

City of Garland
 Approved Materials List for Drainage
 September 23, 2021 (Revised: 9/15/2023)

BASIC PRODUCT CATEGORY	SUB-CATEGORY	MANUFACTURER	MODEL, TYPE, OR STYLE APPROVED	GOVERNING SPECIFICATION	GENERAL REQUIREMENTS	NOTES
Storm Drain						
Storm Sewer	> 15"		Reinforced concrete pipe, Class III	ASTM C76		Spigot end coated with asphaltic primer for better adhesion of Butyl rubber sealant. Class IV or greater may be required depending on surface loads and depth of pipe.
Gaskets		Ram-Nek	Preformed Flexible Plastic Gaskets			Sufficient quantity must be used to achieve squeeze out
Manholes, Junction Structures	Ring & Cover	Bass & Hays	BH 380-24P			

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Water Pipe							
Water Main	4" to 12" Dia.		PVC, Class 235, DR 18	ANSI/AWWA C900	Designed for minimum working pressure of 200psi and minimum field test pressure of 200 psi; HS-20 LiveLoad; PVC shall be blue in color	Integral Bell joints: ASTM D-3139; Gaskets: ASTM F477; Fusible PVC and Certa-Lok are acceptable PVC pipe materials	
	16" to 24" Dia.		PVC, Class 235, DR18	ANSI/AWWA C905		Push on joints: ASTM D-3139; Gaskets: ASTM F477; Fusible PVC and Certa-Lok are acceptable PVC pipe materials	
	16" Dia. and Larger		Reinforced Concrete Cylindrical Pipe (RCCP) or PVC, Class 235, DR 18	AWWA C303/C304			
Water Services	¾" to 2" Dia.		Type K Copper	ASTM B88			
	4" to 12" Dia.		PVC, Class 235, DR 18 PVC, Class 305, DR 14 for Fire Line	ANSI/AWWA C900			
Fire Hydrants							
Fire Hydrants	Items listed in General Notes - Water	Mueller	Super Centurion 250-A423		Manufactured within 2 years of install date; 1~ 4" Steamer Nozzle; 2 ~ 2.5" Hose Nozzles; 1" Pentagon Operating Nut Turns Clockwise to Close		
		Waterous Company / American Flow Control	Pacer WB67-250; 5 ¼" Waterous Pacer				
		Kennedy	K81A Guardian				
		Clow	Medallion				
		FireFlo	FireFlo Model F-06				
Fire Hydrant Paint	Aluminum	Flynt				On 6" Water Main	
	Blue	Flynt	Tropic Blue Enamel			On 8" Water Main	
	Yellow	Flynt	Safety Yellow Enamel			On 10" or > Water Main	
Valves							
Valves	6" to 12"	Mueller	A-2361 Resilient Wedge Gate Valve	AWWA C515	Upon approval of City Engineer Horizontal installation only		
		Mueller	A-2362 Resilient Wedge Gate Valve	AWWA C509			
		Clow	2639 / 2640 Resilient Wedge Gate Valve	AWWA C509			
		Waterous Company / American Flow Control	Series 2500 Resilient Wedge Gate Valve	AWWA C515			
		M&H	4067 Resilient Wedge Gate Valve	AWWA C509			
		Kennedy	KS-FW Resilient Wedge Gate Valve	AWWA C509			
	16" and Larger	Mueller	Linseal Series Butterfly Valve	AWWA C504			2" operating nut
		M&H Valve Company	Style 4500 Class 150 BFV				
Air Release Valves						2"	
Blow-Off Valve		Kupferle Foundry	Trufflo TF550			For 2" Only	
Valve Stacks and Boxes		Bass & Hays	Model 2436S, 3648S, 3690S		Screw Type		
		Tyler Union	6850 Series – Screw Type				
		Star Pipe	VB462S, VB562S – Screw Type				
		EJ	8550 Series – Screw Type				
		Proselect	PSVB562SW – Screw Type				
		Accucast	Part #111200 – Screw Type				

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Fittings, Misc						
Tapping Sleeves	For PVC Pipe	Mueller	H304SS**		Type 304 Stainless Steel Tapping Sleeve with Stainless Steel Flange; Require 3/4" NPT Brass Test Plug	
		Ford	FTSS, FTSS-MJ			
		Smith-Blair	665	ASTM A240		
		Romac Industries	SST III			
	For RCCP	JCM Industries	JCM 415 Type 1 ESS w/ 304 SS straps, nuts, bolts, studs, & washers and 12 mil fusion bonded epoxy coating			
	Thompson Pipe Group	415 Type 1 ESS w/ 304 SS straps, nuts, bolts, studs, & washers and 12 mil fusion bonded epoxy coating				
Mechanical Joint Restraint	Items listed in General Notes - Water	EBA Iron Inc.	Series 2000PV Megalug®	ASTM A536		Meets UNI-B-13-92; C900
		Romac Industries, Inc.	Grip Ring Pipe Restrainer			
		Ford	Uni-Flange® Series 1500 Circle Lock			
		Ford	Uni-Flange® Series 1300 w/ 316 Stainless Steel			
		Star Pipe Products	Stargrip® 4000 MJ Wedge Action Restraint			
		Star Pipe Products	StarFlange Series 3200			
		Sigma	One-Lok Series SLDE			
		Tyler Union	Tufgrip Series 1500 – Domestic			
		Tyler Union	Tufgrip Series 2000 – Non-Domestic			
		EBA Iron Inc.	3800 Mega Coupling – DI to PVC Connection			
Ductile Iron Fittings		Clow Products	Clow MJ C110 Fittings			
		Star Pipe Products	Star Pipe_mj_accessories1901			
		Sigma	Sigma MJ Fittings			
		Tyler Union®	Tyler Union C153 MJ Compact Fittings			
		US Pipe/Forterra	USpipe_Forterra_MJ Fittings_Feb2016			
Restraint (Internal Joint Restraint)	C900 PVC Pipe	JM Eagle, Inc.	Eagle LOC 900			
		Diamond Plastics Co.	Lok-21			
Couplings		Romac Industries, Inc.	Romac Alpha			
		Romac Industries, Inc.	Macro HP – Cathodic Protection			
Polyethylene Wrap			8 MIL (0.008 in.) Polyethylene Encasement (LOW DENSITY POLYWRAP)	AWWA C105; ANSI A21.5-10	All ductile iron pipe and fittings shall be wrapped	
Underground Marking Tape		Reef Industries, Inc.	Terra Standard (Non-Detectable) 4.0 MIL, 6-inch Wide			Water – APWA Blue Sewer – APWA Green
Bores						
Casing Spacers		Raci Spacers North America	Raci Spacers			
		Pipeline Seal and Insulator, Inc.	Model Ranger II			
		Power Seal	Model 4810			
Casing End Seals		Advanced Product & Systems, Inc.	Model AW (wrap around) End Seal			
		CCI Pipeline Systems	Model ESW Wrap Around Neoprene Rubber End Seal			

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Service Connections						
Ball Corporation Valve (Stops)	3/4", 1"	Mueller	B-25008N		AWWA CC Thread Outlet	
		Ford	FB1000-3-Q-NL (3/4"), FB1000-4-Q-NL (1")			
		A.Y. McDonald	4701BQ			
		Jones	J-1937-SG			
	2"	Mueller	B25028N		AWWA IP Thread Outlet	
		Ford	FB1100-7-Q-NL			
		A.Y. McDonald				
		Jones				
Angle Meter Ball Valve (Stops)	3/4", 1"	Mueller	B-24258N		AWWA CC Thread Outlet	
		Ford	BA43-332W-Q-NL (3/4"), BA43-444W-Q-NL (1")			
		A.Y. McDonald	4602BQ			
		Jones	J-1963W-SG (3/4", 1"); J-1975W-SG (1.5", 2")			
	2"	Mueller	B-24276N		AWWA IP Thread Outlet	
		Ford	BFA43-777W-Q-NL			
		A.Y. McDonald				
		Jones				
Service Saddles	3/4", 1"	Mueller	BR2S – brass saddle with SS strap		AWWA CC Thread Outlet	
		Ford	202BSD – brass saddle with SS strap			
		A.Y. McDonald	None for PVC Pipe?			
		Jones	No service saddle for PVC Pipe – a Mueller Brand			
	2"	A.Y. McDonald	None for PVC Pipe?		AWWA IP Thread Outlet	
		Jones	No service saddle for PVC Pipe – a Mueller Brand			
		Mueller	BR2S – brass saddle with SS strap			
		Ford	202BSD – brass saddle with SS strap			
Meter Boxes	5/8" & 3/4" Water Meter	Bass & Hays	BH P34P18D1S3LIDP7		HDPE Base Enclosure - With Slot; Not Traffic Rated; Cast Iron Ring with HDPE Locking Lid	
		DFW Plastics	DFW1818F-1BA%T 100			
	1" Water Meter	Bass & Hays	BH P548P18D 5LIDP7			
		DFW Plastics	DFW2418F-1BA%T 100			
	2" Water Meter	Bass & Hays	BH_P55P18D5LIDP7			
		DFW Plastics	DFW2818F-1BA%T 100			
Meter Boxes – Traffic Rated	5/8", 3/4" & 1" Water Meter	DFW Plastics	DFW37C-14-1O1BAT		Traffic Rated for in-pavement installation only	
	2" Water Meter	DFW Plastics	DFW65C-14-1O1BAF			

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BASIC PRODUCT CATEGORY	SUB-CATEGORY	MANUFACTURER	MODEL, TYPE, OR STYLE APPROVED	GOVERNING SPECIFICATION	GENERAL REQUIREMENTS	NOTES
Sewer Pipes						
Sewer Main	4" to 15" Dia		PVC, SDR-26	ASTM D3034	Green color	Fusible PVC and Certa-Lok are acceptable PVC pipe materials
			PVC, SDR-26 PRESSURE PIPE	ASTM D2241		Pressure pipe only
			HDPE, DR 17 IPS	ASTM F714, PE 4710		White, gray color permitted
	18" to 30" Dia		PVC, PS115	ASTM F679		Fusible PVC and Certa-Lok are acceptable PVC pipe materials
	18" to 54" Dia	Hobas Pipe	Fiberglass	ASTM D3262 / ASTM 4161		Must submit thickness design for wall thickness calculations
Service Laterals			PVC, SDR-26		Green color	Green color
Aerial Crossing			PVC Pipe with Steel Carrier Pipe, requires approval		Green color	
Manhole and Appurtenances						
Manhole Pipe connectors		Trelleborg	KOR-N-SEAL 306 Series			
		A-Lok Products, Inc.	G3 Boot System			For field installation
		A-Lok Products, Inc.	Quik-LOK			For Pre-Cast
		Press-Seal Corporation	PSX: Direct Drive			
Manhole Ring and Lids		Pamrex	32-inch Ring & Cover		30" Clear Opening; AASHTO HS-20Load Rated; Words and Logo per Standard Detail	
		Pamrex	Pamtight 32-inch Ring & Cover			
		Composite Access Products, L. P.	A-1BK30B4-C01CPGSS-H1			For off street only.
Manhole Coating		Raven Lining Systems	Raven 405			125 mils thick
Manhole Grade Adjustment Rings		Cretex Specialty Products	Cretex Pro-Ring™			Butyl Sealant required per manufacturer
Pre-Cast Manhole Ring Gasket		Hydroconduit	Profile			
		Hanson	CR 097			
Geotextile Material Under Manhole		Tencate	Mirafi 140N			
		Propex Geosolutions	Geotex 401			
Manhole Chimney Seals, Ring & Cover sealing systems		GPT Industries	Boa-Tape Extra Grip Infiltration Taping Seal System			
		GPT Industries	Riser-Wrap			
Threaded Lid Anchor		Hilti USA	KWIK BOLT 3 SS 304 5/8" or equal			All manhole ring anchors must be embedded a minimum of 4.5-inches into concrete cone. All Stainless Steel Bolts Threads and Nuts must be coated with approved anti-seize compound: Permatex Nickel Anti-Seize or approved equal.
		Simpson Strong-Tie	Strong Bolt 5/8"			