

**ADS HP Storm & Sanitite HP
Polypropylene Pipe Field Inspection Summary
May 26, 2016**

Sanitite HP is a polypropylene plastic pipe specifically engineered for the gravity flow sanitary sewer market. Sanitite HP is available as a dual wall pipe with diameters ranging from 12 to 30 inches. It is also available as a triple wall pipe in sizes ranging from 30 to 60 inches. The triple wall construction provides an added layer of stiffness compared to other plastic pipe products. Sanitite HP is available in varied lengths: 13 feet, 16.3 feet, and 20 feet (see Table 1).

HP Storm is also a polypropylene pipe. It is a dual wall pipe available in diameters from 12 to 60 inches. HP Storm, as the name suggests, is designed for gravity flow storm water systems. HP Storm pipe is available in 20 foot lengths.

At the present time Advanced Drainage Systems (ADS), is the sole manufacturer of polypropylene pipe. These pipes are governed by AASHTO M 330.

The following is a report of inspections of polypropylene pipe installations by MaineDOT.

Bristol, Route 130



Two Sanitite HP triple wall pipes are at this location. One is a cross pipe, 36" x 96', and the other (36" x 40') is under a private entrance.

The 96' cross pipe has good alignment, but is out of round at one end.

Coordinates: 43.9411, -69.5186

Damariscotta, Route 129



There are eight polypropylene pipe locations in all. Although the plans called for three 24" diameter triple wall pipes, triple wall is only available in 30" to 60" diameters. Please see Table 1 below for more details on sizing. All pipes were installed as part of a culvert replacement project in 2014 (WIN 21441.00).

We noted deflection in some of these pipes. A good example of which is in the photo above. These pipes were inspected in October, 2015.



44..01938,-69.52940 to 44.00669,-69.53046

Durham, Route 136



Durham, Route 136 (continued)



This is a 48"x150' SaniTite HP, triple wall profile pipe. It was installed as part of a highway reconstruction project in 2014.

No deflections were noted and the joints looked good. Slope stabilization work around the outlet end was not yet finished at the time of inspection in autumn, 2014.

Coordinates: 43.995793, -70.144301

East Wilton, Routes 2 & 4



These pictures were provided by the ADS representative who was onsite during construction.

The pipe is an ADS' SaniTite HP triple wall 48" diameter pipe with a dissimilar pipe adapter to an existing concrete pipe. It is replacing a rusted out CMP.

The pipes will be inspected by the Transportation Research Division in 2016.

Coordinates: 44.615242, -70.183654



Harpwell, Route 24



A 60" x 120 foot long SaniTite HP triple wall polypropylene pipe was used as a cross pipe replacement at this location under Route 24. The pipe was installed in 2014.

We inspected the pipe in the fall of 2014 and found no major issues with the installation in general. We did note some aggregate that has washed into and collected within the pipe on the inlet end.

Coordinates: 43.773472, -69.966993

Leeds, Routes 219/106



Leeds (continued)

An N12-HP (now called HP Storm) 36 inch diameter by 100 feet long dual wall polypropylene pipe was used in a cross pipe application replacing a corroded 18 inch diameter CMP. Maximum cover height at this location is 15 feet. The pipe was installed in the fall of 2012.

We inspected the pipe in the fall of 2014. The pipe is in good overall condition. It's a little out of round under the roadway but reasonable to assume it was installed this way.

Coordinates: 44.344812, -70.144186



Orono, Forest & Stillwater Aves.



This was a roundabout construction project with multiple pipes. The plans called for ADS 'polypropylene N-12 HP dual wall pipes in four diameters: 18", 24", 30", and 36". N-12 HP pipe is available only in 20' sticks. SaniTite pipe is available in 13' & 20' sticks. When the contractor ordered the polypropylene pipe for the job, they didn't specify dual or triple wall and so they were sent a few 13' lengths which only come in the SaniTite HP triple wall product. So, there is a mixture in some areas. We inspected these pipes in 2013, and found no major issues.

Coordinates: 44.892156, -68.702245

Sabattus, Crowley Rd. & Brook St.



This is a 48" diameter x 65', N-12HP (now HP Storm) dual wall profile pipe located on Crowley Rd. near the intersection with Brook Street. This pipe was installed in the summer of 2013.

The pipe was inspected in 2014 and looked very good and had only recently been installed. No deflections or cracks were note and the joints looked good.

Coordinates: 44.07277, -70.09137



Windham, US302/202



Windham, US302/202 (continued)



A SaniTite HP 24” x 60’ dual wall profile pipe was used replaced a corroded CMP inlet pipe at this location.

The pipe was installed by MaineDOT Region 1 Maintenance personnel.

Coordinates: 43.802902,-70.405911

Winterport, Cove Rd.



A 36 inch diameter by 72 feet long triple wall profile SaniTite HP pipe was installed under Cove Rd as a replacement for an 18” corroded CMP. This pipe was installed in 2013.

We inspected this pipe in the fall of 2014 and found it to be in excellent condition.

Coordinates: 44.690613, -68.849936

	HP Storm			Sanitite HP					
Description:	Gravity flow storm drainage pipe.			Gravity flow sanitary sewer pipe					
Diameter Inches	AASHTO M 330, Type S	Pipe Stiffness*		AASHTO M 330, Type S	Pipe Stiffness*		AASHTO M 330, Type D	Pipe Stiffness*	
	Dual Wall	M330	ADS	Dual Wall	M330	ADS	Triple Wall	M330	ADS
	Lengths Ft.	psi	psi	Lengths Ft.	psi	Psi	Lengths Ft.	psi	psi
12	20	65	75	13 & 20	65	75			
15	20	54	60	13 & 20	54	60			
18	20	50	56	13 & 20	50	56			
24	20	44	50	13 & 20	44	50			
30	20	36	46	13 & 20	36	46	13 & 20	36	46
36	20	29	40				13 & 20	29	46
42	20	27	35				13 & 20	27	46
48	20	25	35				13 & 20	25	46
60	20	19	30				16.3 & 20	19	46

TABLE 1

Inspections by Dale Peabody & Doug Gayne
MaineDOT Transportation Research Division

Report by Doug Gayne, May 26, 2016