Montgomery County Department of Permitting Services
Stormwater Management Structure
Shop Drawing Review Checklist

PROJECT NAME: Clarksburg Town Center Sediment Control Permit #: 205466

S W M Structure: Water quality MH#4 S W M File #: 1-95042

This checklist is to be completed by the civil engineering submitting shop drawings for acceptance by MCDPS. The precaster is to send the shop drawings with structural computations to the civil engineer after plan approval, but prior to construction. The civil engineer should review the shop drawings per this checklist and submit two copies of the required information to Station 8 of MCDPS. This checklist must be accepted by MCDPS prior to fabrication of the structure.

When certifying the correctness of shop drawings for acceptance by MCDPS the following (at a minimum) must be verified:

[X] Interior dimensions as per the approval plan.
[X] Wall and slab thickness as per the approved plan.
[X] Correct size, number, and placement of openings, orifices, and manholes as per the approved plan and any precast anchor points necessary for installation of the structure.
[N/A] Structural design certification and P.E. seal by preparer of shop drawing ("I hereby certify that the structural design of this structure is in accordance with applicable codes and that this structure has been designed for the specified loadings as indicated on the plan.")
[N/A] The following notes are to appear on the shop drawing:
- o Structure must be watertight.
- o Annular space between pipe and hole to be filled with an approved non-shrink grout or concrete (as specified).
- o Butyl rubber to be used in all joints. All joints be to grouted with non-shrink grout, inside and out.

[N/A] Structural computations sealed by preparer of shop drawings.
[N/A] Anti-flotation restraints at construction joints (where applicable).
[N/A] Flotation computations (if any dimensions are changed from the approved plan).
[X] Steps (if required).
[X] Reference on shop drawings the fabrication to be in conformance with the latest edition and addenda of the MSHA Standards and Specifications for Construction and Materials.
[ ] Other _____

SUBMITTED BY:
Firm: Charles P. Johnson & Associates, Inc.
Address: 1751 Elton Road, Suite 300 Silver Spring, MD 20903
Phone #: 301-434-7000 Fax #: 301-434-9394
Project engineer: Jeff Strulic
Prepared by: Jeff Strulic Date: 2/9/05

CHECKLIST ACCEPTED BY MCDPS:

Name: Richard J. Lee Date: 2/14/05

W:\WPFILES\FORMS\mcshopchk.wpd

Rinker MATERIALS™

Hydro Conduit

1781 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

STC 1200

PRECAST CONCRETE STORMCEPTOR

PROJECT: CLARKSBURG TOWN CENTER STRUCTURE#: WQ-4

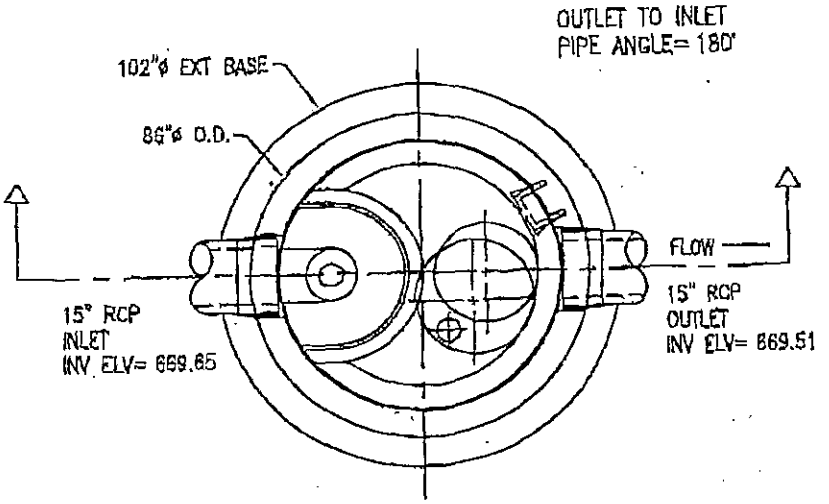
CONTRACTOR: ALLEN H. MITCHELL, CONSTRUCTION, INC. LOCATION: MONTGOMERY COUNTY, MD

DR. BY: BNG

CK. BY:

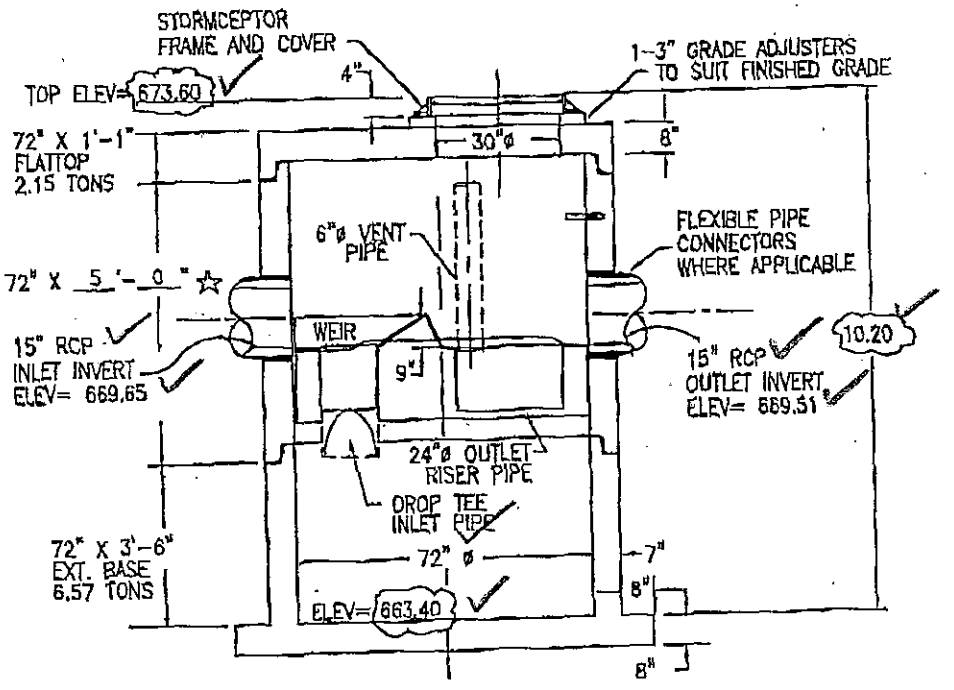
NOT TO SCALE

DWG.# STC 1200-S



PLAN

(FRAME AND COVER NOT SHOWN FOR CLARITY)



SECTION

☆ 72" RISER SECTION = 1 72" X 5'-0" RISER(S)
— 72" X —'-— RISER(S)

GENERAL NOTES

1. STORMCEPTOR SECTIONS SHALL CONFORM TO ASTM C 478, PROFILE GASKETED JOINTS CONFORMING TO ASTM C 443.
2. MANHOLE STEPS PROVIDED ABOVE INSERT @ 12" O.C. AND SHALL BE COPOLYMER POLYPROPYLENE PLASTIC ENCAPSULATED GR. 60 STEEL.
3. MINIMUM CONCRETE STRENGTH
   f'c= 4,000 PSI
   MINIMUM STEEL STRENGTH
   fy= 60,000 PSI
4. REINFORCEMENT DESIGN SHALL MEET ASTM C 478.
5. FLEXIBLE PIPE CONNECTORS SHALL MEET ASTM C 923.
6. HANDLING:
   A. ALL RISERS SHALL HAVE 2 EA. 1 1/2"ø HOLES FOR LIFTING @ 1/3 WAY DOWN FROM SPIGOT.
   B. ALL LG. DIAM. BASE SECTIONS FLATTOPS, AND REDUCERS TO HAVE LIFT HOOKS.
7. DESIGNED FOR AASHTO H-20 LOADING.
8. FIBERGLASS STORMCEPTOR INSERT REFERENCE DRAWING # CA-0225-U.
9. DIMENSIONS ARE BASED ON USING 1/4" JOINT GAP.
10. COMPONENTS WILL CONFORM TO LATEST EDITION AND ADDENDA OF *MSHA Standards and Specifications for Construction and Materials.*

ALL LIFTING DEVICES TO BE SUPPLIED BY CONTRACTOR

☑ No Exception Taken ☐ Approved as Noted
☐ Rejected ☐ Revise and Resubmit
☐ Submit Specified Item

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirement of the plans and dimensions, which shall be confirmed and correlated, fabrication processes and techniques of construction, coordination of his work with that and all other trades and the satisfactory performance of his work.

CHARLES P. JOHNSON & ASSOCIATES, INC.
Engineers - Architects

REV.	DESCRIPTION	BY:	DATE
1	ADJUSTED TOP AND BOTTOM ELEVATIONS	BNG	02/09/05

Rinker MATERIALS

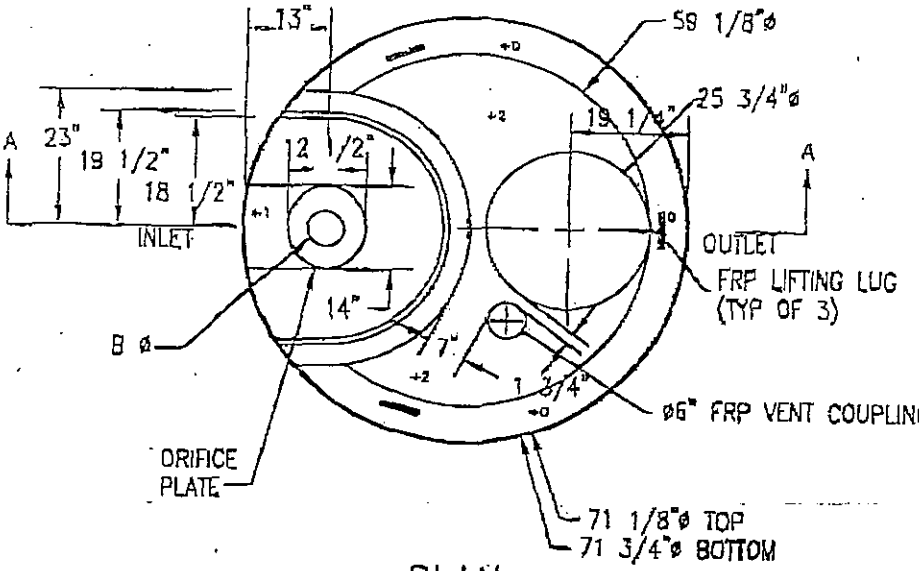
Hydro Conduit

1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

STORMCEPTOR SINGLE INLET

DISK TYPE INSERT DETAIL

DR. BY: DMT
CK. BY:
NOT TO SCALE
DWG.# CA-0225-U



PLAN

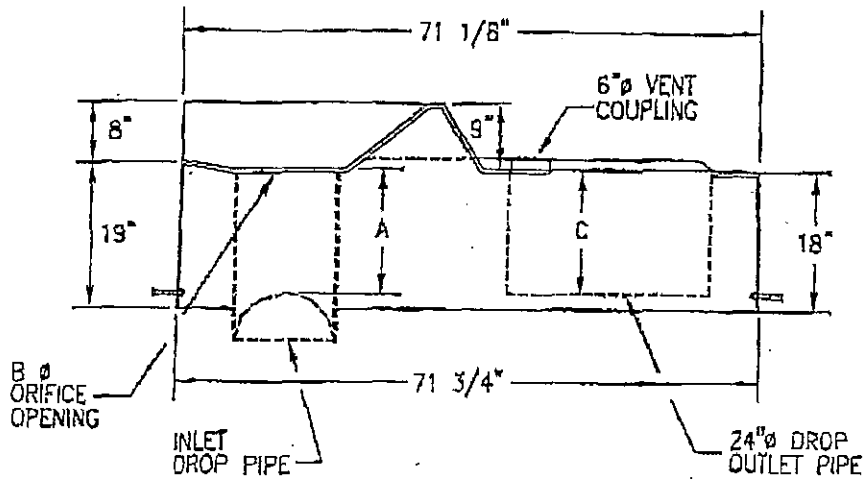
GENERAL NOTES:

1. CSR HYDRO CONDUIT RECOMMENDS THE USE OF FLEXIBLE PIPE CONNECTORS AT THE INLET PIPE AND OUTLET PIPE WHERE APPLICABLE.
2. STORMCEPTOR FRAME AND COVER TO BE POSITIONED OVER OUTLET RISER PIPE AND 6" VENT PIPE.
3. INSERT TO BE INSTALLED WITH SIX 1/2" DROP-IN ANCHORS AND BOLTS.
4. INSERT TO BE SEALED AROUND CIRCUMFERENCE WITH CHEMREX 948.

NOTE:
DIFFERENCE BETWEEN INLET INVERT & OUTLET INVERT IS 0"-1"

UNIT	A (in.)	B (in.)	C (in.)
STC 900	16	6	16
STC 1200	16	6	16
STC 1800	16	6	16
STC 2400	44	8	44
STC 3600	44	8	44
STC 4800	44	10	44
STC 6000	44	10	44
STC 7200	44	12	44

ALSO SEE DWG# CA-0225-P



SECTION A-A

REV.	DESCRIPTION	BY:	DATE

Rinker MATERIALS

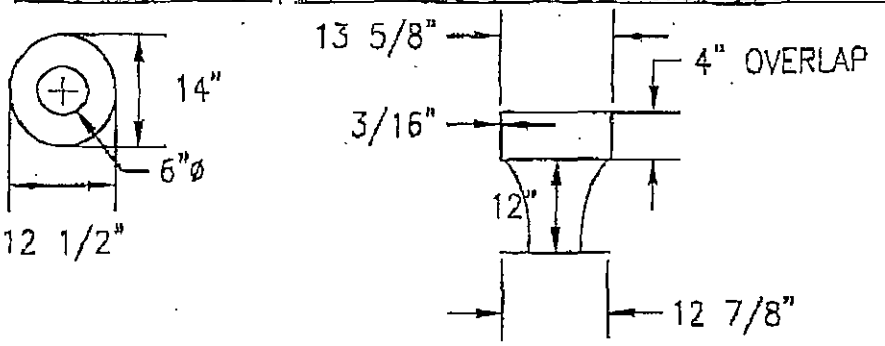
Hydro Conduit

1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

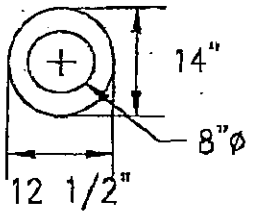
DR. BY: DMT	
CK. BY:	
NOT TO SCALE	
DWG.# CA-0225-P	

STORMCEPTOR ORIFICE PLATE AND PIPE EXTENSION DETAIL

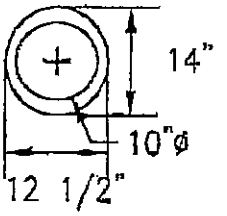
6" ORIFICE PLATE AND PIPE EXTENSION – STC 900, 1200, & 1800



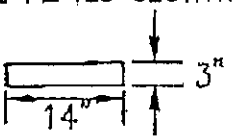
8" ORIFICE PLATE
STC 2400 & 3600



10" ORIFICE PLATE
STC 4800 & 6000

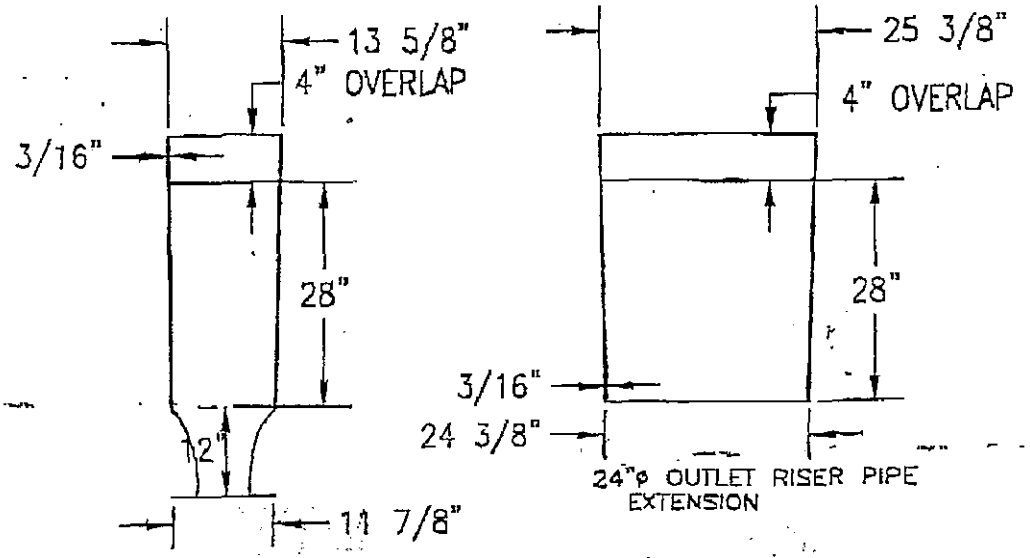


ORIFICE PLATES SECTION VIEW



NO ORIFICE PLATE USED FOR STC 7200

PIPE EXTENSIONS – STC 2400, 3600, 4800, 6000, & 7200



REV	DESCRIPTION	BY:	DATE

Rinker MATERIALS

Hydro Conduit

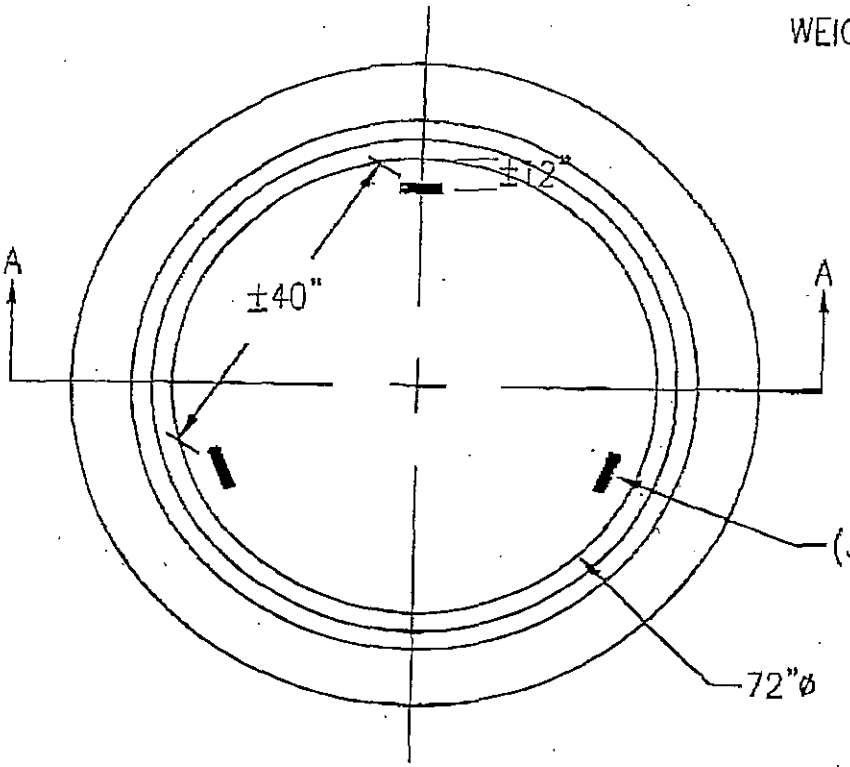
1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

LIFTING INFORMATION FOR

STC 900, 1200, & 1800 BASE SECTIONS

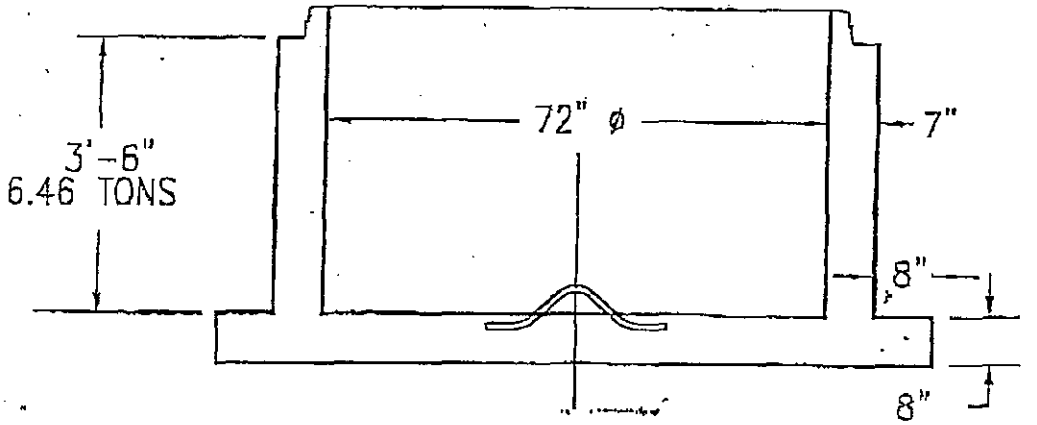
DR. BY: DMT
CK. BY:
NOT TO SCALE
DWG.# SS-0058-01

WEIGHT= 6.46 TONS



PLAN

ALL LIFTING DEVICES TO BE SUPPLIED BY CONTRACTOR

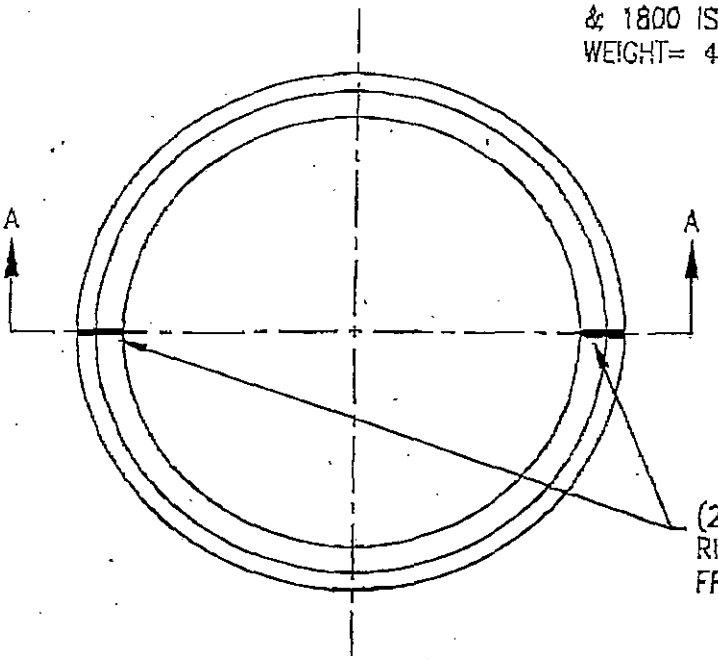


SECTION

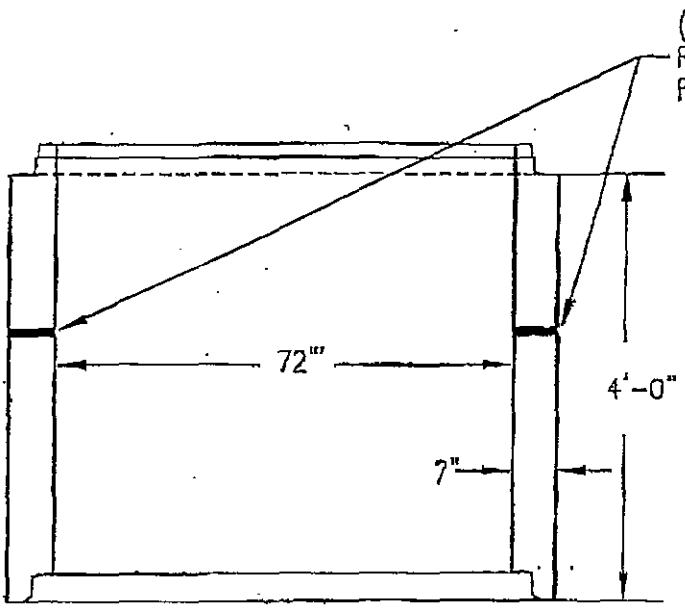
REV.	DESCRIPTION	BY:	DATE

Rinker MATERIALS	**Hydro Conduit** 1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373	DR. BY: DMT CK. BY:
	LIFTING INFORMATION FOR	NOT TO SCALE
	STC 900, 1200, & 1800 RISER SECTIONS	DWG.# SS-0058-02

TALLEST RISER FOR STC 900, 1200 & 1800 IS 6'-0"
WEIGHT= 4.52 TONS



PLAN



SECTION

NOTES:
LIFT HOLES ARE TO BE PLUGGED AND GROUTED AFTER STRUCTURE IS SET

ALL LIFTING DEVICES TO BE SUPPLIED BY CONTRACTOR

REV.	DESCRIPTION	BY:	DATE

Rinker MATERIALS

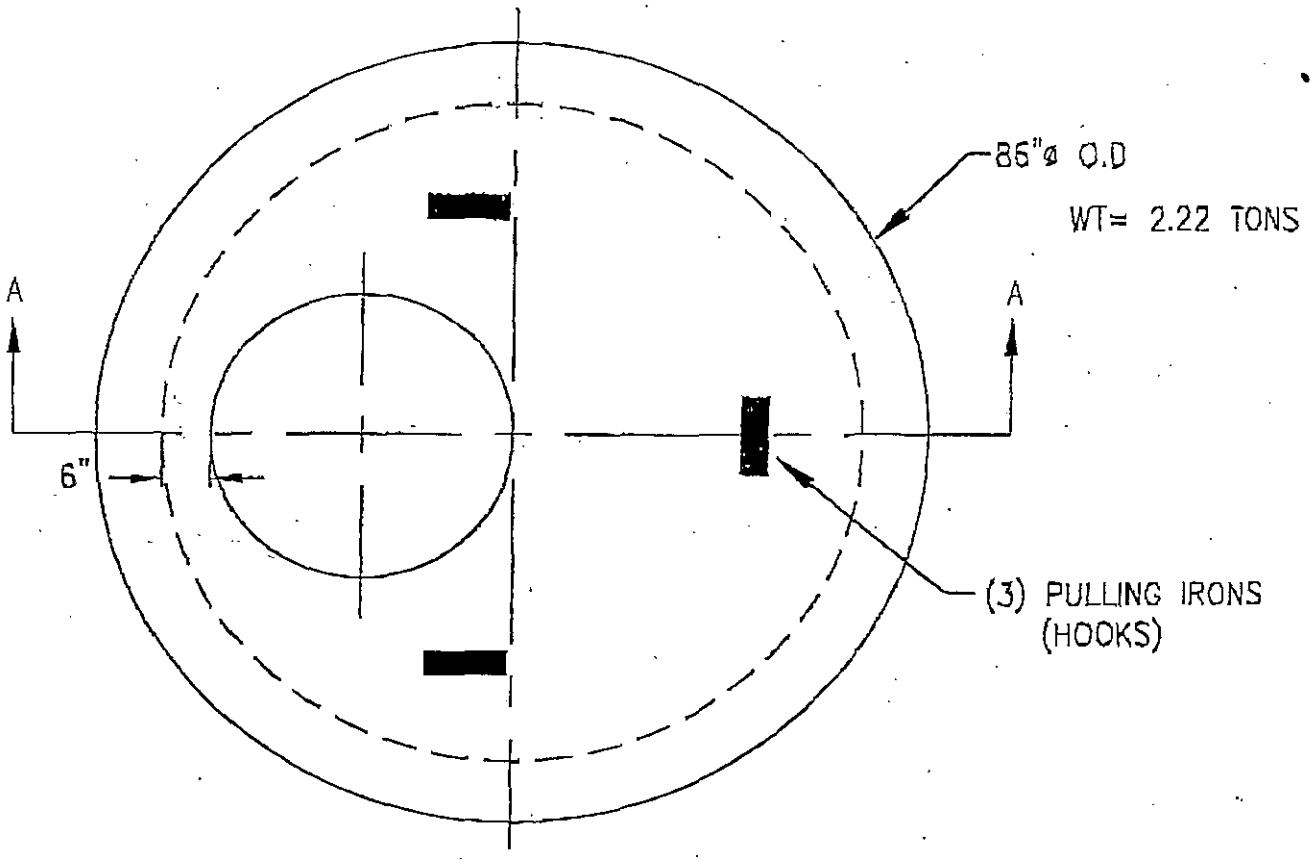
Hydro Conduit

1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

DR. BY: DMT	
CK. BY:	
NOT TO SCALE	
DWG.# SS-0058-03	

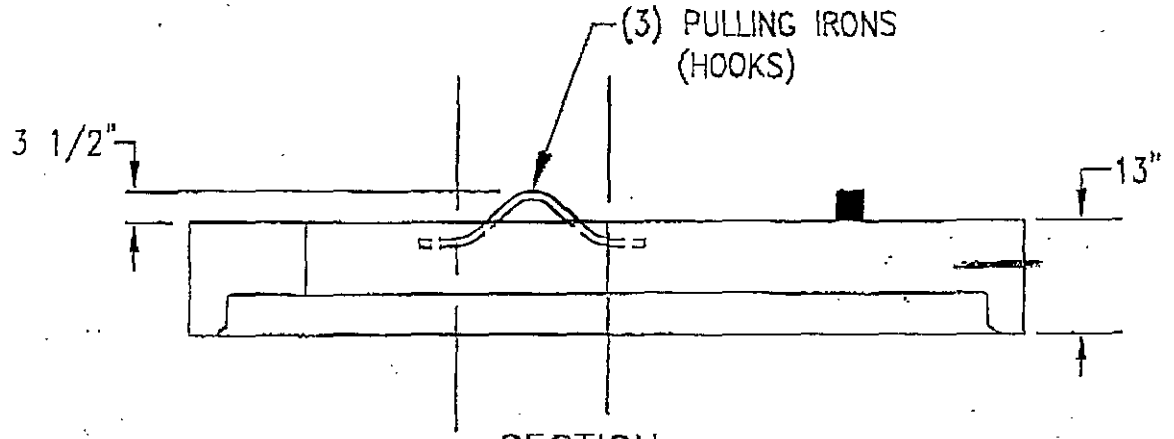
LIFTING INFORMATION FOR

72" STORMCEPTOR FLATTOPS



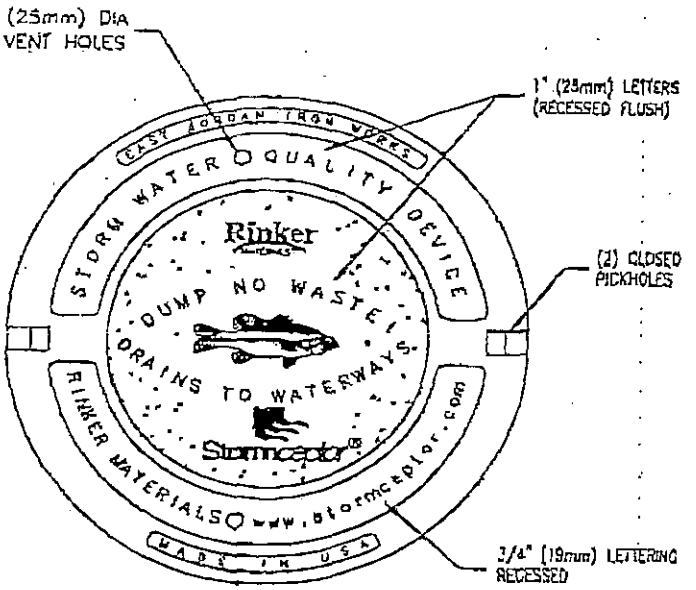
PLAN

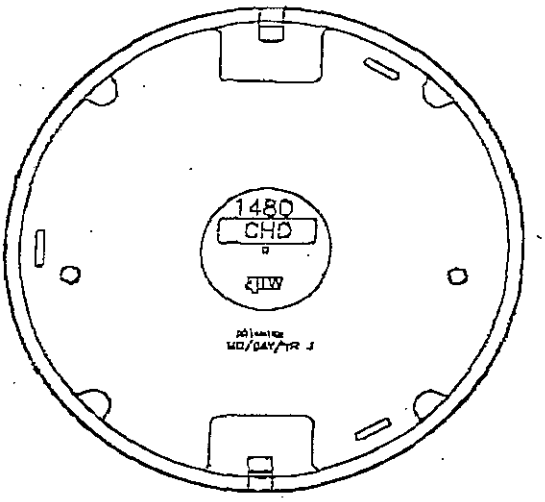
ALL LIFTING DEVICES TO BE SUPPLIED BY CONTRACTOR



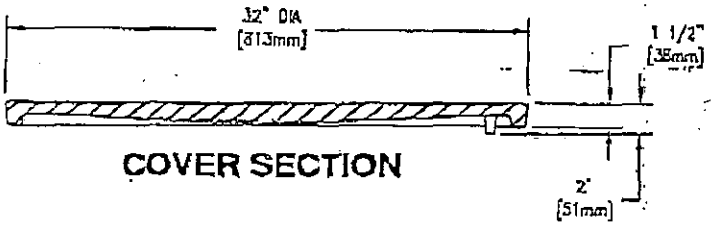
SECTION

REV.	DESCRIPTION	BY:	DATE

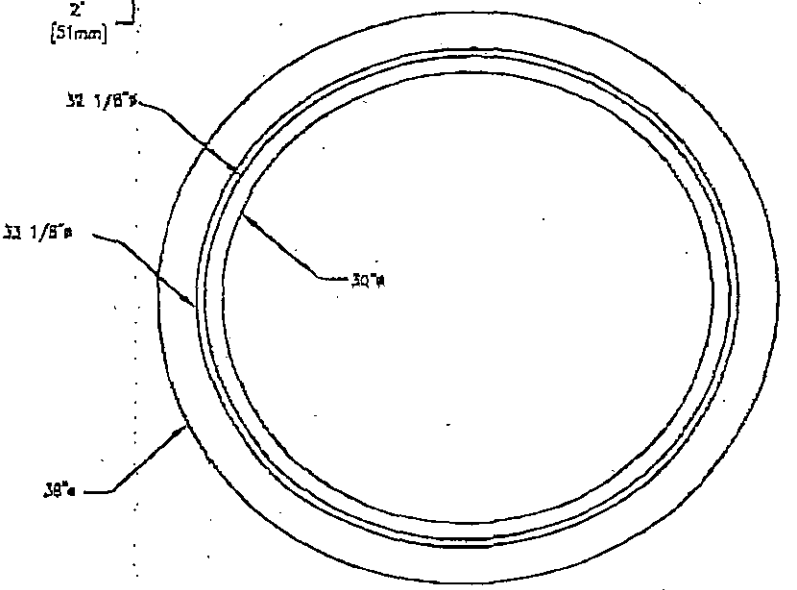




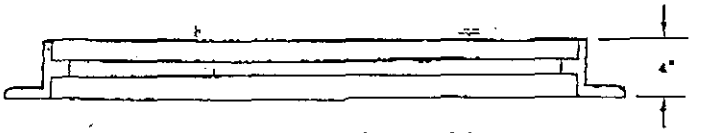
BOTTOM VIEW OF COVER



COVER SECTION



FRAME VIEW



FRAME SECTION

Rinker MATERIALS Hydro Conduit 1751 Monocacy Blvd., Frederick Md. 21701 Phone 800-414-7960 Fax 301-698-5351	STORMCEPTOR MANHOLE COVER	LOAD RATING HEAVY DUTY PRODUCT NO. 00148195	EAST JORDAN IRON WORKS, INC. P.O. BOX 439 EAST JORDAN, MI. 49727 1-800-874-4100 FAX 231-536-4458
	EST. WT. COVER: 215 LBS 98kg	DRAWN SMH / DATE 11/06/01	

Rinker MATERIALS

Hydro Conduit

1751 Monocacy Blvd., Frederick, Md. 21701 (301) 698-7373

PRECAST CONCRETE STORMCEPTOR

PROFILE GASKET ASSEMBLY GUIDELINES

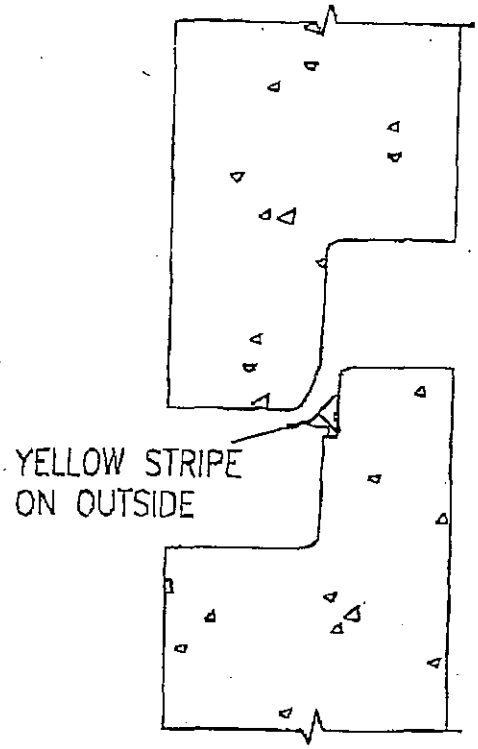


Figure 1

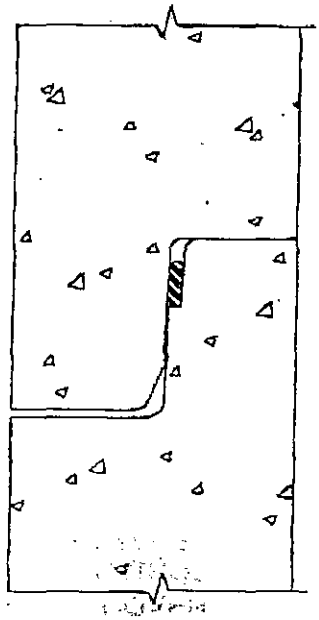


Figure 2

1. The precast Stormceptor section should be handled with care to avoid any damage to the bell or spigot end.
2. Clean all dirt and debris from the spigot and bell surfaces.
3. Place the profile gasket on the step of the cleaned spigot. The fin of the gasket should point towards the shoulder of the spigot. (See Figure 1)
4. After the gasket is seated on the spigot, the gasket will need to be equalized. Insert a smooth round rod between the gasket and the spigot. Run the rod around the entire circumference of the joint several times to equalize the gasket. Take care not to cut or damage the gasket.
5. Apply joint lubricant to the inner surface of the bell including the leading edge. Lubricate the spigot and gasket.
6. Align the Stormceptor units and gently push the joint home. (See Figure 2)

IF JOINTING PROBLEMS ARISE CONTACT THE STORMCEPTOR REPRESENTATIVE IMMEDIATELY. DO NOT TRY AND FORCE THE JOINT HOME AS THIS MAY CAUSE DAMAGE TO THE JOINT.

Stormceptor®

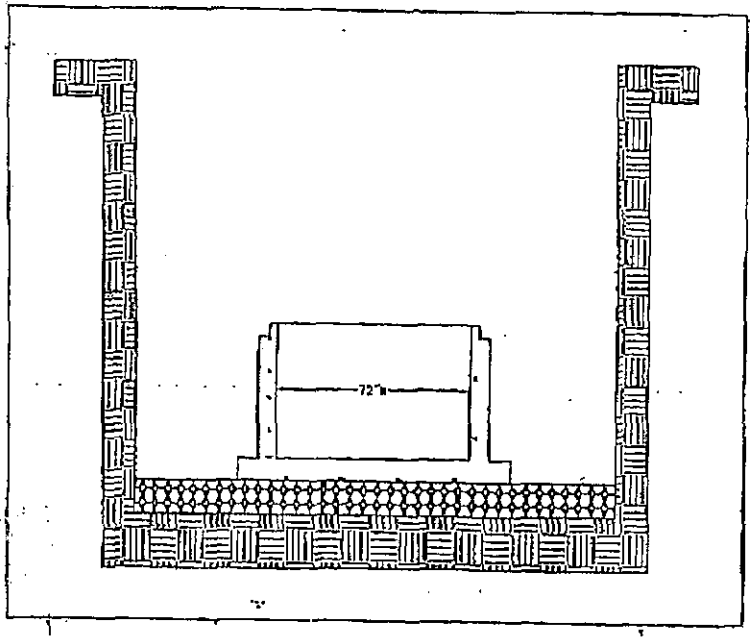
Hydro Conduit

Precast Concrete Stormceptor

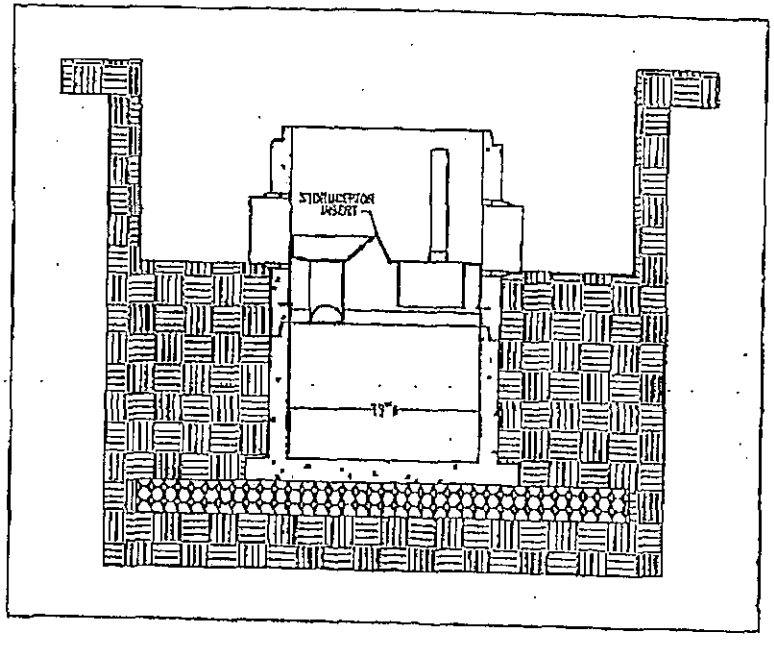
STC 900 thru STC 3600

Installation Guide

DR. BY: N. BALDWIN	
CK. BY:	
DATE: JULY 30, 2001	
SCALE: N.T.S.	
DWG.# 1 of 3	



1. FOLLOW ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS AT ALL TIMES DURING THE EXCAVATION AND ERECTION OF THE STORMCEPTOR.
2. ALL PIECES ARE GASKETED. FOR GASKET ASSEMBLY, SEE "PROFILE GASKET ASSEMBLY GUIDELINES" DETAIL.
3. EXCAVATE HOLE TO THE PROPER DEPTH AS SHOWN ON THE ENGINEERING DRAWINGS ALLOWING FOR 12" OF SUB-BASE.
4. MEASURE OUTSIDE DEPTH OF BASE, TREATMENT CHAMBER, AND BYPASS SECTION TO PROPOSED INVERT OF STORM LINE, TO VERIFY REQUIRED DEPTH OF EXCAVATION.
5. PLACE GRANULAR SUB-BASE AND COMPACT TO LOCAL/STATE STANDARDS AS PER THE ENGINEERS REQUIREMENTS TO A DEPTH OF 12".
6. SET BASE SECTION AND LEVEL (CHECK ELEVATION).



7. INSTALL REMAINING STORAGE CHAMBER RISERS IF NECESSARY
8. INSTALL BYPASS SECTION OF STORMCEPTOR WITH FACTORY INSTALLED INSERT (CHECK ELEVATION AND VERIFY THAT UNIT IS LEVEL).
9. INSTALL STORMCEPTOR INTERNAL PIPING (SEE DOWN PIPE INSTRUCTIONS).
10. PLUG AND GROUT LIFTING HOLES IF PRESENT.
11. BACKFILL UNIT TO THE INLET AND OUTLET PIPES USING COMPACTED GRANULAR FILL OR MATERIAL APPROVED BY THE ENGINEER. COMPACTION DENSITY AND LIFT HEIGHT SHOULD CONFORM TO LOCAL/STATE GUIDELINES.

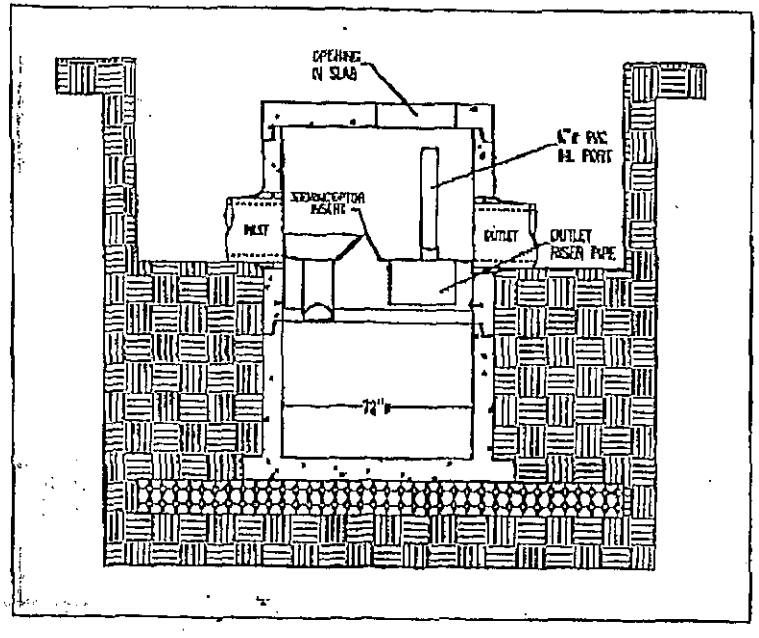
Stormceptor®

Hydro Conduit

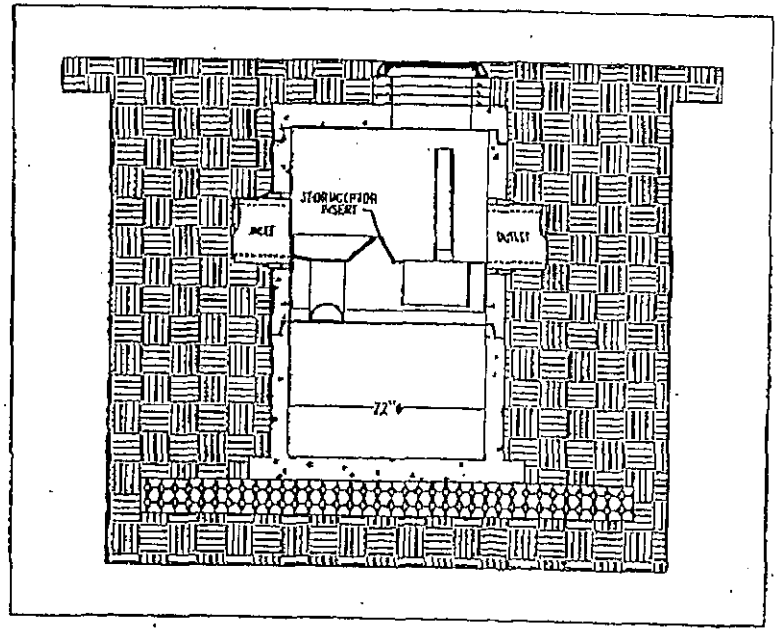
Precast Concrete Stormceptor
STC 300 thru STC 1800

Installation Guide

DR. BY: N. BALDWIN	
CK. BY:	
DATE: JULY 30, 2001	
SCALE: N.T.S.	
DWG.# 2 of 3	



12. INSTALL INLET AND OUTLET STORM DRAIN PIPE.
13. IF FLEXIBLE CONNECTORS ARE USED, TIGHTEN THE CONNECTOR OVER THE PIPE TO THE MANUFACTURER'S RECOMMENDED TORQUE.
14. INSTALL ADDITIONAL RISER SECTION(S) IF NECCESSARY.
15. INSTALL TOP SLAB SUCH THAT THE OPENING IN THE SLAB ALLOWS ACCESS TO BOTH THE OIL PORT AND OUTLET RISER PIPE.



16. INSTALL AND SET GRADE ADJUSTMENT RINGS IN A FULL BED OF MORTAR (AS REQUIRED).
17. INSTALL FRAME AND COVER AT THE FINISHED GRADE ELEVATION IN A FULL BED OF MORTAR.
18. BACKFILL UNIT UP TO FINISHED GRADE USING COMPACTED GRANULAR FILL OR MATERIAL APPROVED BY THE ENGINEER. COMPACTION DENSITY AND LIFT HEIGHT SHOULD CONFORM TO LOCAL/STATE GUIDELINES.

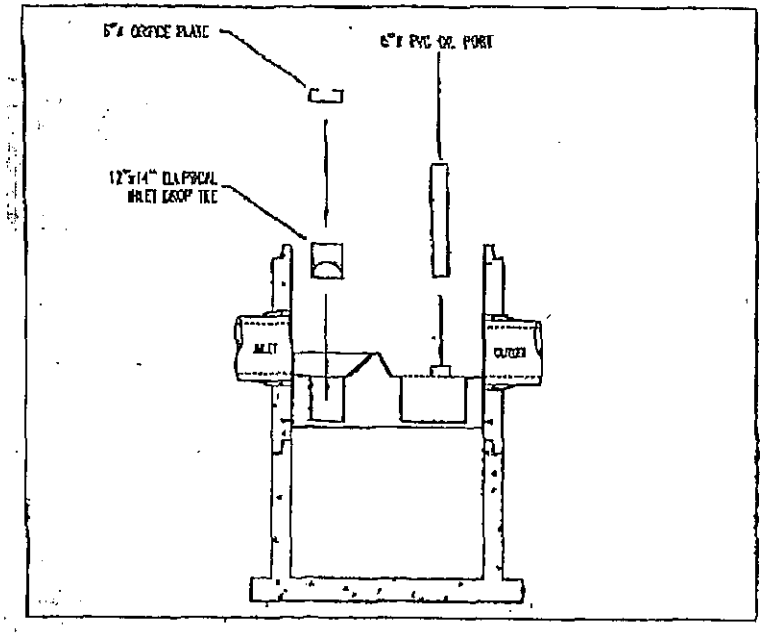
Stormceptor®

Hydro Conduit

Precast Concrete Stormceptor
STC 900 thru STC 1800

Installation Guide

DR. BY: N. BALDWIN
CK. BY:
DATE: JULY 30, 2001
SCALE: N.T.S.
DWG.# 3 of 3



DOWN PIPE & VENT PIPE INSTALLATION INSTRUCTIONS

1. INSTALL ELLIPTICAL INLET PIPE FROM THE TOP OF THE DISC INSERT.
2. INSTALL 6"ø ORIFICE PLATE ON INLET PIPE (GLUE IN PLACE WITH CHEMREX 948).
3. ORIFICE PLATE SITS 1" BELOW INSERT.
4. ATTACH THE PROVIDED 6"ø OIL PORT (IF NOT PRE-INSTALLED AT THE CSR PLANT) TO THE FRP COUPLING ON THE FIBERGLASS INSERT WITH CHEMREX 948. CUT OIL PORT AS REQUIRED TO ALLOW ACCESS FOR INSPECTION, BUT ENSURE THAT THE OIL PORT EXTENDS 12" ABOVE THE DESIGN HIGH WATER LEVEL IN THE STORMCEPTOR.

PROFILE GASKET ASSEMBLY GUIDELINES

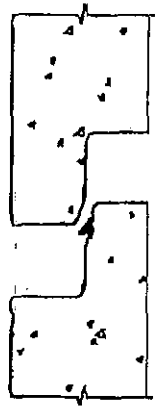


Figure 1

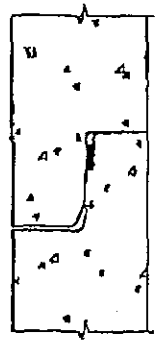


Figure 2

1. The precast Stormceptor section should be handled with care to avoid any damage to the bell or spigot end.
2. Clean all dirt and debris from the spigot and bell surfaces.
3. Place the profile gasket on the step of the cleaned spigot. The fin of the gasket should point towards the shoulder of the spigot. (See figure 1)
4. After the gasket is seated on the spigot, the gasket will need to be equalized. Insert a smooth round rod between the gasket and the spigot. Run the rod around the entire circumference of the joint several times to equalize the gasket. Take care not to cut or damage the gasket.
5. Apply joint lubricant to the inner surface of the bell including the leading edge. Lubricate the spigot and gasket.
6. Align the Stormceptor units and gently push the joint home. (See Figure 2)

IF JOINTING PROBLEMS ARISE CONTACT THE STORMCEPTOR REPRESENTATIVE IMMEDIATELY. DO NOT TRY AND FORCE THE JOINT HOME AS THIS MAY CAUSE DAMAGE TO THE JOINT.

Rinker MATERIALS™

Hydro Conduit

Stormceptor®

1751 Monocacy Boulevard Frederick, Md. 21701
Telephone: 301-695-7373 facsimile: 301-698-5351

This is to certify that the Stormceptor is manufactured in accordance with ASTM C-478, and is capable of withstanding AASHTO HS-20 loading at time of delivery.

Very Truly Yours,

Hydro Conduit

Steve Hoesing

Regional Manager

PATRICIA J. SHIPLEY NOTARY PUBLIC WASHINGTON COUNTY, MD

Subscribed in my presence

this 1st day of June Year 2002

Patricia J. Shipley, Notary

My commission expires May 01, 2006

CPJ Associates

Transmittal

Charles P. Johnson & Associates, Inc.

PLANNERS ENGINEERS LANDSCAPE ARCHITECTS SURVEYORS
1751 ELTON ROAD SUITE 300 SILVER SPRING, MARYLAND 20903
TEL:301-434-7000 FAX: 301-434-9394 E-MAIL: ss@cpja.com

To: MCDPS
2nd Floor
255 Rockville Pike
Rockville , MD 20850
Attn: Richard Gee

Date: 2/9/2005 **Job:** 29-100

Project: Clarksburg Town Center
Phase 2D
SCP #205466

Via: ☐ By Hand ☑ Messenger ☐ Pickup ☐ Regular Mail ☐ UPS Ground ☐ UPS Overnight

Find Enclosed: ☐ Prints ☐ Disc ☑ Other

Copies	Number	Description
2		Shop Drawings (Water Quality Manhole 4)
1		Shop Drawing Approval Checklist

For: ☐ Approval ☑ Review ☐ Your Use

Remarks: Richard, Submitted for your approval the shop drawings for water quality manhole #4.

Received By: _____ **By:** Jeff Strulic

cc: Jim Richmond, Newland
Matt Shea, Newland

Montgomery County Department of Permitting Services
Stormwater Management Structure
Shop Drawing Review Checklist

PROJECT NAME: Clarksburg Town Center Sediment Control Permit #: 205466

S W M Structure: Water quality MH#4 S W M File #: 1-95042

This checklist is to be completed by the civil engineering submitting shop drawings for acceptance by MCDPS. The precaster is to send the shop drawings with structural computations to the civil engineer after plan approval, but prior to construction. The civil engineer should review the shop drawings per this checklist and submit two copies of the required information to Station 8 of MCDPS. This checklist must be accepted by MCDPS prior to fabrication of the structure.

When certifying the correctness of shop drawings for acceptance by MCDPS the following (at a minimum) must be verified:

[X] Interior dimensions as per the approval plan.
[X] Wall and slab thickness as per the approved plan.
[X] Correct size, number, and placement of openings, orifices, and manholes as per the approved plan and any precast anchor points necessary for installation of the structure.
[N/A] Structural design certification and P.E. seal by preparer of shop drawing ("I hereby certify that the structural design of this structure is in accordance with applicable codes and that this structure has been designed for the specified loadings as indicated on the plan.")
[N/A] The following notes are to appear on the shop drawing:
- o Structure must be watertight.
- o Annular space between pipe and hole to be filled with an approved non-shrink grout or concrete (as specified).
- o Butyl rubber to be used in all joints. All joints be to grouted with non-shrink grout, inside and out.

[N/A] Structural computations sealed by preparer of shop drawings.
[N/A] Anti-flotation restraints at construction joints (where applicable).
[N/A] Flotation computations (if any dimensions are changed from the approved plan).
[X] Steps (if required).
[X] Reference on shop drawings the fabrication to be in conformance with the latest edition and addenda of the MSHA Standards and Specifications for Construction and Materials.
[ ] Other _____

SUBMITTED BY:
Firm: Charles P. Johnson & Associates, Inc.
Address: 1751 Elton Road, Suite 300 Silver Spring, MD 20903
Phone #: 301-434-7000 Fax #: 301-434-9394
Project engineer: Jeff Strulic
Prepared by: Jeff Strulic Date: 2/9/05

CHECKLIST ACCEPTED BY MCDPS:

Name: _____ Date: _____