

TRASHGUARD BMP - G13

TRASHGUARD CALCULATIONS:

CALCULATE OUTFLOW WITH PERFORATED TRASHGUARD:
 USE 28" TRASHGUARD, WIDTH = 28", HEIGHT = 30", CURVED FACE = 31.7"
 TOP OF TRASHGUARD = 501.88, BOTTOM ELEVATION = 499.18
 STARTING HOLE ELEVATION = 499.23
 AREA NEEDED FOR 24 HR. DEWATERING: $A = Q/4.81 \cdot H$
 $Q = 1.27 \text{ CFS}$
 $H = 1.82$, WHERE T = TOP ELEVATION, B = BOTTOM HOLE ELEVATION
 $H = 501.88 - 499.23/2 = 1.225$
 $A = 1.27/4.81 \times 1.225 = A = 0.29 \text{ SQ. FT.}$
 $0.29 \text{ SQ. FT.} \times 144 \text{ SQ. IN./FT.} = 42.08 \text{ SQ. IN.}$

SECTION 1: L = 31.7" H = 10", 3/8" DIA. HOLES AT 1/2" SPACING = 12 ROWS, 6 W/2 HOLES & 6 W/1 HOLES STAGGERED
 AREA OF HOLE = 0.110 SQ. IN. X 498 HOLES = 54.78 SQ. IN. TOTAL AREA

SECTION 2: L = 31.7" H = 6", 3/4" DIA. HOLES, 1/2" VERT. SPACING = 7 ROWS, 1.5" HOR. SPACING = 20 & 21 HOLES STAGGERED
 4 ROWS W/2 HOLES & 3 ROWS W/20 HOLES
 AREA OF HOLE = 0.442 SQ. IN. X 144 HOLES = 63.65 SQ. IN. TOTAL AREA

SECTION 3: L = 31.7" H = 6", 3/4" DIA. HOLES, 1/2" VERT. SPACING = 7 ROWS, 1.5" HOR. SPACING = 20 & 21 HOLES STAGGERED
 4 ROWS W/2 HOLES & 3 ROWS W/20 HOLES
 AREA OF HOLE = 0.442 SQ. IN. X 144 HOLES = 63.65 SQ. IN. TOTAL AREA

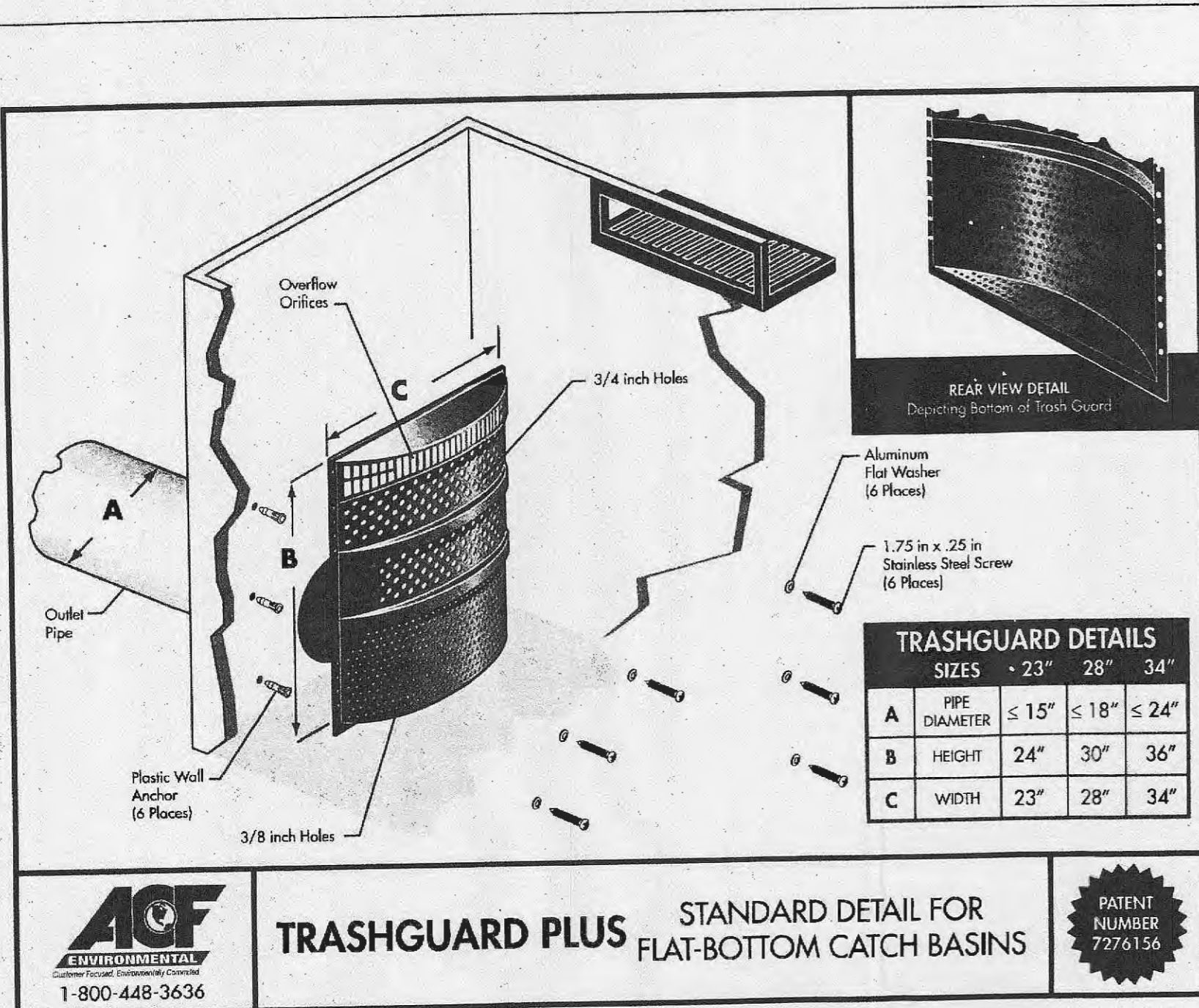
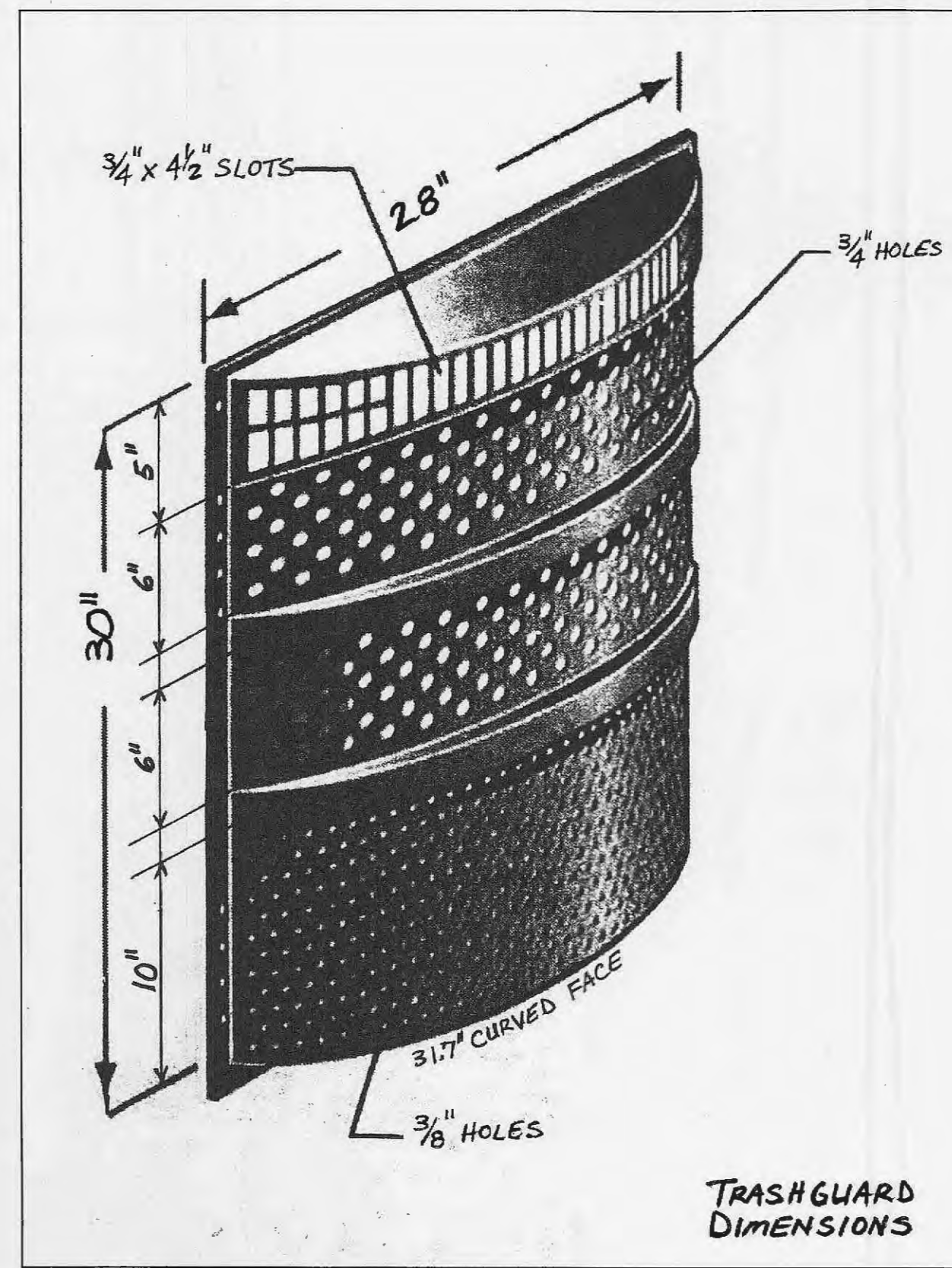
SECTION 4: L = 31.7" H = 5", 3/4" X 4.5" SLOTS, 1/4" VERT. SPACING = 30 SLOTS
 AREA OF SLOT = 3.375 SQ. IN. X 30 SLOTS = 101.25 SQ. IN. TOTAL AREA

TOTAL OPEN AREA = 283.33 SQ. IN. > 42.08 (OK)
 ASSUMING 12" OF DEBRIS DEPTH THE HW = 501.46 TOP OF GI = 505.50 FREEBOARD = 4.04

OPERATION AND MAINTENANCE:

TYPICAL MAINTENANCE OF CATCH BASINS INCLUDES TRASH REMOVAL IF A SCREEN OR OTHER DEBRIS CAPTURING DEVICE IS USED, AND REMOVAL OF SEDIMENT USING A VACUUM TRUCK. OPERATORS NEED TO BE PROPERLY TRAINED IN CATCH BASIN MAINTENANCE. MAINTENANCE SHOULD INCLUDE KEEPING A LOG OF THE AMOUNT OF SEDIMENT COLLECTED AND THE DATE OF REMOVAL.

INSPECTIONS SHOULD BE MADE QUARTERLY TO DETERMINE THE QUANTITY OF DEBRIS TRAPPED BY THE TRASHGUARD THE FIRST YEAR AFTER CONSTRUCTION. AFTER THE INITIAL YEAR OF INSPECTIONS AND CLEANINGS THE INTERVAL MAY BE INCREASED OR DECREASED AS REQUIRED BY THE DEBRIS BUILDUP. AT NO TIME SHALL THE DEPTH OF DEBRIS SURPASS 12".



PROJECT TITLE:
LOT 2 OF MARKETCENTER

ENGINEERING PLANNING SURVEYING
 221 Point West Blvd. 63301
 St. Charles, MO 63301
 636-929-6552
 FAX 636-929-1718

DISCLAIMER OF RESPONSIBILITY
 I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

REVISIONS

8/18/2015	CITY COMMENTS
8/19/2015	BUCKETT CREEK CO.
9/1/2015	FWSD NO.2 CMTS
10/8/2015	CITY COMMENTS

Developer / Owner:
DENNIS SENDEROVICH
 9979 WINGHAVEN BLVD SUITE 202
 O'FALLON, MISSOURI 63368
 314-504-1343

DETAILS

P+Z No. #13-15
 City No. #15-599

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Trash Guard® Installation Instructions

Trash Guard® can be installed in a variety of catch basin configurations (or field conditions). In general the Trash Guard is mounted on the catch basin wall, centered over the outlet pipe.

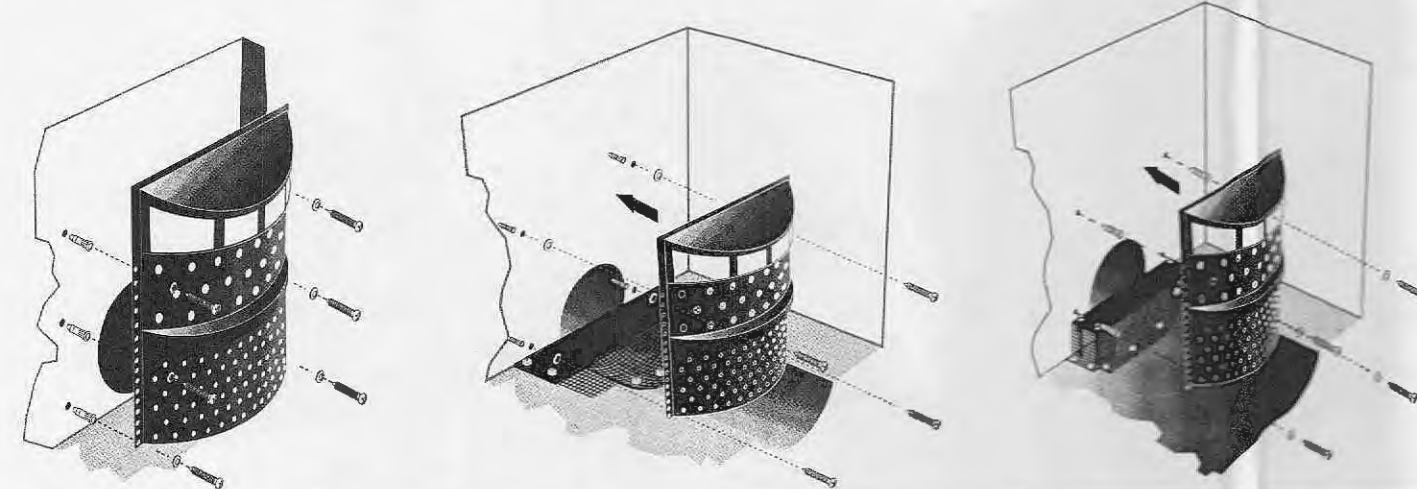
Before installing Trash Guard®, a hydraulic calculation should be performed to determine maximum flow rate based on depth of the catch basin and size of Trash Guard® used. This calculated model will determine maximum flow rate with no obstructions or varying amounts of trash build up, and determine drainage area required to support the calculated flow rate. Allowable trash build up and drainage area required for trash build up will determine maintenance frequency.

If catch basin conditions allow and increased flow rate and additional vertical capacity are desired, a model can be calculated to determine flow rate when extending Trash Guard® from one inch to seven inches from the catch basin wall. As above, this calculated model will determine maximum flow rate with no obstructions or varying amounts of trash build up. Contact Trash Guard® for assistance in determining flow rate and drainage areas under varying field conditions.

The following instructions are organized in sections described as follows:

- Section 1 – Trash Guard® installed on a flat perpendicular wall with a flat bottom
- Section 2 – Bottom Plate installed on an inverted bottom
- Section 3 – Trash Guard® installed on a flat perpendicular wall with an inverted bottom
- Section 4 – Trash Guard® installed on tiered brick wall escalating width from top to bottom with an inverted or flat bottom.
- Section 5 – Trash Guard® installed on concave wall reasonable flat at top and bottom with an inverted or flat bottom.
- Section 6 – Trash Guard® installed extended from wall to increase flow capacity with an inverted or flat bottom.

EXAMPLES OF FLAT AND INVERTED BOTTOMS



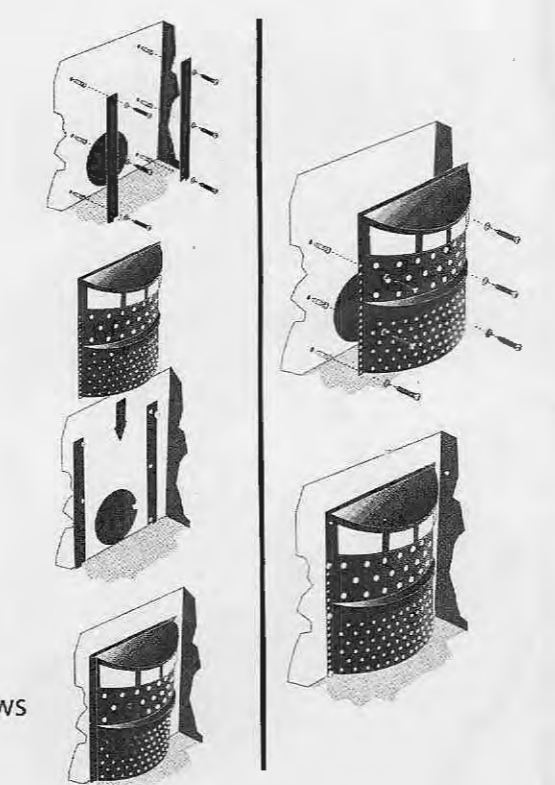
WARNING: Improper installation of the Trash Guard® or failure to keep the area around the Trash Guard® free from sediment, debris and litter after installation may result in clogging of the storm water drainage system and increase the risk of flooding during times of heavy rainfall. It is important to clear sediment, debris and litter from around the Trash Guard® at least four (4) times a year and more frequently in areas with large amounts of vegetation or litter. Please contact your local Trash Guard® distributor with any questions regarding the installation or regular maintenance requirements of the Trash Guard®.

Section 1 (Diagram I)

- Items Included:
 - Trash Guard® (Chosen Size)
 - Seven Plastic Anchors
 - Seven Flat Washers
 - Seven 1.75" x .25" Stainless Steel Phillips Screws
- Tools Needed:
 - Cordless Hammer Drill
 - 5/16" Masonry Drill Bit
 - Phillips Screwdriver

Installation Instructions

- Can be attached with or without retaining rails.
1. Place Trash Guard over outlet pipe.
 2. Drill 5/16" hole top and bottom each side.
 3. Insert plastic anchor and attach washer and phillips screws as shown in diagram.



Section 2 (Diagram A & B)

- Items Included for A:
 - Bottom Plate with plastic netting attached
 - Seven Plastic Anchors
 - Seven Flat Washers
 - Seven 1.75" x .25" Stainless Steel Phillips Screws
 - Tools Needed:
 - Cordless Hammer Drill
 - 5/16" Masonry Drill Bit
 - Phillips Screwdriver
- Items Included for B:
 - Bottom Plate with plastic netting attached
 - Seven Plastic Anchors
 - Seven Flat Washers
 - Seven 1.75" x .25" Stainless Steel Phillips Screws
 - Stainless Steel All Thread Rod Cut to Size
 - Fourteen Hex Nuts & Flat Washers
 - Four Expansion Anchors
 - Plastic Netting (if excess amount on plate is not enough)
 - Two Tie Wraps
 - Tools Needed:
 - Cordless Hammer Drill
 - 5/16" Masonry Drill Bit for Plastic Anchors
 - 1/2" Masonry Drill Bit for Expansion Anchors
 - Phillips Screwdriver

Installation Instructions For A

1. Place bottom plate over inverted bottom with level sides. (Front and Back)
2. Drill 5/16" holes as shown in diagram.
3. Insert plastic wall anchors as shown in diagram A.
4. Attach with washer and screw as shown.

Installation Instructions For B

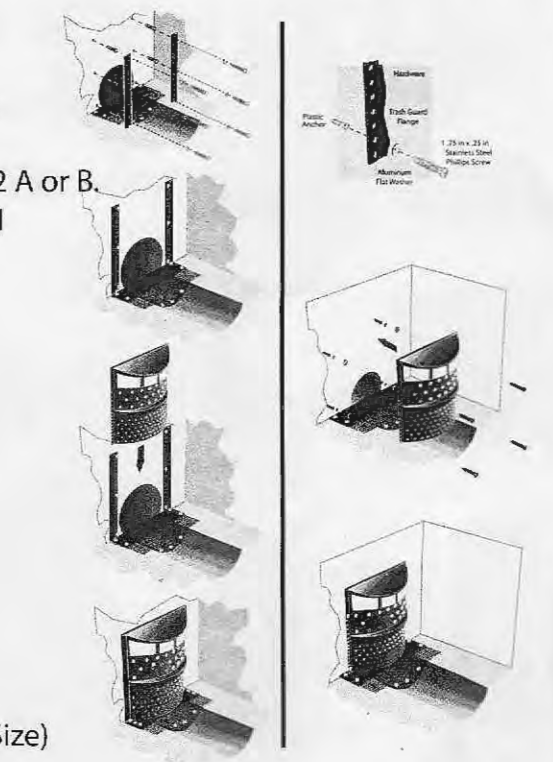
1. Follow instructions A if one side is level.
2. Drill 1/2" holes to accommodate expansion anchors.
3. Cut stainless steel rod to desired length. (Allow 1" inside expansion anchor and 1" through bottom plate)
4. Attach washers and hex nuts as shown in diagram.
5. Attach netting as shown in diagram.

Section 3 (Diagram C) Installation Instructions

- Items Included:
 - Same as Section 2 A or B
 - Trash Guard® (Chosen Size)
 - Seven Plastic Anchors
 - Seven Flat Washers
 - Seven 1.75" x .25" Stainless Steel Phillips Screws
- Tools Needed:
 - Same as Section 2 A or B

Can be attached with or without retaining rails.

1. Follow instruction for Section 2 A or B.
2. Follow instruction for Section 1



Section 4 (Diagram D & G)

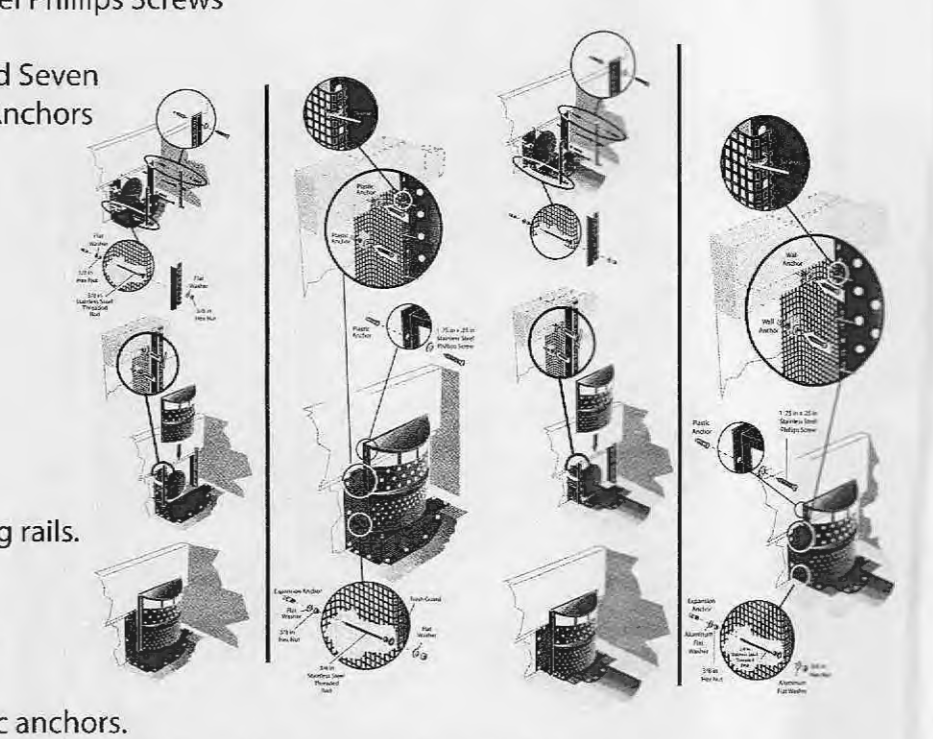
- Items Included:
 - Same as Section 2 A or B If inverted bottom
 - Trash Guard® (Chosen Size)
 - Plastic Netting for Sides (Length Determined by Trash Guard® Size)
 - Fourteen Plastic Anchors
 - Fourteen Flat Washers
 - Fourteen 1.75" x .25" Stainless Steel Phillips Screws
 - 3" Stainless Steel All-Tread Rod
 - Seven Stainless Steel Hex Nuts and Seven Flat Washers and two Expansion Anchors
 - Seven Tie Wraps
- Tools Needed:
 - Cordless Hammer Drill
 - 5/16" Masonry Drill Bit
 - Phillips Screwdriver

Additional:

- 1/2" Masonry Drill Bit
- Hacksaw

Installation Instructions

- Can be attached with or without retaining rails.
1. Attach bottom plate to floor directly under area where Trash Guard® will sit. (Use either A or B bottom instructions)
 2. Drill the 5/16" holes on each side of Trash Guard® near top and insert plastic anchors.
 3. Drill 1/2" holes on each side of Trash Guard® near bottom insert expansion anchors.
 4. Cut two sections from all thread Rod the length required for Trash Guard® or retaining rails to hang perpendicular with top attached to wall (allow 1" inside anchors and 1" through Trash Guard® Flange or retaining rails)
 5. Secure Trash Guard® or retaining rails to top as shown in diagram.
 6. Secure rods to expansion anchors and Trash Guard® or retaining rails as shown in insert.
 7. Attach plastic netting to Trash Guard® flange or retaining rails with the wraps as shown in insert.
 8. Cut mesh from top tier of bricks and secure with plastic anchor, screw and washer as shown in insert.
 9. Continue process until netting is attached to wall top and bottom.



ENGINEERS SEAL DOES NOT APPLY TO DETAILS ON THIS SHEET.