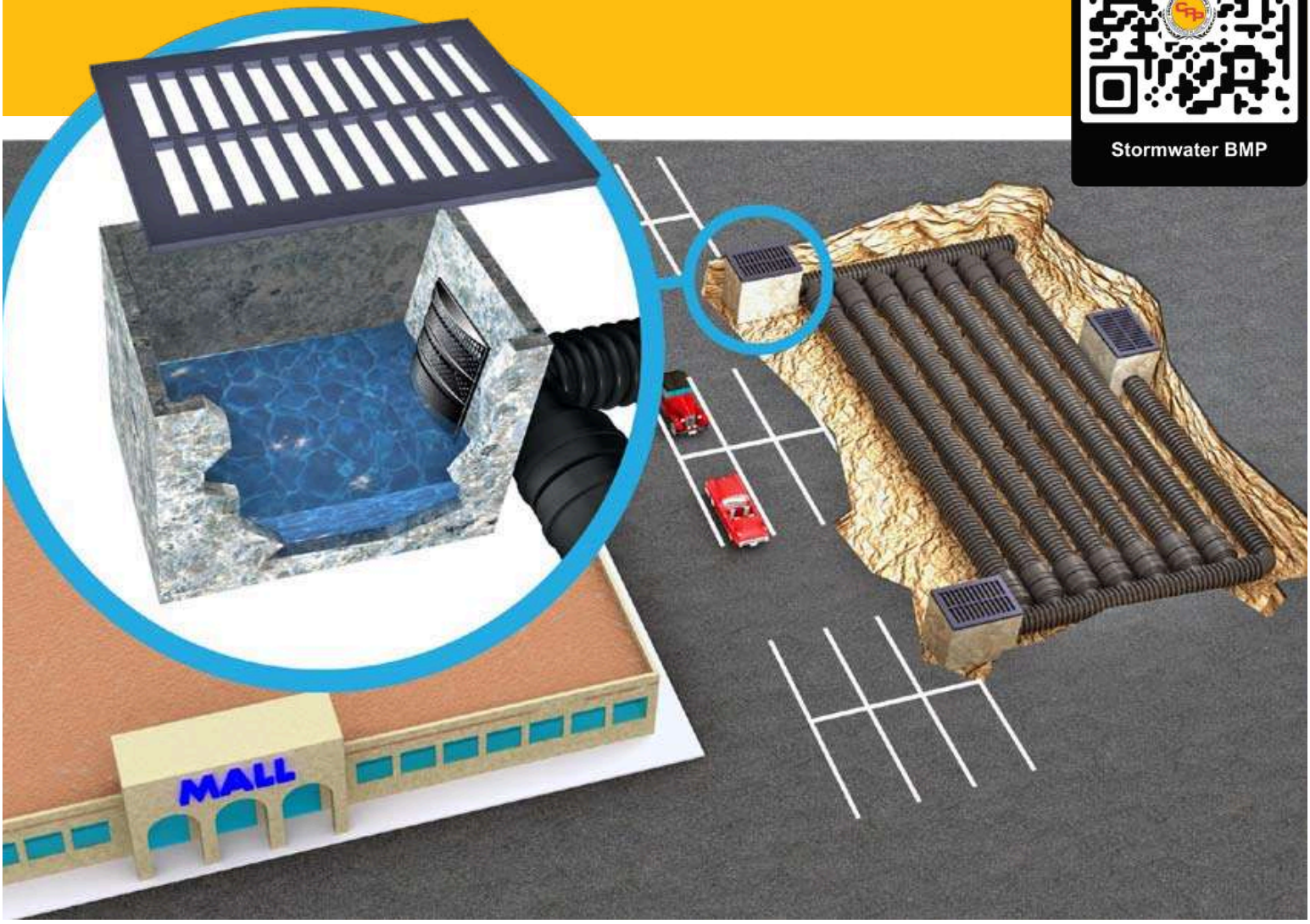
Stormwater Detention/Retention Systems

Stormwater BMP



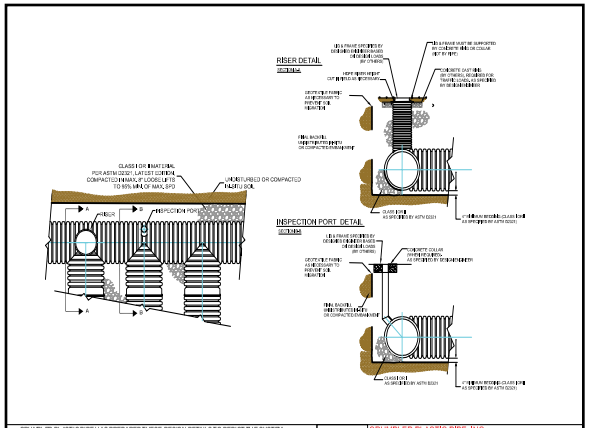
Crumpler Plastic Pipe, Inc.

Manufacturers of Corrugated Plastic Drainage Pipe

PHONE 910-525-4046 / (800) 334-5071
POST OFFICE BOX 2068
ROSEBORO, NORTH CAROLINA 28382

WEB SITE: www.cpp-pipe.com

CRUMPLER PLASTIC PIPE Inc
CORRUGATED PLASTIC PIPE
1-800-334-5071
www.cpp-pipe.com

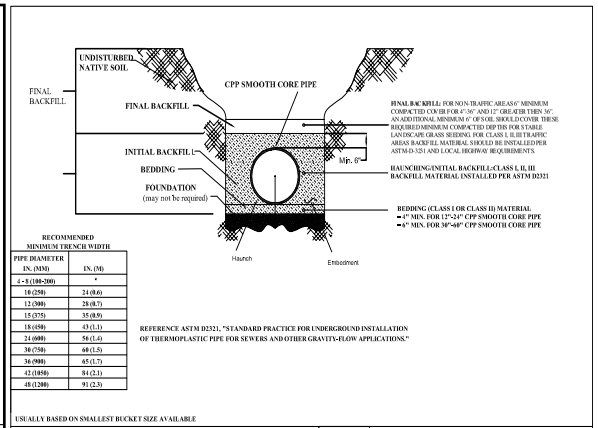


CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

CLEANOUT AND RISER DETAIL

DATE: 09-07-11	DWG NUMBER: DT-301
SCALE: NONE	MATERIAL:



RECOMMENDED MINIMUM TRENCH WIDTH

PIPE DIAMETER IN. (MM)	IN. (M)
4 - 8 (100-200)	
10 (250)	24 (0.6)
12 (300)	28 (0.7)
15 (375)	35 (0.9)
18 (450)	43 (1.1)
24 (600)	58 (1.4)
30 (750)	68 (1.5)
36 (900)	65 (1.7)
42 (1050)	84 (2.1)
48 (1200)	91 (2.3)

USUALLY BASED ON SMALLEST BUCKET SIZE AVAILABLE

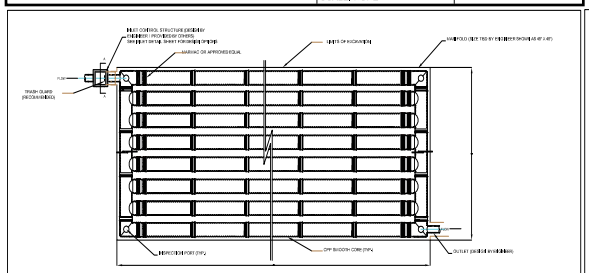
REFERENCE ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS."

CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL TRENCH DETAIL CROSS SECTION

DATE: 09-07-11	DWG NUMBER: DT-304
SCALE NONE	MATERIAL



TRASH GUARD
TRASH AND GRIT FILTRATION SYSTEM MOUNTED TO STRUCTURE WALL CONTACT (TYP.)

INLET STRUCTURE
SECTION A-A

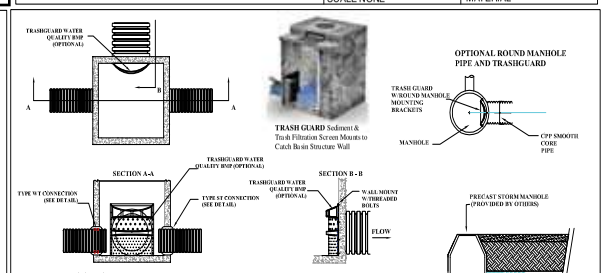
NOTES:
1. THE HDPE PIPE FOR THIS APPLICATION SHALL BE BACKFILLED AND SPACED IN ACCORDANCE WITH THE INSTALLATION PROFILE DETAIL.
2. ALTERNATE PRODUCT OTHER THAN CPP SMOOTH CORE SHALL BE SUBMITTED TO DESIGN ENGINEER A MINIMUM TWO WEEKS PRIOR TO BID FOR REVIEW AND APPROVAL.
3. TRASH GUARD SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATION. CONTACT TRASH GUARD AT 866-526-0362 FOR PRICING OR INSTALLATION INSTRUCTIONS.
INSTALLATION INFO IS BASED OFF OF PROPOSED PAVEMENT ELEVATION AND ASSUMED PAVEMENT DEPTH. THESE NUMBERS MAY CHANGE BASED ON DESIGN CRITERIA AND FIELD CONDITIONS.
** CONTACT CPP AT 800-334-5071 FOR INSTALLATION INSTRUCTIONS OR OTHER TECHNICAL ASSISTANCE.

CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL DETENTION SYSTEM LAYOUT DETAIL

DATE: 09-07-11	DWG NUMBER: DT-302
SCALE: NONE	MATERIAL:

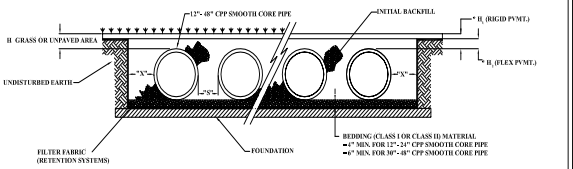


CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

STANDARD MANHOLE AND BOX STRUCTURE DETAILS

DATE: 09-07-11	DWG NUMBER: DT-305
SCALE NONE	MATERIAL



NOTES:
1. ALL DETENTION AND RETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM 2321, "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 OR STABILIZE USING GEOTEXTILE MATERIAL, AS SPECIFIED BY THE ENGINEER.
4. INITIAL BACKFILL - SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
5. MINIMUM COVER HEIGHTS -"H1" = 12" FOR H-25 TRAFFIC LOADS FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVED SURFACE FOR 12" - TO - 48". PAVING THICKNESS TO BE SPECIFIED CORRECTLY FOR THE END USE. IF NO PAVED SURFACING USED, THE MINIMUM COMPACTED COVER SHOULD BE EXTENDED TO 18". FOR UNPAVED AREAS WHERE HEAVY CONSTRUCTION LOADING (75 T AXLE LOAD) EXPECTED, 48" OF COMPACTED MOUNDING COVER REQUIRED AT ISOLATED TRAFFIC CROSSING POINTS. FLOWABLE FILL OR OTHER ENGINEERED BACKFILLS MAY BE DESIGNED TO REDUCE MINIMUM COVER.
6. CONTACT CPP AT 800-334-5071 FOR INSTALLATION INSTRUCTIONS OR OTHER TECHNICAL ASSISTANCE.

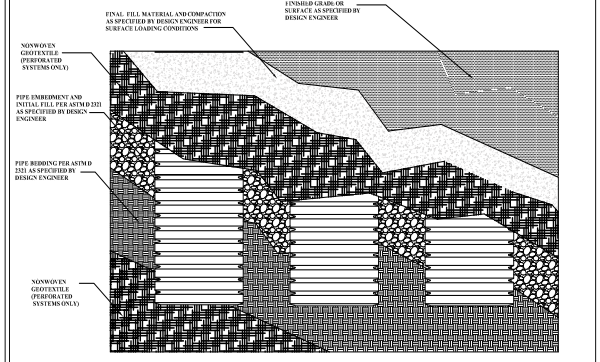
NOMINAL DIAMETER	MINIMUM "A"	MINIMUM "B"
12"	8"	12"
15"	8"	12"
18"	9"	12"
24"	10"	12"
30"	12"	15"
36"	12"	18"
42"	18"	21"
48"	18"	24"

CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL SUBSURFACE DET./RET. CROSS SECTION

DATE: 09-07-11	DWG NUMBER: DT-303
SCALE: NONE	MATERIAL:



CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

SYSTEM PLAN VIEW OF CONSTRUCTION LAYERS

DATE: 09-07-11	DWG NUMBER: DT-306
SCALE NONE	MATERIAL

Introduction:

Underground Stormwater Storage Products have become a popular BMP as Developers and Commercial Property Owners strive to save land space that can ultimately be used as an available building area to generate more income for a project. The placement of these Stormwater BMPs underneath Parking Lots, Roadways, Athletic Fields and set back open space areas permit volumes of Stormwater runoff to be stored underground, where it can be reused, discharged to public storm sewers or infiltrated into the soil to recharge local aquifers.

To protect underground CPP Pipe Stormwater Detention/Retention systems from trash and sediment accumulation as well as floatable items, such as plastic bags, from entering an underground pipe Storage System, CPP, Inc. recommends the use of the Catch Basin insert screen called TRASH GUARD®. These durable plastic screens have been demonstrated to remove not only unsightly trash, but also parking lot sediments laced with regulated metals, Nitrogen and Phosphorus. By removing the unwanted trash and toxic sediments from the Stormwater flow at the TRASH GUARD® protected Catch Basin, CPP underground detention systems last longer because they are not becoming clogged. At numerous locations from mountains to the Carolina and California coasts, the cleaning cycle required of TRASH GUARD® protected Catch Basins has been either Quarterly or Semi-Annual under a variety of rainfall and topography conditions. Removal of trash and sediments from a Catch Basin is much less expensive than from an underground BMP storage system once the Post Construction life of a project begins.

Specification for Smooth Interior and Annular Exterior Corrugated High Density Polyethylene (HDPE) Pipe

Descrlptlon
This specification describes 12-inch through 48-inch (300 to 1200 mm) HDPE pipe for soil-tight applications. All construction will be to prescribed lines and grades in accordance with the plans and specifications, or as directed by the engineer.

Manufacturer
Pipe and fittings shall be Crumpler Plastic Pipe Smooth Core Pipe

Pipe Requirements
Pipe shall have a smooth interior and annular exterior corrugations.
• 12- through 48-inch (300 to 12000 mm) shall meet most current edition of AASHTO M294.

Joint Performance
Pipe joints shall meet the requirements of most current edition of AASHTO M294..

12- through 48-inch (300 to 1200 mm) shall be soil tight according to the requirements of AASHTO M294. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris.

Fittings
Fittings shall conform to most current edition of AASHTO M294.

Material Properties
Pipe and fitting material shall be high-density polyethylene meeting ASTM D3350 cell classification. Cell classification shall be 345434C or greater. The 12- through 48-inch (300 to 1200mm) pipe shall be a slow crack resistant material evaluated using the single point notched constant tensile load (SP-NCTL) test per AASHTO M294.

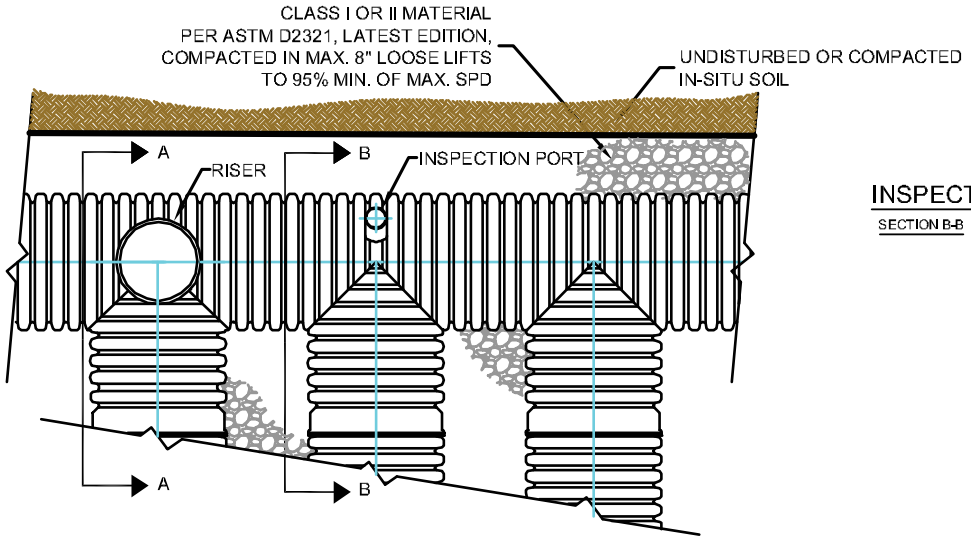
Inlet / Outlet pipe joints shall be sealed with an exterior coupler. The joints' coupler shall be Marmac Polyseal Pipe Coupler as supplied by Crumpler Plastic Pipe and shall be installed according to manufacturer's recommendations. The couplers shall have an outer layer of cross-laminated polyethylene with an under layer of rubberized mastic that is reinforced with a woven polypropylene fabric. The coupler's width shall be per manufacturer's recommendations and designed so that when it is applied around the joint the ends shall overlap at least 8-inches.

Installation
Installation shall be in accordance with ASTM D2321, with the exception that minimum cover in trafficked areas for 12- through 36-inch (300 to 900 mm) diameters shall be 1 ft. (0.3 m) and for 42-inch (1050 mm) and 48-inch (1200 mm) diameter, the minimum cover shall be 2.0 ft. (0.6 m).

DATE:
DESIGNED BY: TRT
MATERIAL:

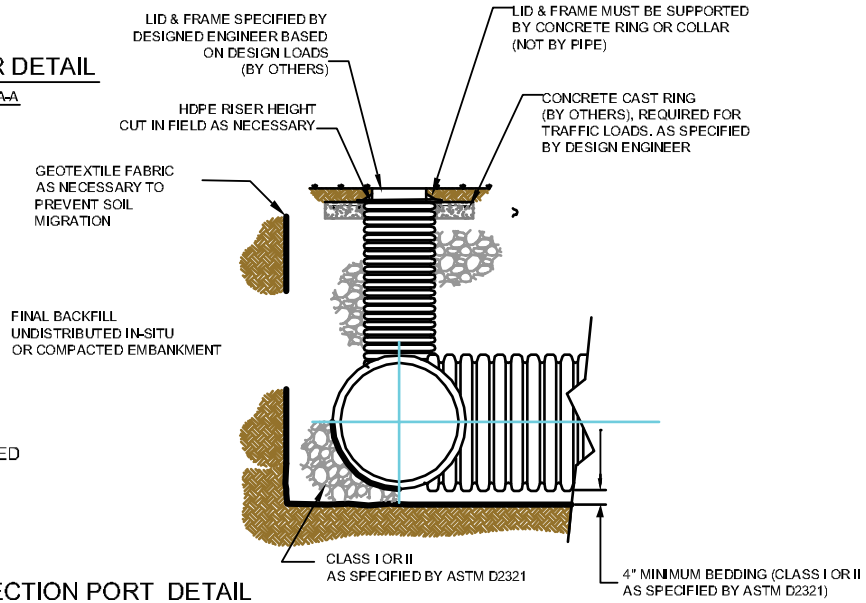
CRUMPLER PLASTIC PIPE
STORMWATER LAYOUT
ROSEBORO, NC

CPP Stormwater Detention/Retention Systems



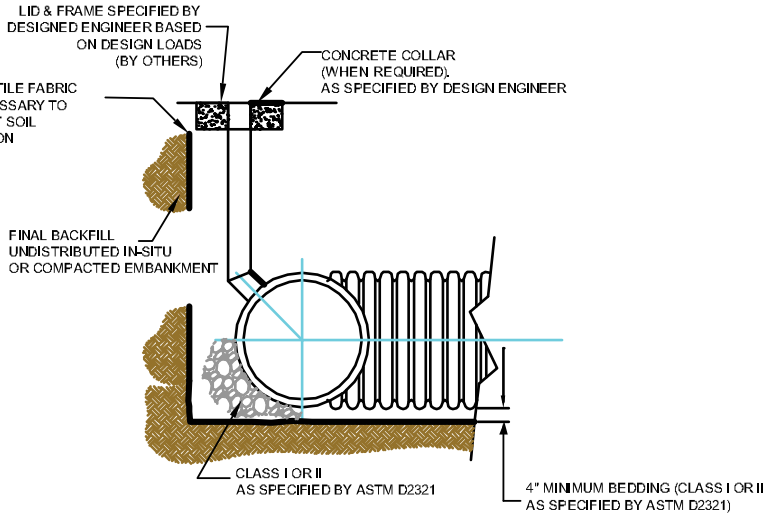
RISER DETAIL

SECTION A-A



INSPECTION PORT DETAIL

SECTION B-B

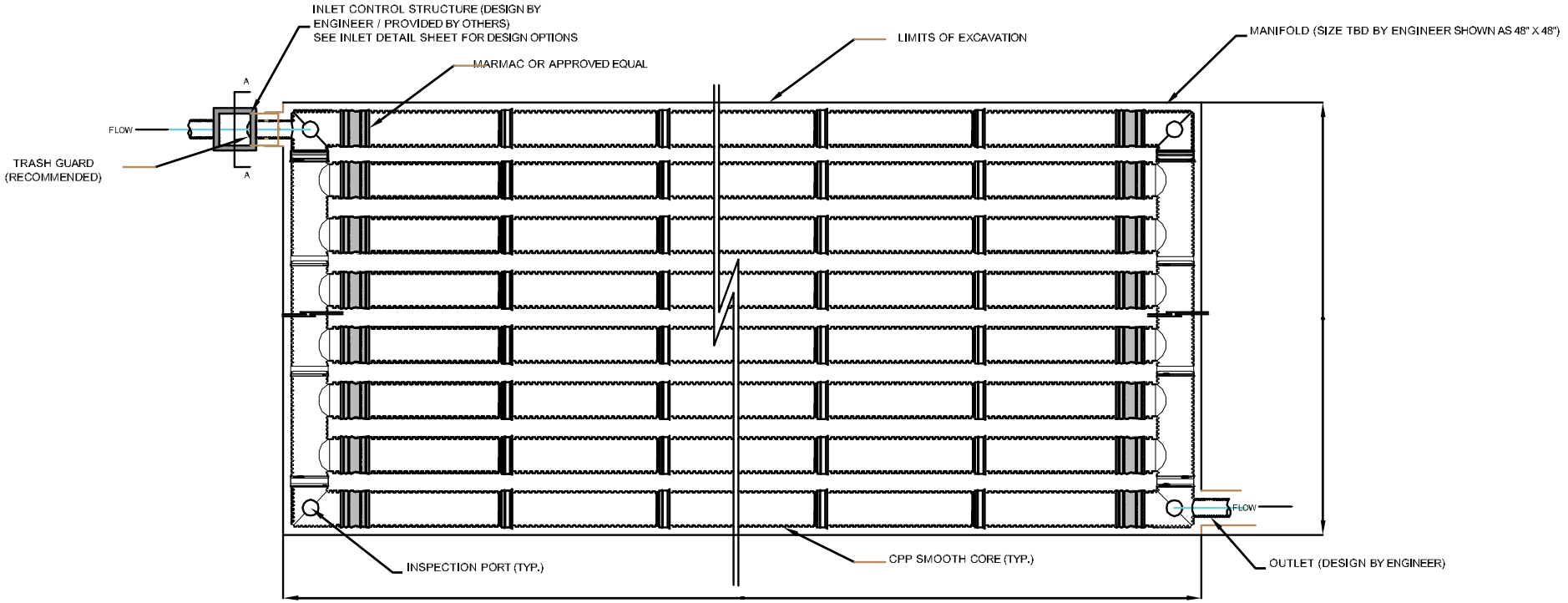


CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

CLEANOUT AND RISER DETAIL

DATE: 09-07-11	DWG NUMBER: DT-301
SCALE: NONE	MATERIAL:



TRASH GUARD
TRASH AND GRIT FILTRATION SYSTEM MOUNTED TO STRUCTURE WALL CONTACT (TYP.)

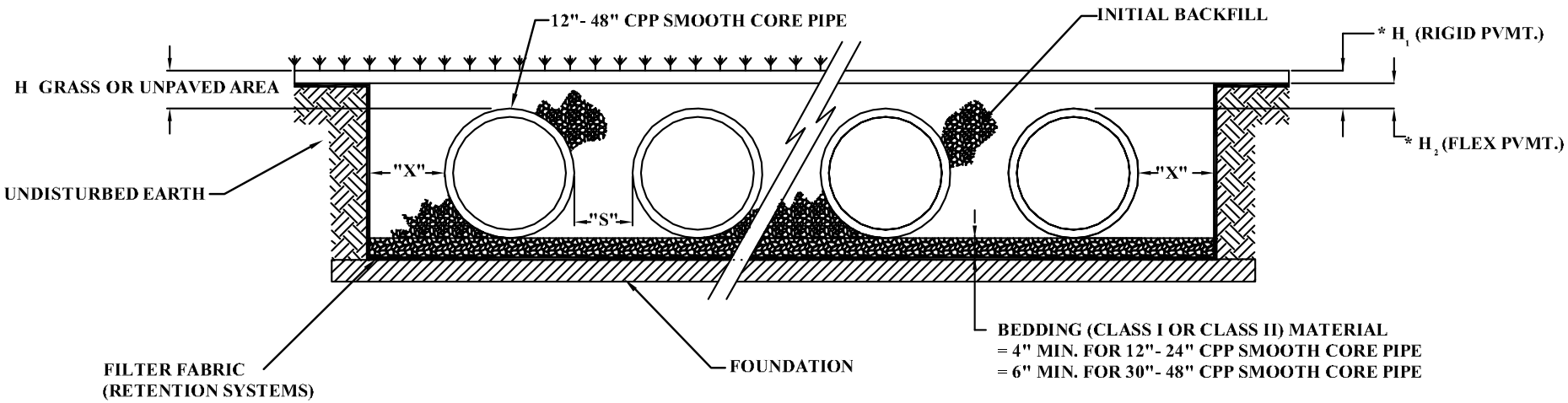
INLET STRUCTURE SECTION A-A

NOTES:
1. THE HDPE PIPE FOR THIS APPLICATION SHALL BE BACKFILLED AND SPACED IN ACCORDANCE WITH THE INSTALLATION PROFILE DETAIL.
2. ALTERNATE PRODUCT OTHER THAN CPP SMOOTH CORE SHALL BE SUBMITTED TO DESIGN ENGINEER A MINIMUM TWO WEEKS PRIOR TO BID FOR REVIEW AND APPROVAL
3. TRASH GUARD SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATION. CONTACT TRASH GUARD AT 866-520-4362 FOR PRICING OR INSTALLATION INSTRUCTIONS.
INSTALLATION INFO IS BASED OFF OF PROPOSED PAVEMENT ELEVATION AND ASSUMED PAVEMENT DEPTH. THESE NUMBERS MAY CHANGE BASED ON DESIGN CRITERIA AND FIELD CONDITIONS.
** CONTACT CPP AT 800-334-5071 FOR INSTALLATION INSTRUCTIONS OR OTHER TECHNICAL ASSISTANCE.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL DETENTION SYSTEM LAYOUT DETAIL

DATE: 09-07-11	DWG NUMBER: DT-302
SCALE: NONE	MATERIAL:



NOMINAL DIAMETER	MINIMUM "X"	MINIMUM "S"
12"	8"	12"
15"	8"	12"
18"	9"	12"
24"	10"	12"
30"	12"	15"
36"	12"	18"
42"	18"	21"
48"	18"	24"

NOTES:

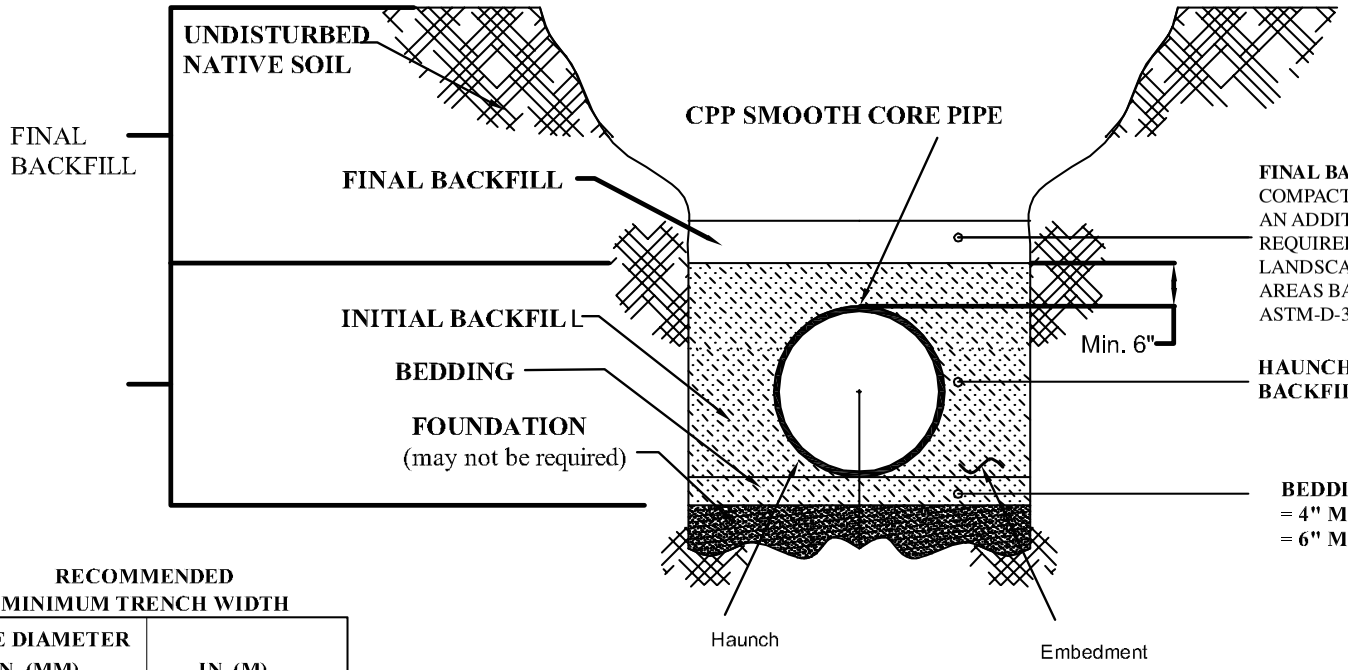
1. ALL DETENTION AND RETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM 2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL 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 OR STABILIZE USING GEOTEXTILE MATERIAL, AS SPECIFIED BY THE ENGINEER.
4 INITIAL BACKFILL - SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
5. MINIMUM COVER HEIGHTS-*H1, = 12" FOR H-25 TRAFFIC LOADS FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVED SURFACE FOR 12" - TO - 48". PAVING THICKNESS TO BE SPECIFIED CORRECTLY FOR THE END USE. IF NO PAVED SURFACING USED, THE MINIMUM COMPACTED COVER SHOULD BE EXTENDED TO 18". FOR UNPAVED AREAS WHERE HEAVY CONTRUCTION LOADING (75 T AXLE LOAD) EXPECTED, 48" OF COMPACTED MOUNDING COVER REQUIRED AT ISOLATED TRAFFIC CROSSING POINTS. FLOWABLE FILL OR OTHER ENGINEERED BACKFILLS MAY BE DESIGNED TO REDUCE MINIMUM COVER.

6. CONTACT CPP AT 800-334-5071 FOR INSTALLATION INSTRUCTIONS OR OTHER TECHNICAL ASSISTANCE.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL SUBSURFACE DET./RET. CROSS SECTION

DATE: 09-07-11	DWG NUMBER: DT-303
SCALE: NONE	MATERIAL:



FINAL BACKFILL: FOR NON-TRAFFIC AREAS 6" MINIMUM COMPACTED COVER FOR 4"-36" AND 12" GREATER THEN 36". AN ADDITIONAL MINIMUM 6" OF SOIL SHOULD COVER THESE REQUIRED MINIMUM COMPACTED DEPTHS FOR STABLE LANDSCAPE GRASS SEEDING. FOR CLASS I, II, III TRAFFIC AREAS BACKFILL MATERIAL SHOULD BE INSTALLED PER ASTM-D-3231 AND LOCAL HIGHWAY REQUIREMENTS.

HAUNCHING/INITIAL BACKFILL:CLASS I, II, III BACKFILL MATERIAL INSTALLED PER ASTM D2321

BEDDING (CLASS I OR CLASS II) MATERIAL
= 4" MIN. FOR 12"-24" CPP SMOOTH CORE PIPE
= 6" MIN. FOR 30"-60" CPP SMOOTH CORE PIPE

RECOMMENDED MINIMUM TRENCH WIDTH

PIPE DIAMETER IN. (MM)	IN. (M)
4 - 8 (100-200)	*
10 (250)	24 (0.6)
12 (300)	28 (0.7)
15 (375)	35 (0.9)
18 (450)	43 (1.1)
24 (600)	56 (1.4)
30 (750)	60 (1.5)
36 (900)	65 (1.7)
42 (1050)	84 (2.1)
48 (1200)	91 (2.3)

REFERENCE ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS."

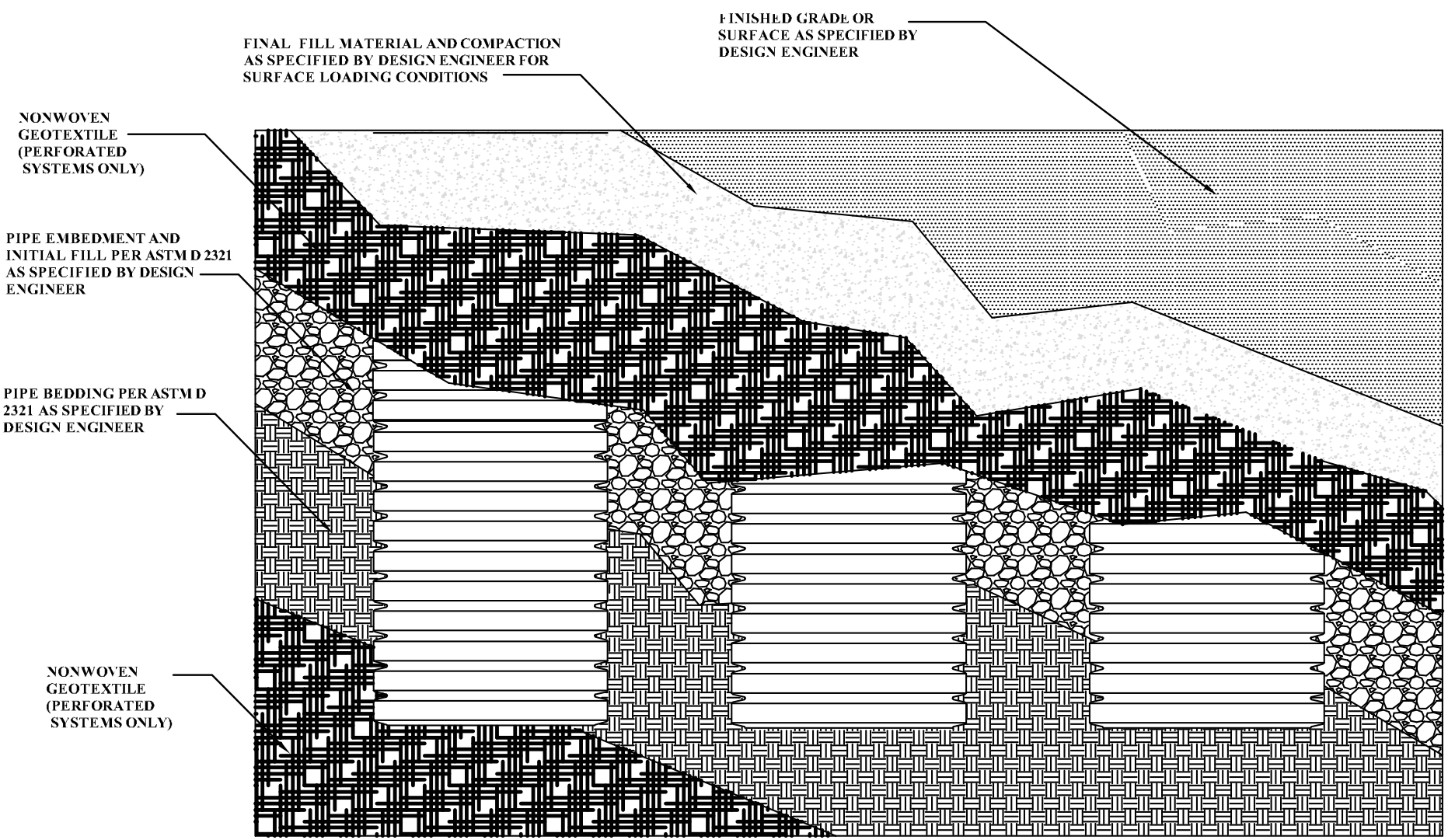
USUALLY BASED ON SMALLEST BUCKET SIZE AVAILABLE

CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

TYPICAL TRENCH DETAIL CROSS SECTION

DATE: 09-07-11	DWG NUMBER: DT-304
SCALE NONE	MATERIAL

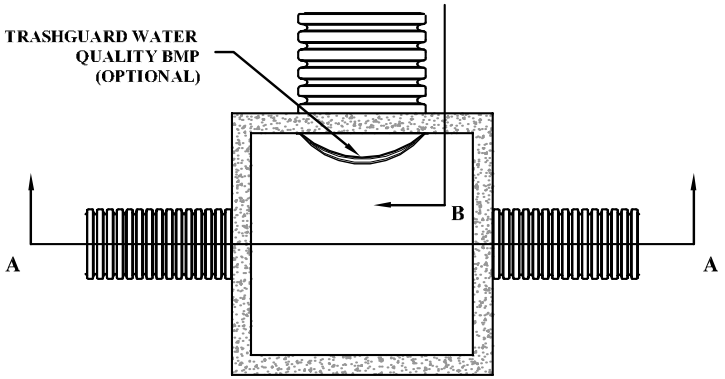


CRUMPLER PLASTIC PIPE HAS PREPARED THESE DESIGN DETAILS TO DEPICT THE SYSTEM COMPONENTS AS REQUESTED. CRUMPLER PLASTIC PIPE HAS NOT PREFORMED ANY DESIGN OR ENGINEERING SERVICES FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER TO ENSURE THAT THE ABOVE DETAILS MEET THE APPLICABLE NATION, STATE OR LOCAL REQUIREMENTS AND CODES FOR THE PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT.

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

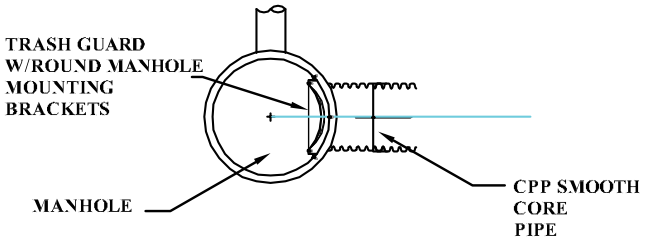
SYSTEM PLAN VIEW OF CONSTRUCTION LAYERS

DATE: 09-07-11	DWG NUMBER: DT-306
SCALE NONE	MATERIAL

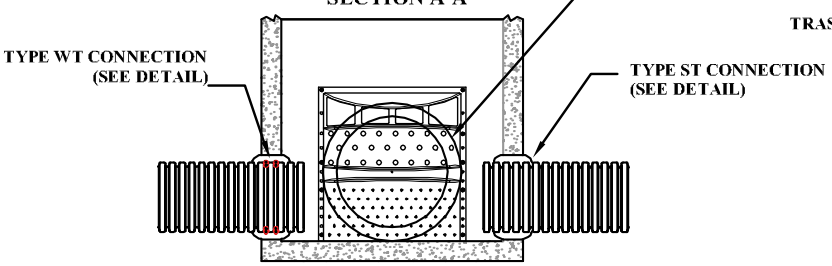


TRASH GUARD Sediment & Trash Filtration Screen Mounts to Catch Basin Structure Wall

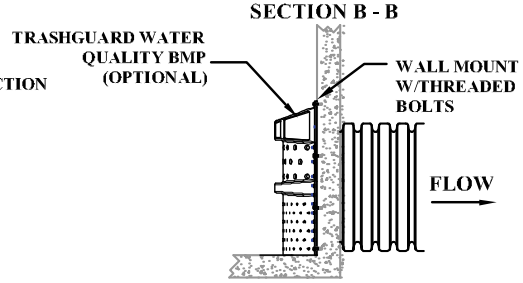
OPTIONAL ROUND MANHOLE PIPE AND TRASHGUARD

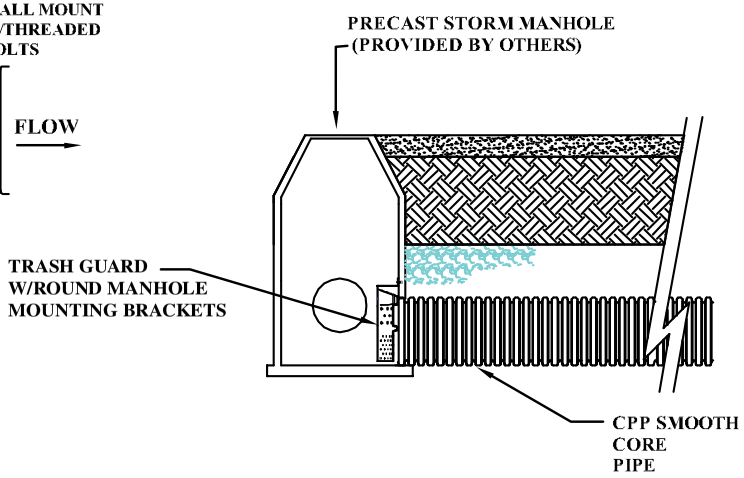


SECTION A-A

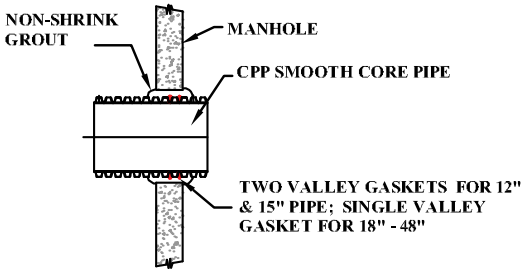


SECTION B - B





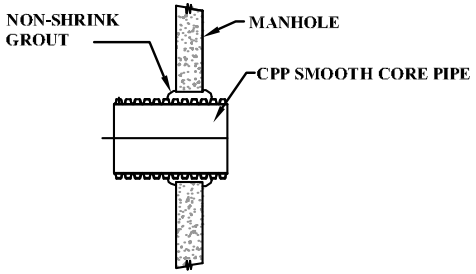
TYPE WT PIPE TO STRUCTURE CONNECTION DETAIL



****TYPE WT - WATERTIGHT CAPABLE:**
CPP SMOOTH CORE/W NON-SHRINK GROUT AND FULL HEIGHT CORRUGATION GASKET(S)

** NOTE: TYPE WT MANHOLE CONNECTIONS ARE NON-TESTABLE WATER TIGHT CONNECTIONS. RUBBER BOOTS ARE REQUIRED FOR PRESSURE TESTABLE PIPE TO STRUCTURE CONNECTIONS.

TYPE ST PIPE TO STRUCTURE CONNECTION DETAIL



TYPE ST - SOIL TIGHT:
CPP SMOOTH CORE W/NON-SHIRNK GROUT

NOTES:

1. **CONTACT TRASH GUARD AT 866-520-4362 FOR DETAILED INSTALLATION INSTRUCTIONS.**
2. **CPP SMOOTH CORE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM 2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION.**
3. **MEASURES SHOULD BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT WHEN TRANSITIONING FROM MANHOLES OR STRUCTURES TO FLEXIBLE PIPE.**

CRUMPLER PLASTIC PIPE, INC.
POST OFFICE BOX 2068
ROSEBORO, NC 28382-2068
910-525-4046

STANDARD MANHOLE AND BOX STRUCTURE DETAILS

DATE: 09-07-11	DWG NUMBER: DT-305
SCALE NONE	MATERIAL

CPP factory fabricated fittings and manifolds allows for easy
site assembly of CPP Stormwater Detention/Retention Systems

Compacted cover and ready for paving photos show Manhole Covers
for inspection access and easy post construction maintenance

Now ready for paving and final landscape touch up work, this Trash Guard® Protected CPP Stormwater Detention / Retention System is set to last the mortgage life of this shopping complex thanks to inexpensive maintenance for sediment control

Crumpler Plastic Pipe Stormwater Layout

Post Office Box 2068
Roseboro, NC 28382-2068

910-525-4046
www.cpp-pipe.com

Crumpler Plastic Pipe, Inc.

Manufacturers of Corrugated Plastic Drainage Pipe

PHONE 910-525-4046 / (800) 334-5071
POST OFFICE BOX 2068
ROSEBORO, NORTH CAROLINA 28382

WEB SITE: www.cpp-pipe.com

CRUMPLER PLASTIC PIPE Inc
CPP
CORRUGATED PLASTIC PIPE

1-800-334-5071
www.cpp-pipe.com