MSDGC Approved Pipe Materials

Last Updated April 29, 2024

Standard Gravity Sewer Pipe Materials, Open Cut Installation

															Pipe :	Size									
Pipe	Allowable Joints	Installation	Bedding Class	Lining Types		6"	8"	10"	12"	14"	15"	16"	18"	20"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"	64"
PVC SDR 35	Flexible Elastomeric	ASTM D2321			Allowable	35'	35'	35'	35'		35'														
ASTM D3034	Seals, ASTM D3212	ASTIVI DZ3Z1	II		Cover*	14'	14'	14'	14'		14'														
PVC SDR 35	Flexible Elastomeric	ASTM D2321			Allowable								35'		35'	35'	35'								
ASTM F679	Seals, ASTM D3212	ASTIVI DZSZT	II		Cover*								14'		14'	14'	14'								
"Vylon" PVC	Flexible Elastomeric	ASTM D2321	I		Allowable										35'	35'	35'	35'		35'	35'	35'	35'		
ASTM F1803	Seals, ASTM D3212	ASTIVI DZSZT	II		Cover*										14'	14'	14'	14'		14'	14'	14'	14'		
"Ultra-Rib" PVC	Flexible Elastomeric	ASTM D2321	I		Allowable								35'		35'	35'	35'	35'							
ASTM F794	Seals, ASTM D3212	ASTIVI DZ3ZT	II		Cover*								14'		14'	14'	14'	14'							
				Cement AWWA C104	RWP 150*													14'		14'	13'	13'	13'	13'	13'
Ductile Iron Pipe (DIP)	Push On Joints	AWWA C600	Acc. No.	Protecto 401	RWP 200*											17'		16'		15'	15'	15'	14'	14'	14'
ASTM A746	AWWA C111	Type 4	40033	Special - Glass	RWP 250*					23'			22'	22'		20'		19'		18'	17'	17'	16'	16'	16'
A31W A740	AWWACIII	Type 4	43032	Polyethylene Encase	RWP 300*					26'		26'		26'		24'		21'		20'	20'	19'	19'	19'	19'
				(ASTM C105)	RWP 350*	47'	34'	28'	28'	27'		28'	28'	28'		28'		25'		24'	23'	22'	22'	22'	21'
Sanitite HP Polypropylene	Flexible Elastomeric	ASTM D2321			Allowable				35'		35'		35'			31'		30'							
HDPP ASTM F2736	Seals, ASTM D 3212	ASTIVI DZ3Z1	II		Cover*				14'		14'		14'			14'		14'							
Sanitite HP Polypropylene	Flexible Elastomeric	ASTM D2321			Allowable													30'		31'	33'	34'		32'	
HDPP ASTM F2764	Seals, ASTM D 3212	ACTIVI DZSZ I	II		Cover*													14'		14'	14'	14'		14'	

^{*}Allowable Cover is based on bedding and compaction per Installation Standard. Casing pipe can not be used to increase allowable cover.

Standard Gravity Sewer Pipe Materials, Trenchless Installation

Pipe Size

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Pipe	Allowable Joints	Installation	Bedding Class	Lining Types		6"	8"	10"	12"	14"	15"	16"	18"	20"	21"	24"	27"	30"	33" 3	5" 4	l2" -	48"	54"	60"	64"
PVC SDR 35 (6" ONLY) ASTM D3034	Flexible Elastomeric Seals, ASTM D3212	Jack & Bore (Per Detail)	N/A			As pe			ith PV	/C lar	ger tha	an 6" ı	nay b	e con	sidere	d if us	sing ca	asing s	pacers	and if	f appr	roved	by W		cking
	Push On Joints				RWP 150*													14'	1	4' 1	13'	13'	13'	13'	13'
Ductile Iron Pipe (DIP)	AWWA C111-	Jack & Bore		Cement AWWA C104	RWP 200*											17'		16'	1	5' 1	15'	15'	14'	14'	14'
ASTM A746	Restrained joints when	(Per Detail)	N/A	Protecto 401	RWP 250*					23'		24'	22'	22'		20'		19'	1	B' 1	17'	17'	16'	16'	16'
A31WI A740	needed	(Fei Detail)		Special - Glass	RWP 300*					26'		26'	26'	26'		24'		21'	2	0' 2	20'	19'	19'	19'	19'
	needed				RWP 350*	47'	34'	28'	28'	27'		28'	28'	28'		28'		25'	2	4' 2	23'	22'	22'	22'	21'
HDPE ASTM F714	ASTM F2620 ASTM 1290	Directional Drill ASTM F1962	N/A										As p	er des	sign**,	Typic	ally DI	R 11							
Polymer Reinforced Concrete (PRC) ASTM D6783	Flexible Elastomeric Seals, ASTM D4161	Micro-Tunneling	N/A										"Меу	er Poly	/crete	", as p	er des	sign**							
Fiberglass Reinforced Pipe (FRP) ASTM D3262	Flexible Elastomeric Seals, ASTM D4161	Tunneling	N/A								"Hoba	as" or	"Flow	/tite" m	nanufa	acture	d pipe	, as pe	er desig	י**					

^{*}Allowable Cover is based on bedding and compaction per Installation Standard

Standard Gravity Sewer Pipe Materials, Large Diameter (or as depth and field conditions require)

															Pipe S	Size									
Pipe	Allowable Joints	Installation	Bedding Class	Lining Types		12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	102"
Reinforced Concrete Pipe					Class II*						11'	11'	11'	11'	11'	11'	11'	11'	10'	10'	10'	10'	10'	10'	9'
(RCP) ASTM C76	Flexible Elastomeric	ASTM C12	Acc. No.	Epoxy, PVC, HDPE or	Class III*			16'	16'	16'	16'	16'	16'	16'	16'	16'	16'	16'	16'	15'	15'	15'	15'	15'	15'
ODOT 706.02	Seals, ASTM C443	Class C	49032	other as necessary	Class IV*	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	25'	24'	24'	24'	24'	24'	24'
ODO1 706.02					Class V*	38'	39'	39'	39'	39'	39'	39'	39'	39'	39'	39'	39'	39'	39'	38'	38'	38'	38'	38'	38'
(Cylinder Pine (PCCP)	Flexible Elastomeric Seals, ASTM C443	ASTM C12 Class C		Epoxy, PVC, HDPE or other as necessary										As	s per d	lesigr	า**								
, ·	Flexible Elastomeric Seals, ASTM D4161	ASTM D3839	Acc. No. 49032						"Ho	obas"	or "Fl	owtite	" or "E	Bonds	strand'	' man	ufactu	ıred pi	pe, as	s per c	lesigr	1**			

^{*}Allowable Cover is based on bedding and compaction per Installation Standard

^{**}Design engineer to use maufacturer's design guidelines to determine allowable cover before including in contract

^{**}Design engineer to use maufacturer's design guidelines to determine allowable cover before including in contract

MSDGC Approved Pipe Materials

Last Updated April 29, 2024

Standard Force Main Pipe Material, Open Cut Installation (Trenchless as per design)

											Pipe	Size					
Pipe	Allowable Joints	Installation	Bedding Class	Lining Types		3"	4"	6"	8"	10"	12"	14	16	18	20	22	24
PVCO AWWA C900	ASTM D3139- Restrained	ASTM D2321			Allowable		35'	35'	35'	35'	35'						
DR as per design	joints when needed	AS TWI D232 I	II		Cover*		14'	14'	14'	14'	14'						
Ductile Iron Pipe (DIP) AWWA C151	AWWA C111	AWWA C600	1 40032	Cement AWWA C104 Protecto 401 Polyethylene						RWF	P as p	er des	sign**				

^{*}Allowable Cover is based on bedding and compaction per Installation Standard

Standard Low Pressure Sewer System (LPSS) Pipe Material

Pipe	Allowable Joints	Installation	Bedding Class	Lining Types	
HDPE	ASTM F2620	ASTM D2321,			As per design**, Typically SDR 11 IPS
ASTM F714	ASTM 1290	ASTM F1962	"		As per design , Typically 3DK 11 IF3
PVC ASTM D2241	ASTM D2672, ASTM D3139	ASTM D2321	II		As per design**, Typically SDR 21 IPS PVC

^{**}Design engineer to use maufacturer's design guidelines to determine allowable cover before including in contract

Conditionally Approved Gravity Sewer Pipe (as of July 2, 2014)

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Pipe	Allowable Joints	Installation	Bedding Class	Lining Types		12" 1	4" 15'	" 16"	18"	20"	21"	24" 2	27"	30" 3	36"	42" 4	8" 60	0" 6	5" 72"	78"	84"	90" 96"
"Weholite" HDPE	Mechanical Coupling Band		I																			
ASTM F894	with ASTM D3212 seals, or	ASTM D2321			Allowable				1 18	8" - 120	o" As	per de	sign*	* - Min	nimur	n 160 F	ling Sti	iffnes	s Const	ant (RS	SC) Re	equired
	Field Fused Joints		II		Cover																	
"Pro 21" PVC	Flexible Elastomeric	ASTM D2321	I		Allowable									۸۵.		esign**						
ASTM F1803	Seals, ASTM D3212	AS TWI DZ3Z I	II		Cover									AS I	ber a	esign						
"Duramaxx" Steel			1															_				
Reinforced Thermoplastic	Flexible Elastomeric	ASTM D2321	'		Allowable							24"	" _ 12(n" Δe n	oer de	esign**						
Ribbed Pipe (SRTRP)	Seals, ASTM D3212	ACTIVI DZSZ1			Cover							24	- 121	U AS P	oci ut	Jaigili						
ASTM F2562			"																			

^{**}Design engineer to use maufacturer's design guidelines to determine allowable cover before including in contract Conditionally Approved Pipes will not be accepted on Design-Build projects.

^{**}Design engineer to use maufacturer's design guidelines to determine allowable cover before including in contract