CITY OF ISLE OF PALMS, SOUTH CAROLINA
REQUEST FOR BIDS (RFB) 2025.04
WILD DUNES GOLF COURSE- FLOOD MITIGATION IMPROVEMENTS
Response to Questions August 19, 2025

1. The RFB documents specify one inch asphalt, but the remainder of the golf course paths are planned to be paved with two inches of asphalt, which amount should be bid?

   Response: the bid should include two inches of asphalt. An amended bid sheet is attached here.

2. For units on bid form - do you want us to carry the units you carried (like a unit price) or carry what we think it will take (we would usually carry 10-15% overage on a lump sum bid)?

   Response: bid the units on the form. The contractor must document the amounts of each unit used and payments will be made on actual amounts installed. In instances where the amounts needed are more than 25% greater than those specified on the bid sheet, the City will have to and chosen contractor will need to agree to a process to authorize amounts greater than 25% off of those provided on the bid form.

3. What were the white flags on trees marking?

   Response: flags can be disregarded.

4. Are we able to isolate the irrigation lines so they will not be pressurized when digging in the area?

   Response: HDPE irrigation lines will need to remain pressurized to have the ability to irrigate areas of the course outside the scope of work. Should the need arise to depressurize the lines the contractor will need to have authorization from the golf course managers.

5. Will AutoCAD be able to be provided for layout purposes?

   Response: yes

6. Can an AutoCAD with aerial photos be provided (to be better bearings)?

   Response: yes, but background will be blurry.

7. Typically the contractors warranty is 1 year - what is plan on the warranty on grass? Will that be accepted by Wild Dunes and us not have to carry cost to potentially replace?

Response: sod should be Tifway 419 Bermuda, purchased from Green Acres Turf Farm, Furman, SC, (803) 625-2902 and should be installed day of deliver. No warranty required.

8. With such high LDs what is the anticipated weather days (or how do you plan on addressing lost days)?

   Response: contract will be extended by rain days (more than 0.5 inches of rain) above a normal number of days as determined by historical seasonal data. Contractor should account for a normal number of days within their schedule. This number will be provided before work begins.

9. For retaining wall can we carry in our base a lower cost design? Or would you prefer us list an add/alt?

   Response: provide base bid amount based on specified wall design and list an addition or alternate

10. Is there good utility drawings for work areas, or should private locate services be carried?

    Response: all golf course utilities, irrigation and drainage lines will be marked by the golf course personnel.

11. We typically carry general conditions, profit, and mark up distributed across all total costs (linearly) - is that preference? (if its unit price that sometimes makes it harder to do adds / subtracts.

    Response: yes include general conditions, profit, mark up and any other related costs in each line of the bid sheet

12. Is stabilization of berms to be Bermuda sod?

    Response: yes, the area included in line 26 of the bid sheet (74,796 sf) is expected to include all disturbed areas and should be sod as specified in Question 6 here.

13. We would recommend soil that has some fines for more cohesion (not typical engineered sandy fill) to help hold slopes and moisture for grass - is there a particular recommendation from T&H?

    Response: According to golf course management: soil to be used for construction of berms can be sandy fill from the Marcinach south pit in Awendaw, SC.

14. Do we have installation details on the in line Wapro check valves?

    Response: see attached installation specifications

15. For the two "convert to sealed manhole lids" - those seem to be current rectangular drop inlets, is the intent to adjust cover to a gasketed and bolted man hole? can a detail or explanation be provided? (brick up to man hole, new precast top, sealed rectangular lid?)

    Response: detail forthcoming

16. Should any bedding material be anticipated for HDPE pipe?

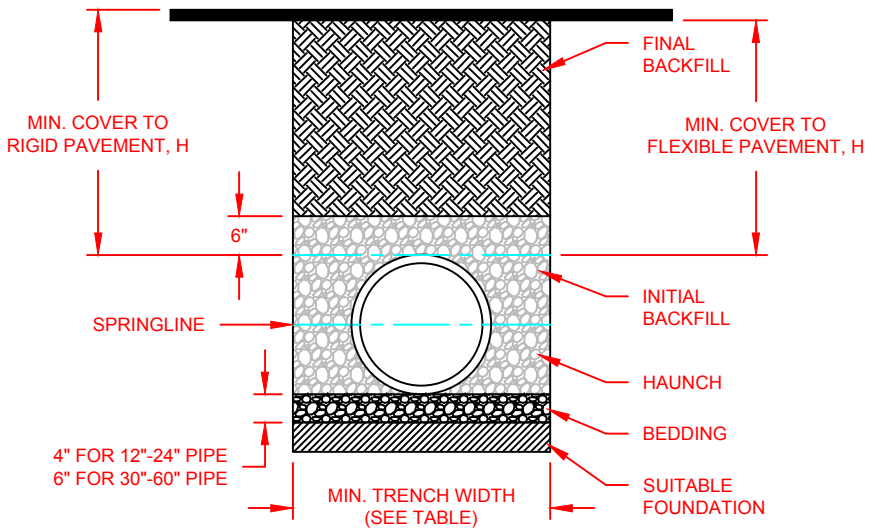
    Response: all HDPE pipe shall be installed per the manufacturer's recommendations. Attached are the recommendations for ADS branded pipe. If the contractor uses ADS – they should follow these recommendations. The contractor can propose alternate brands, but should provide installation recommendations and the alternate must be verified for meeting the needs of the project prior to installation.

17. Nyloplast shows rock in some of their basin details, should that be considered and added to those line items?

    Response: the installation of the inlets is to be inclusive of all materials needed per the detail. Rock should be included in the total cost (EA) of the inlet.

18. Typically you would put 1-2" of top soil down with the sod, is that the plan? Should we put that in sod line item?

    Response: Yes, include topsoil amounts in the grassing line of the bid (line 26). According to golf course management: sandy fill to be capped with a minimum 2 inches clean topsoil from Daily organics, Rifle Range Rd.



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

PIPE DIAM.	CLASS I		CLASS II		CLASS III
	COMPACTED	DUMPED	95%	90%	95%
4" (100mm)	34 (10.4m)	16 (4.9m)	23 (7.0m)	16 (4.9m)	17 (5.2m)
6" (150mm)	40 (12.2m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	20 (6.1m)
8" (200mm)	30 (9.1m)	14 (4.3m)	21 (6.4m)	14 (4.3m)	15 (4.6m)
10" (250mm)	34 (10.4m)	16 (4.9m)	23 (7.0m)	16 (4.9m)	17 (5.2m)
12" (300mm)	35 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	18 (5.5m)
15" (375mm)	37 (11.3m)	18 (5.5m)	25 (7.6m)	18 (5.5m)	19 (5.8m)
18" (450mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
24" (600mm)	27 (8.2m)	13 (4.0m)	19 (5.8m)	13 (4.0m)	14 (4.3m)
30" (750mm)	22 (6.7m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	12 (3.7m)	13 (4.0m)
42" (1050mm)	24 (7.3m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
48" (1200mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	12 (3.7m)	13 (4.0m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

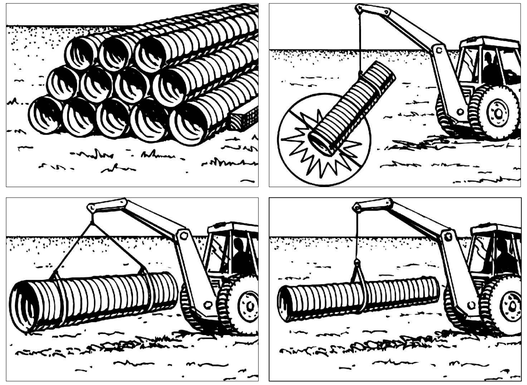
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
4	ADDED CLASS 3 MAX COVER COLUMN	RJS	01/27/17	

TRENCH INSTALLATION DETAIL (ASTM F2648)

DRAWING NUMBER: STD-101A

ADS
ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

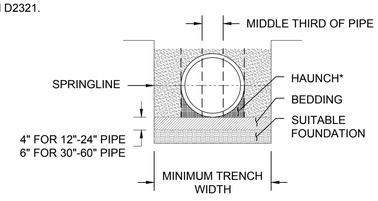
DRAWN BY:	JLE
DATE:	8/15/13
CK'D BY:	
SCALE:	NTS
SHEET	1 OF 1



- STACK PIPE ON LEVEL GROUND TO PREVENT WARPING OF PRODUCT.
- DO NOT LIFT PIPE BY INSERTING FORKLIFT INTO THE END OF THE PIPE.
- TO PREVENT DAMAGE TO THE BELL OR SPIGOT WHEN MOVING PIPE SECTIONS, DO NOT DRAG OR STRIKE PIPE ENDS AGAINST ANYTHING
- PIPE CAN BE MOVED WITH A BACKHOE AND A NYLON SLING. LIFT 36" AND LARGER DIAMETER PIPE WITH A SLING AT TWO POINTS, SPACED APPROXIMATELY 10 FEET APART. SMALLER DIAMETERS CAN USE ONE LIFT POINT.

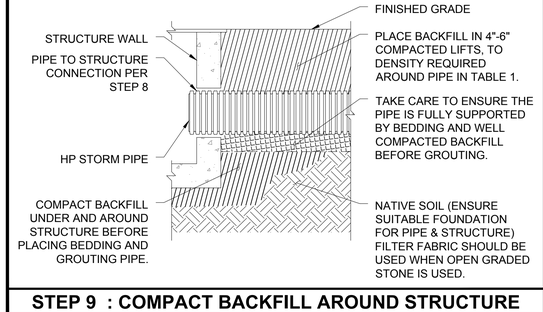
STEP 1 : PIPE HANDLING AND STORAGE

TRACKHOE OPERATOR SHALL UNIFORMLY PLACE A SHALLOW LIFT (NOT TO EXCEED 8"), OVER THE PIPE SO WORKERS CAN DIAGONALLY KNIFE OR BOOT PRESS SOIL UNDER PIPE HAUNCHES. PLACING BACKFILL UNDER THE PIPE HAUNCHES HELPS PREVENT THE PIPE FROM SHIFTING DURING BACKFILL COMPACTION. FOR ADDITIONAL GUIDANCE SEE ASTM D2321.



* HAUNCH BACKFILL PROVIDES SUPPORT FOR SOIL & TRAFFIC LOADS. BACKFILL SHOULD BE WORKED INTO HAUNCH AREA IN 4-6" LIFTS

STEP 5 : PLACING MATERIAL INTO HAUNCH AREA



STEP 9 : COMPACT BACKFILL AROUND STRUCTURE

TRENCH MUST BE WIDE ENOUGH TO FIT PIPE, WORKERS, AND COMPACTION EQUIPMENT.

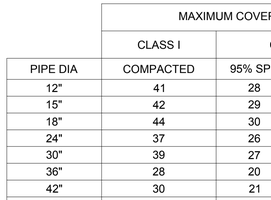
PIPE DIAMETER	MINIMUM BETWEEN PIPES	MINIMUM TRENCH WIDTH
12"	12"	30"
15"	12"	34"
18"	12"	39"
24"	12"	48"
30"	15"	56"
36"	18"	64"
42"	21"	72"
48"	24"	80"
60"	30"	96"

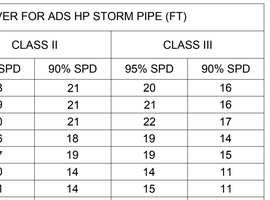
RECOMMENDED MINIMUM TRENCH WIDTHS, WHEN TRENCH WALLS AND FOUNDATION ARE STABLE. FOR ADDITIONAL TRENCH WIDTH OPTIONS REFER TO ADS INSTALLATION STANDARDS AND ASTM D2321.

STEP 2 : TRENCH WIDTH RECOMMENDATIONS

PLACE BACKFILL AROUND PIPE IN 4"-6" COMPACTED LIFTS OR AS DIRECTED BY THE ONSITE GEOTECHNICAL ENGINEER (LOOSE LIFTS SHALL NOT EXCEED 8"). COMPACT BEDDING AND BACKFILL WITH SMALL TO MEDIUM COMPACTION EQUIPMENT TO SPECIFIED DENSITY. VISUALLY INSPECT THE PIPE TO ENSURE THE APPROPRIATE SHAPE IS MAINTAINED. BACKFILL SHOULD BE NEAR OPTIMUM MOISTURE WHEN COMPACTED. FOR ADDITIONAL GUIDANCE SEE ASTM D2321.

STEP 6 : COMPACT BACKFILL IN LIFTS





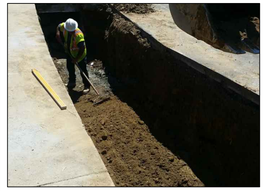
MAXIMUM COVER FOR ADS HP STORM PIPE (FT)					
	CLASS I	CLASS II		CLASS III	
PIPE DIA	COMPACTED	95% SPD	90% SPD	95% SPD	90% SPD
12"	41	28	21	20	16
15"	42	29	21	21	16
18"	44	30	21	22	17
24"	37	26	18	19	14
30"	39	27	19	19	15
36"	28	20	14	14	11
42"	30	21	14	15	11
48"	29	20	14	14	10
60"	29	20	14	14	10

FILL HEIGHTS BASED ON CALCULATIONS SHOWN IN THE STRUCTURES SECTION OF THE ADS DRAINAGE HANDBOOK (V20.7). CALCULATIONS ASSUME NO HYDROSTATIC PRESSURE AND A DENSITY OF 120 PCF FOR OVER BURDEN MATERIAL. INSTALLATION IN ACCORDANCE WITH ASTM D2321, WITH FILL HEIGHTS AS SHOWN. SEE TABLE 3 FOR SOIL DATA. STANDARD PROCTOR DENSITY USED FOR COMPACTION. INCREASE SOIL CLASS AND/OR COMPACTION EFFORT AS NEEDED TO MEET REQUIRED FILL HEIGHTS ON PROJECT PLANS

MINIMUM COVER FOR ADS HP STORM PIPE (IN)			
PIPE DIA	H20 AXLE LOAD (lbs)	CLASS II @ 90% SPD	CLASS III @ 90% SPD
12" - 48"	32000	12	12
60"	32000	24	24

FOR TRAFFIC APPLICATIONS MINIMUM COVER IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE; MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT (ASPHALT) OR TO TOP OF RIGID PAVEMENT (CONCRETE).

TABLE 1 : MAXIMUM & MINIMUM COVER



ENSURE BEDDING IS UNIFORM AND TRUE TO LINE AND GRADE. MIDDLE THIRD SHOULD BE LOOSE TO CRADLE PIPE.

EXTEND BEDDING AT LEAST 2 FEET BEYOND THE END OF THE PIPE BEING INSTALLED.

TRENCH SHOULD BE DRY OR PROPERLY DEWATERED BEFORE PLACING BEDDING AND BACKFILL.

IF STONE OR ANY OPEN GRADED BEDDING MATERIAL IS USED, WRAP THE STONE WITH A MIN. 6 OUNCE NON-WOVEN GEOTEXTILE.

STEP 3 : PREPARATION OF BEDDING MATERIAL

WHEN COMPACTING OVER THE PIPE WITH LIGHT WEIGHT COMPACTION EQUIPMENT, ENSURE THERE IS 6" MINIMUM COVER.

MEDIUM SIZED COMPACTORS MAY BE USED TO COMPACT BACKFILL IN LIFTS UP SIDES OF PIPE.

MEDIUM SIZED COMPACTORS MUST HAVE 12" MINIMUM COVER BEFORE COMPACTING OVER THE PIPE.

SEE TABLE 2 FOR MINIMUM COVER REQUIREMENTS FOR TYPICAL CONSTRUCTION EQUIPMENT.

STEP 7 : COMPACT OVER TOP OF PIPE

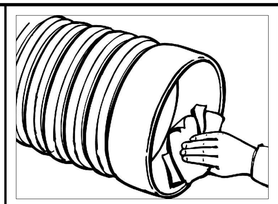
MINIMUM COVER FOR CONSTRUCTION VEHICLES									
					TEMPORARY MINIMUM COVER HEIGHTS (in)				
CONSTRUCTION VEHICLE	VEHICLE DESCRIPTION	MINIMUM TIRE	AXLE LOAD (lbs)	PIPE DIAMETER	CLASS I COMPACTED	CLASS II @ 95% SPD	CLASS II @ 90% SPD	CLASS III @ 95% SPD	CLASS III @ 90% SPD
CAT CT660	DUMP TRUCK	22.5-R11	46000	12"-60"	9	9	12	12	18
CAT 16M3	GRADER	23.5-R25	58753	12"-21"	12	12	15	15	21
				24"-60"					24
CAT 730C	ARTICULATED DUMP TRUCK	23.5-R25	74538	12"-15"	15	15	18	18	24
				18"-60"					27
CAT CS78B[1]	ROLLER	84-IN DRUM	74600	12"-21"	15	15	21	21	24
				24"-60"					27
KOMATSU WA800-3	WHEEL LOADER	45/65-45	158270	12"-30"	15	15	21	21	30
				36"-60"					36

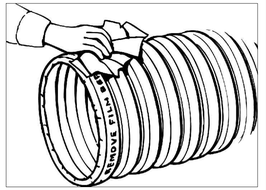
[1]ACCELERATOR (VIBRATOR) TURNED ON

MINIMUM COVER TO PREVENT PIPE FLOTATION	
NOMINAL DIAMETER (in)	MINIMUM COVER (in)
12	9
15	11
18	13
24	17
30	22
36	25
42	29
48	33
60	40

FLOTATION NOTES:
THE PIPE IS ASSUMED TO BE EMPTY WITH GROUNDWATER TO THE GRADE SURFACE AND SATURATED SOIL DENSITY OF 130 PCF. IF THE PIPE IS FULL OF WATER THESE VALUES MAY BE ADJUSTED BY THE SITE DESIGN ENGINEER. FOR MORE INFORMATION ON FLOTATION, REFER TO ADS TECH NOTE TN 5.05.

TABLE 2 : MIN. COVER FOR CONSTRUCTION VEHICLES & FLOTATION



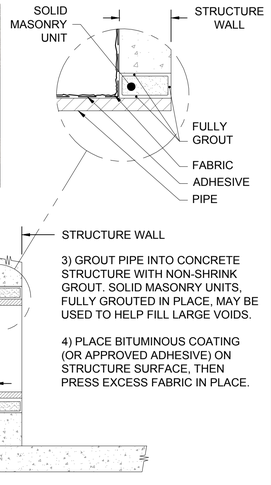


- USE A CLEAN RAG OR BRUSH TO LIGHTLY LUBRICATE INSIDE THE BELL. CLEAN SPIGOT END OF PIPE. REMOVE PLASTIC WRAP FROM GASKET. DO NOT ALLOW LUBRICATED SECTION TO TOUCH DIRT OR BACKFILL.
- ALIGN PIPE AND PLACE SPIGOT INTO BELL. USING STRAP OR PUSH PIECE, FULLY INSERT SPIGOT INTO BELL. WHEN LEADING BELL EDGE TOUCHES "HOME" MARK JOINT IS FULLY INSERTED. INSIDE JOINT GAPS SHOULD BE TIGHT ON ALL SIDES. SEE MANUFACTURER FOR JOINT TOLERANCE.

STEP 4 : PIPE JOINT ASSEMBLY

1) PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) AROUND PIPE, WRAP AND SECURE FABRIC AROUND PIPE, LEAVING EXCESS FABRIC TO PRESS AGAINST STRUCTURE

2) INSERT PIPE INTO STRUCTURE, WITH PIPE RESTING ON BEDDING. THE PIPE SHOULD BE IN THE APPROXIMATE CENTER OF THE OPENING.



3) GROUT PIPE INTO CONCRETE STRUCTURE WITH NON-SHRINK GROUT. SOLID MASONRY UNITS, FULLY GROUTED IN PLACE, MAY BE USED TO HELP FILL LARGE VOIDS.

4) PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) ON STRUCTURE SURFACE, THEN PRESS EXCESS FABRIC IN PLACE.

STEP 8 : FABRIC & GROUT CONNECTION TO STRUCTURE

ASTM D2321 SOIL CLASS[1]	ASTM D2487 SOIL GROUP[1,2]	AASHTO M145 SOIL GROUPS[1]
STONE BACKFILL		
CLASS I[2]	ANGULAR CRUSHED ROCK, WITH 100% PASSING 1-1/2 IN. SIEVE ≤15% PASSING #4 SIEVE ≤25% PASSING 3/8 IN. SIEVE ≤12% PASSING #200 SIEVE ALL PARTICLE SURFACES SHALL BE FRACTURED.	-
GRAVEL AND SAND BACKFILL		
CLASS II	CLEAN, COUARSE GRAINED SOILS; "SW", "SP", "GW", "GP", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMPOLS WITH ≤12% PASSING #200 SIEVE.	A1, A3
COARSE GRAINED SOILS WITH FINES		
CLASS III	COARSE GRAINED SOILS WITH FINES: "GM", "GC", "SM", "SC", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS, CONTAINING >12% PASSING #200 SIEVE; "CL", "ML", OR ANY SOIL BEGINNING WITH ONE OF THESE SYMBOLS, WITH ≥30% RETAINED ON #200 SIEVE	A-2-4, A-2-5, A-2-6, OR A-4 OR A-6 SOILS WITH MORE THAN 30% RETAINED ON #200 SIEVE

[1]SEE ASTM D2321 FOR ADDITIONAL GUIDANCE REGARDING THE USE OF LISTED SOIL AS BACKFILL AROUND THERMOPLASTIC PIPE

[2]IT IS HIGHLY RECOMMENDED TO WRAP THIS MATERIAL WITH A GEOTEXTILE TO PREVENT MIGRATION OF FINES INTO AND THROUGH VOIDS IN THE BACKFILL.

BACKFILL AROUND PIPE SHALL MEET ASTM D2321 CLASS I, II, OR III UNLESS SPECFICALLY APPROVED IN WRITING BY THE PROJECT DESIGN ENGINEER AND MAXIMUM COVER DATA IS PROVIDED.

TABLE 3 : BACKFILL CLASSIFICATIONS

HP STORM INSTALLATION GUIDE

DRAWN: JLM | DATE: 08/17/17

REVISION: | DWG NO:

NOT TO SCALE

PIPE MUST BE INSTALLED IN ACCORDANCE WITH ASTM D2321, IN ADDITION TO ALL SITE CONDITIONS REQUIRED BY STATE AND LOCAL CODES, INDUSTRY STANDARDS AND GUIDELINES, MANUFACTURER'S INSTALLATION RECOMMENDATIONS, OSHA, AND ALL APPLICABLE LAWS.

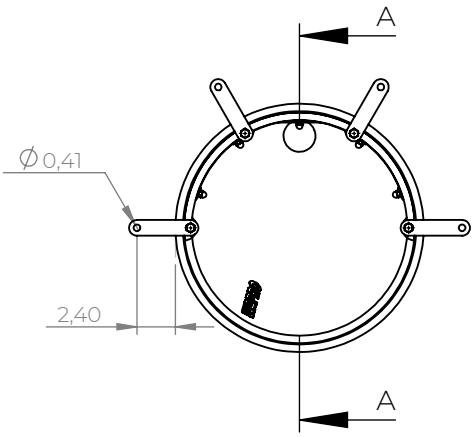
HP Storm HIGH PERFORMANCE

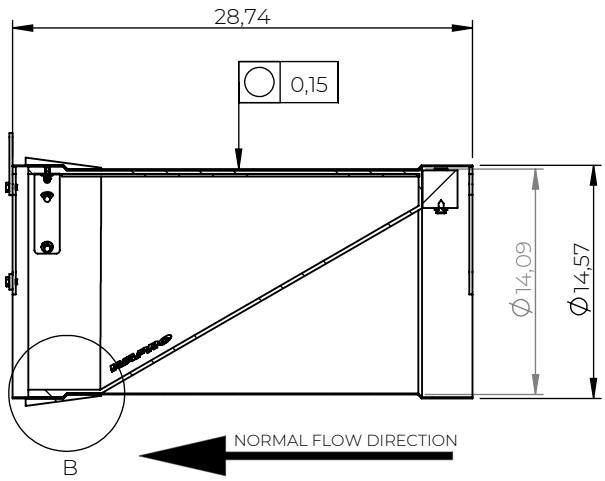
4640 TRUEMAN BLVD
HILLIARD, OH 43026

ADS®
ADVANCED DRAINAGE SYSTEMS, INC.

SHEET
1 OF 1

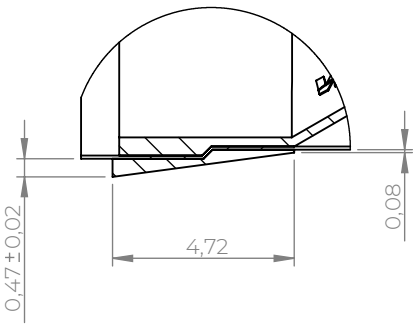
Rev	Note	CreatedBy	Appr.By	Appr.Date
A	Initial release	HE	AE	2019-12-10

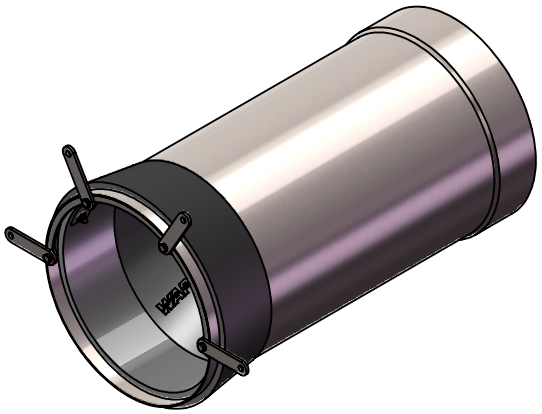




A-A

DETAIL B
SCALE 1 : 5





Designed By	Approved By	Created Date	Units	General Tolerance	Scale
FG		2020-03-23	[inch]	ISO 13920A	1:12

Material	Project	Comments
AISI 316L / EN1.4404		

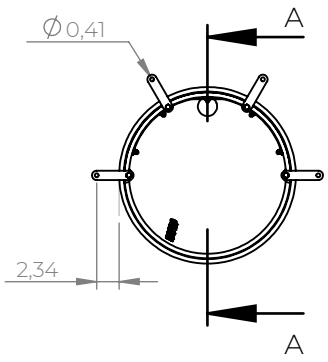
Weight [Lbs]	Box Volume [ft³]
42,11	

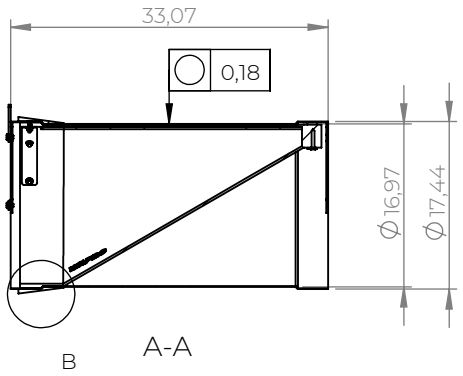
Description: WaStop NPS 15"

WAPRO
www.wapro.com

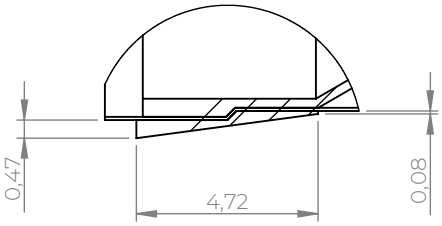
Article Number	Drawing Number	Rev	Sheet
WS370-S	ws370-s-us	A	1 (1)

Rev	Note	CreatedBy	Appr.By	Appr.Date
A	Initial release	HE		





DETAIL B
SCALE 1 : 5



Designed By	Approved By	Created Date	Units	General Tolerance	Scale
HE		2019-12-11	[inch]	ISO 13920A	1:20

Material	Project	Comments
AISI 304 / AISI 316L		

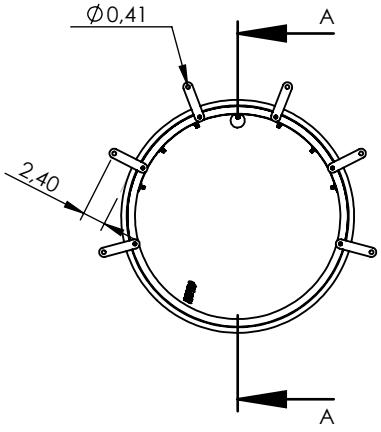
Weight [Lbs]	Box Volume [ft³]
56,42	5.8

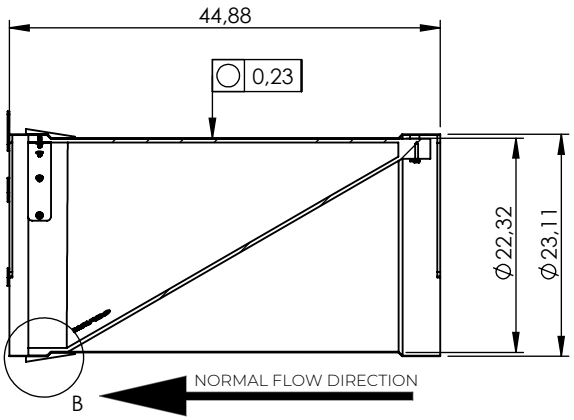
Description: WaStop NPS 18"

www.wapro.com

Article Number	Drawing Number	Rev	Sheet
WS440-S	ws440-s-us	A	1 (1)

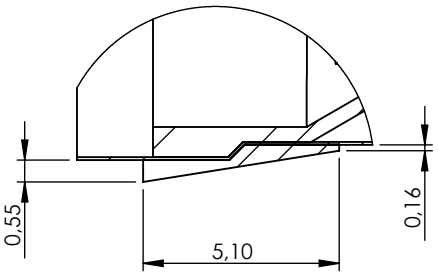
Rev	Note	CreatedBy	Appr.By	Appr.Date
A	Initial release		AE	2019-07-10

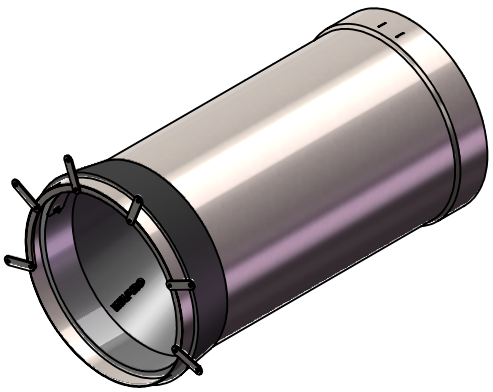




A-A

DETAIL B
SCALE 1 : 5





Designed By	Approved By	Created Date	Units	General Tolerance	Scale
HE	AE	2019-12-16	[inch]	ISO 13920A	1:20

Material	Comments	Project
AISI 304 / AISI 316L		

Weight [Lbs]	Box Volume [ft³]	Description
115,2	14.8	WaStop NPS 24"

WAPRO
www.wapro.com

Article Number	Drawing Number	Rev	Sheet
WS590-S	ws590-s-us	A	1 (1)