

Stan Redford, President
P.O. Box 1065
Raymore, MO 64083



Phone: 816-540-2030
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Certified D/MBE

MATERIAL SUBMITTAL

PROJECT: Manor at Stoney Creek 2nd Plat
Lee's Summit, MO

DATE: 9/19/2017

TO: City of Lee's Summit, MO
220 SE Green St.
Lee's Summit, MO 64063

RE: Sanitary Sewer Pipe

ATTN: Brice Lawson

PROJECT #: 37-43

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Samples	<input type="checkbox"/> Approval	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> As Requested	<input type="checkbox"/> Approved as Submitted
<input checked="" type="checkbox"/> Specifications	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Concrete Mix Designs	<input type="checkbox"/> Your Use	<input type="checkbox"/> Returned for Corrections
<input type="checkbox"/> Other: Product Data Sheets	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

SUBMITTAL #	SPECIFICATION SECTION	DESCRIPTION OF PRODUCT AND MANUFACTURER
3	City of Lee's Summit	4", 8", 12", 15" PVC SDR 26 Pipe - National

CC: Job File

Signed: Thomas Hudgens

4", 8", 12", 15" SDR 26



EVER-GREEN®

Corporate Offices
New York Plant

3421 Old Vestal Road, Vestal, NY 13850
800.836.4350 607.729.9381 Fax: 607.729.6130

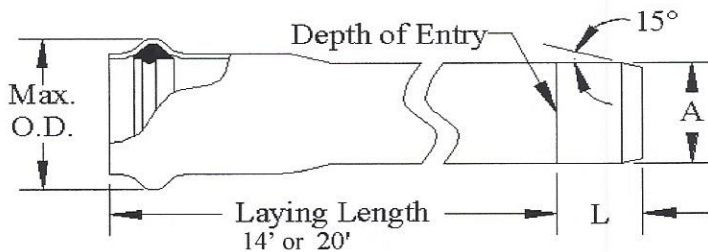
NATIONAL PIPE & PLASTICS, INC.

American-made products since 1970

PVC SEWER & STORM DRAINAGE PIPE (4 - 15")

Scope: This submittal designates the general requirements for Unplasticized Polyvinyl Chloride (PVC) Plastic PSM Sewer Pipe from compound with a cell class 12454, as defined in ASTM Standard D-1784.

Pipe: Pipe in trade size diameter of 4" through 15" shall meet the requirements of the latest ASTM D-3034 Standard. The pipe shall conform to the requirements of CSA B-182.2, BNQ NQ 3624-130 and NQ 3624-135 Standards as indicated in the table below. If integral gasketed bell ends are provided on the pipe, the pipe joint must meet the requirements of ASTM Standard D-3212, and the sealing gasket must conform to the requirements of ASTM Standard F-477 for sizes 4"-15". Pipe in trade size diameters of 4 and 6 inch are available with solvent-weld bells. Pipe is manufactured to a standard laying length of 14 feet. Other lengths available upon request.



ASTM D-3034 Sewer Pipe Size and Dimensions

Nominal Size (in)	Metric (mm)	Dimension Ratio (SDR)	Approvals	Min Stiffness (psi)	"A" Average (OD) Outside Diameter	Minimum Wall	Max OD Reference	"L" Dimension (Min/Max)
4	100	35	CSA, BNQ	46	4.215	.120	5.050	3.250 - 3.500
		28	CSA, BNQ	91		.151		
		26	CSA	115		.162		
5	135	28	CSA, BNQ	91	5.640	.201	6.188	3.750 - 4.125
6	150	35	CSA, BNQ	46	6.275	.180	7.305	4.000 - 4.375
		28	CSA, BNQ	91		.224		
		26	CSA	115		.241		
8	200	35	CSA, BNQ	46	8.400	.240	9.605	4.125 - 4.375
		26	CSA	115		.323		
10	250	35	CSA, BNQ	46	10.500	.300	12.030	5.750 - 6.000
		26	CSA	115		.404		
12	300	35	CSA, BNQ	46	12.500	.360	14.100	5.875 - 6.125
		26	CSA	115		.481		
15	375	35	CSA, BNQ	46	15.300	.437	17.200	6.125 - 6.375
		26	CSA	115		.588		



NOTE: Canadian PVC Sewer Specifications Only

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MATERIAL SUBMITTAL

PROJECT: Manor at Stoney Creek 2nd Plat
Lee's Summit, MO

DATE: 9/19/2017

TO: City of Lee's Summit, MO
220 SE Green St.
Lee's Summit, MO 64063

RE: HDPE Storm Sewer Pipe

ATTN: Brice Lawson

PROJECT #: 37-43

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SUBMITTAL #	SPECIFICATION SECTION	DESCRIPTION OF PRODUCT AND MANUFACTURER
4	City of Lee's Summit	15" thru 60" HDPE Pipe - ADS

CC: Job File

Signed: Thomas Hudgens



N-12® WT IB PIPE (PER AASHTO)

15" - 60" HDPE

It's a revolution that began nearly 15 years ago when ADS pioneered the watertight joint for corrugated polyethylene pipe. The ADS N-12 WT IB pipe (per AASHTO) – our third generation of watertight joint technology – has set the standard in watertight performance.

Today's N-12 WT IB pipe (per AASHTO) incorporates patented technology to provide a superior watertight joint. An exterior bell wrap provides a quick visual indicator to customers and inspectors that a watertight product is being used. A patented gasket, that meets all requirements of ASTM F477, increases its sealing forces as intermittent internal or external hydrostatic pressure occurs. The flared bell and spigot significantly improve ease of installation. N-12 WT IB pipe (per AASHTO) is so advanced in its design that it is easy to put your confidence in for long-term reliability.

APPLICATIONS:

Storm Sewers	Culverts & Cross Drains
Retention/Detention	Slope/Edge Drains
Ditch Enclosures	Mining/Forestry/Industrial
Roof Drainage	

FEATURES:

- 4" – 60" (100 - 1500 mm) diameters available
- Nominal 20 ft. (6m) and 13 ft. (4m) lengths available
- Integral bell and factory-installed gasket
- Joint meets or exceeds ASTM D3212 lab test as well as ASTM F2487 and ASTM F1417 watertight field test
- Exceptional joint strength
- Excellent abrasion and corrosion resistance
- Light weight
- Structural strength that will support H-25 or HL-93 live loads with 1' (0.3 m) minimum cover; 60" (1500 mm) pipe requires 2' (0.6 m) cover for H-25 or HL-93 loads



BENEFITS:

- Variety of diameters and lengths fit any project
- Pipe requires no extra couplers, grout or other sealants for installation due to built-in bell and factory-installed gasket. This means fewer components to risk performance
- Installation cost savings from lower shipping costs, fewer people, and less heavy equipment required.
- Hydraulic efficiency from smooth interior
- Long-term durability of HDPE

ADS Service: ADS representatives are committed to providing you with the answers to all your questions, including specifications, and installation and more.



THE MOST **ADVANCED** NAME IN WATER MANAGEMENT SOLUTIONS™

ADS N-12® WT IB PIPE (PER AASHTO) SPECIFICATION

SCOPE

This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 WT IB pipe (per AASHTO) for use in gravity flow drainage applications.

PIPE REQUIREMENTS

N-12 WT IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.

- 4- through 10-inch (100 to 250 mm) shall meet AASHTO M252, Type S.
- 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306.
- Manning's "n" value for use in design shall be 0.012.

JOINT PERFORMANCE

Pipe shall be joined with the N-12 WT IB joint meeting the requirements of AASHTO M252, AASHTO M294, or ASTM F2306.

4- through 60-inch (100 to 1500 mm) pipe shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

12-through 60-inch (300-1500 mm) diameters shall have an exterior bell wrap installed by the manufacturer.

FITTINGS

Fittings shall conform to AASHTO M252, AASHTO M294 or ASTM F2306.. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

FIELD PIPE AND JOINT PERFORMANCE

To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM F2487. Appropriate safety precautions must be used when field testing any pipe material. Contact the manufacturer for recommended leakage rates.

MATERIAL PROPERTIES

Virgin material for pipe and fitting production shall be high-density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, and 435400C for 12- through 60-inch (300 to 1500 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306, respectively.

INSTALLATION

Installation shall be in accordance with ASTM D2321 and ADS published installation guidelines, with the exception that minimum cover in trafficked areas for 4- through 48-inch (100 to 1200 mm) diameters shall be one foot (0.3 m) and for 54- and 60-inch (1350-1500 mm) diameters, the minimum cover shall be 2 foot (0.6 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum 90% SPD) or Class 3 (minimum 90% SPD) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.02. Contact your local ADS representative or visit our website at www.ads-pipe.com for a copy of the latest installation guidelines.

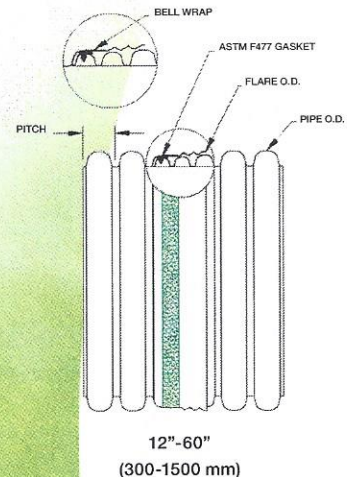
PIPE DIMENSIONS

Nominal Pipe I.D.* in. (mm)	4	6	8	10	12	15	18	24	30	36	42	48	54	60
	(100)	(150)	(200)	(250)	(300)	(375)	(450)	(600)	(750)	(900)	(1050)	(1200)	(1350)	(1500)
Nominal Pipe O.D.** in. (mm)	4.8	6.9	9.1	11.4	14.5	18	22	28	36	42	48	54	61	67
	(122)	(175)	(231)	(290)	(368)	(457)	(559)	(711)	(914)	(1067)	(1219)	(1372)	(1549)	(1702)

*Check with sales representative for availability by region.

**Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ± 1 inch. Contact a sales representative for exact values.

ADS "Terms and Conditions of Sale" are available on the ADS website, www.ads-pipe.com
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Advanced Drainage Systems, Inc.
4640 Trueman Blvd., Hilliard, OH 43026
1-800-821-6710 www.ads-pipe.com



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PROJECT: Manor at Stoney Creek 2nd Plat
Lee's Summit, MO

DATE: 9/19/2017

TO: City of Lee's Summit, MO
220 SE Green St.
Lee's Summit, MO 64063

RE: PVC Water Main Pipe

ATTN: Brice Lawson

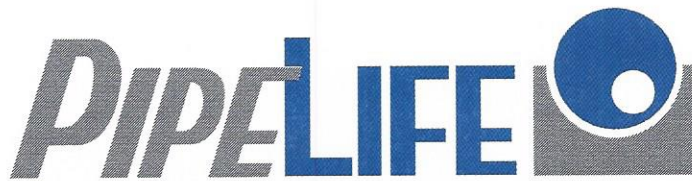
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SUBMITTAL #	SPECIFICATION SECTION	DESCRIPTION OF PRODUCT AND MANUFACTURER
5	City of Lee's Summit	6", 8", 12" PVC C900 DR18 Pipe - Pipelife

CC: Job File

Signed: Thomas Hudgens



C900

6", 8", 12"



PipeLife Jet Stream manufactures the AWWA C900 product family which includes 4" to 12" C.I OD pipes. AWWA C900 standards include all specifications relating to the production and testing of C900 pipes. In three pressure ratings of DR 14, DR 18 and DR 25.

Our C900 is suitable for the transmission and distribution of water. PipeLife Jet Stream carries various certifications from NSF International (NSF), Underwriters Laboratories (UL) and Factory Mutual (FM).

PipeLife Jet Stream uses compound according to ASTM D1784—12454 as well as integral gasket joints according to ASTM F477 and ASTM D3139. To aid in the installation of PipeLife Jetstream's C900, each spigot end is beveled and includes a depth mark for insertion

DR 14 Pressure Ratings are: UL 305 PSI and FM 200 PSI both at 73.4 degrees

Size	Outside Diameter	Minimum Wall Thickness	Weight LBS/Foot	Pieces per Pallet	Order Units
4	4.80	.343	3.22	36	2.4
6	6.90	.493	6.70	18	2.4
8	9.05	.646	11.55	10	2.4
10	11.10	.793	17.46	4	1.71
12	13.20	.943	24.75	4/3	4

DR 18 Pressure Ratings are: UL 235 PSI and FM 150 PSI both at 73.4 degrees

Size	Outside Diameter	Minimum Wall Thickness	Weight LBS/Foot	Pieces per Pallet	Order Units
4	4.80	.267	2.55	36	2.4
6	6.90	.383	5.29	18	2.4
8	9.05	.503	9.15	10	2.4
10	11.10	.617	13.82	4	1.71
12	13.20	.733	19.56	4/3	4

DR 25 Pressure Ratings: UL 165 PSI at 73.4 degrees

Size	Outside Diameter	Minimum Wall Thickness	Weight LBS/Foot	Pieces per Pallet	Order Units
4	4.80	.192	1.87	36	2.4
6	6.90	.276	3.90	18	2.4
8	9.05	.362	6.69	10	2.4
10	11.10	.444	10.16	4	1.71
12	13.20	.528	14.43	4	4

**** All PipeLife Jet Stream C900 products are available in optional colors****