasket, type 304 stainless steel bolts, nuts, and lugs,	N/A	
		Smith-Blair, Inc.	Model 261 (up to 12-inches diameter), Model 263 (12-inches diameter and greater), type 304 stainless steel band, lifter bar, and sidebar, 1/4" thick SBR gasket, type 304 stainless steel armor plate bonded to the gasket, type 304 stainless steel bolts, nuts, and lugs, 24-inches minimum width.	N/A	