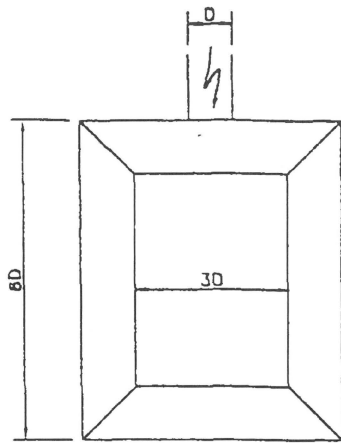
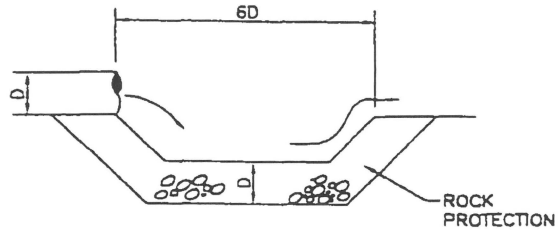


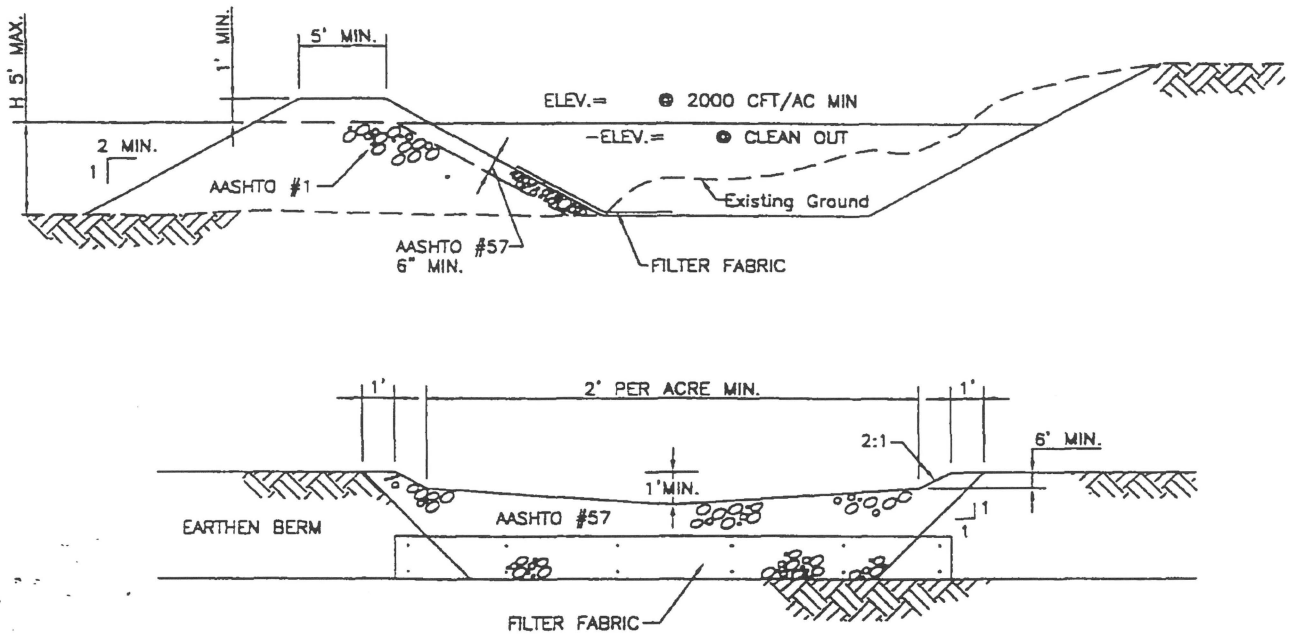
Drawing No. 200.18.5



PLAN



NOT TO SCALE



OUTLETS FOR RISER PIPES WILL BE PROTECTED WITH A ROCK APRON PLACED 3 TIMES AS WIDE, 6 TIMES AS LONG, AND EQUAL IN DEPTH TO THE OUTLET PIPE DIAMETER (IN FEET). ROCK SIZE TO BE DETERMINED IN ACCORDANCE WITH EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM.

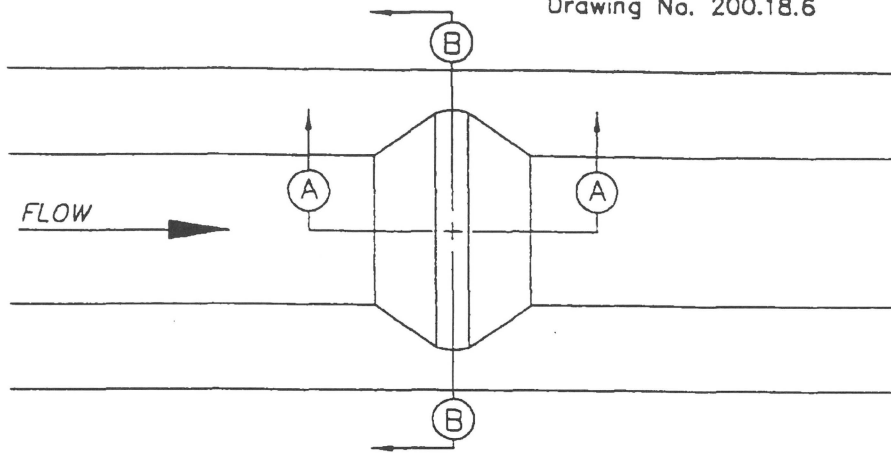
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

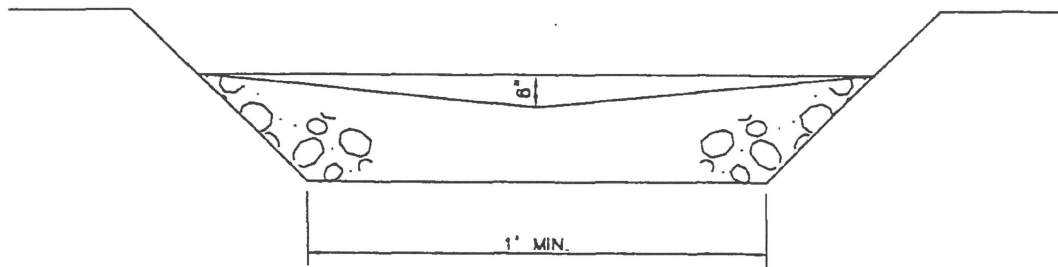
SEDIMENT TRAP OUTLET BASIN DETAILS

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				ES-05 Date: 06/14/00

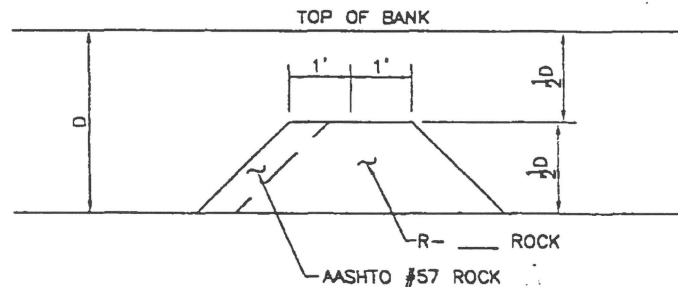
Drawing No. 200.18.6



PLAN VIEW



SECTION B-B



SECTION A-A

FOR 3' ≤ USE R-4
FOR 2' ≤ USE R-3
FOR 1' ≤ USE R-2

NOT TO SCALE

ALL AGGREGATE SHALL BE IN ACCORDANCE WITH SECTIONS 703.2 AND 850.2 OF PENNDOT PUBLICATION 408.

CHIPPEWA TOWNSHIP Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

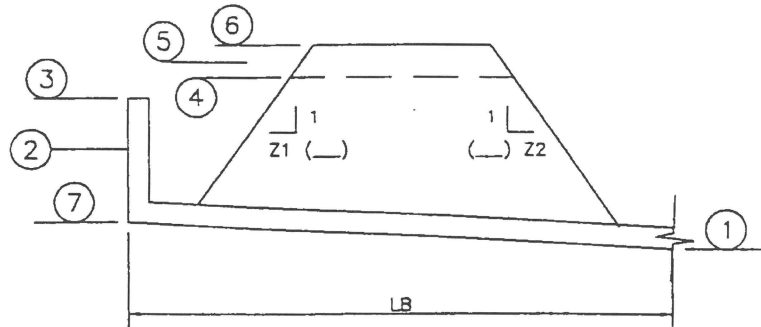
ROCK FILTER DETAIL

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				ES-06

Date: 06/14/00

Drawing No. 200.18.7

$Z1 + Z2 = 5 \text{ MIN.}$
 $Z1 \& Z2 = 2 \text{ MIN.}$



NOT TO SCALE

- ① DISCHARGE PIPE ELEVATION
- ② SEDIMENT STORAGE ELEVATION (@Sd)
- ③ ELEVATION AT TOP OF SETTLING VOLUME (St)
(CREST OF PRINCIPAL SPILLWAY)
- ④ EMERGENCY SPILLWAY CREST ELEVATION
(MIN. 0.5' ABOVE ELEVATION 3)
- ⑤ 2 CFS/ACRE FLOW ELEVATION
- ⑥ TOP OF EMBANKMENT ELEVATION
(MIN. 24" ABOVE ELEVATION 5)
- ⑦ BOTTOM ELEVATION

DESIGN OF SEDIMENT BASINS SHALL FOLLOW THE GUIDELINES
 SET IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL

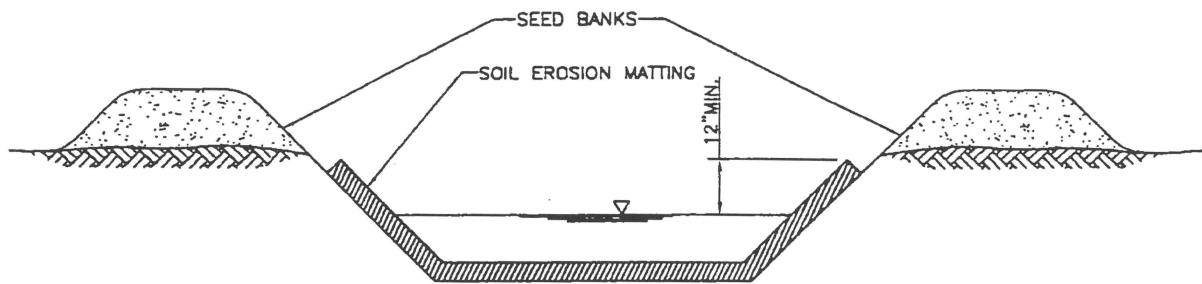
CHIPPEWA TOWNSHIP
 Beaver County

2568 Darlington Road
 Beaver Falls, PA 15010

SEDIMENT BASIN DETAIL

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				ES-07 Date: 06/14/00

Drawing No. 200.18.8



NOT TO SCALE

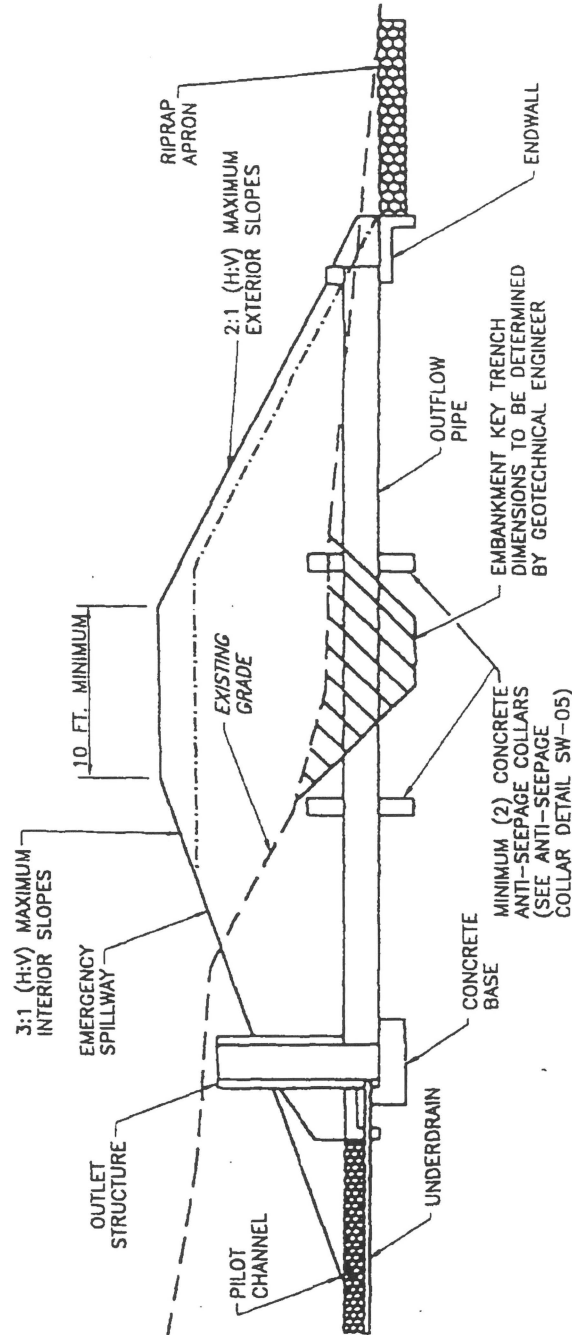
SOIL EROSION MATTING SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 806.

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

**SOIL EROSION
MATTING SECTION DETAIL**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				ES-08 Date: 06/14/00



CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

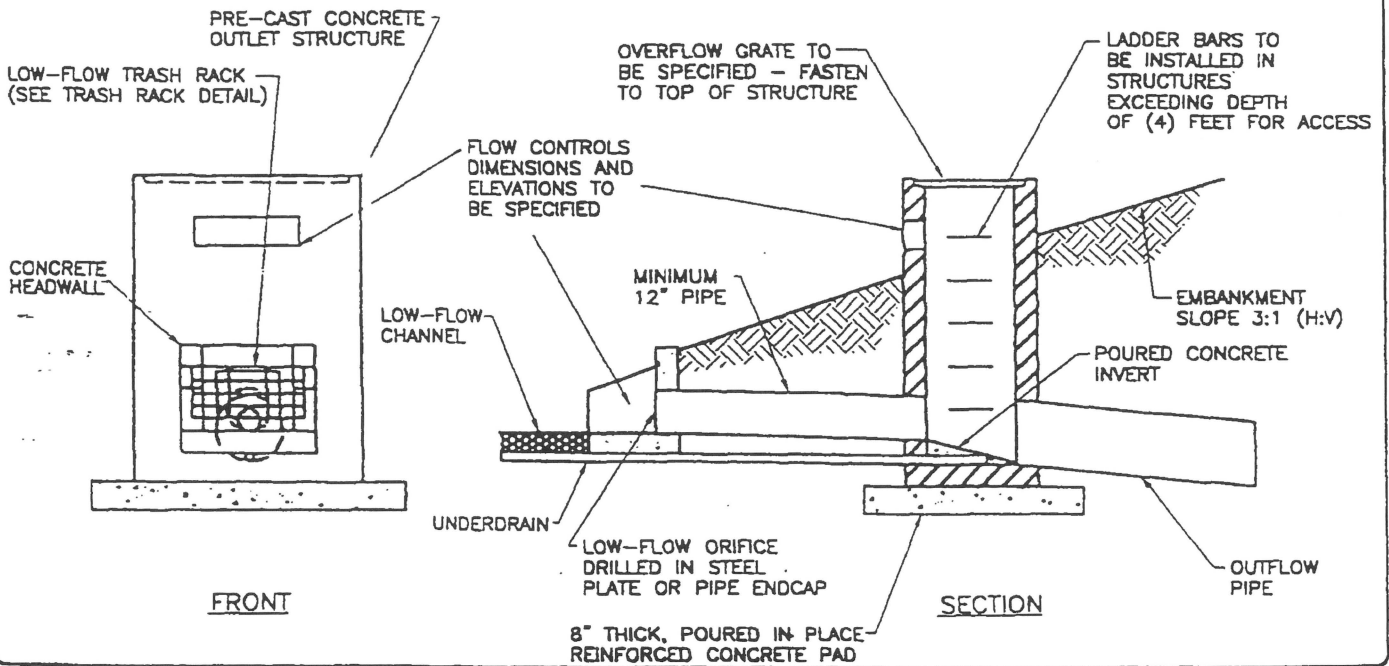
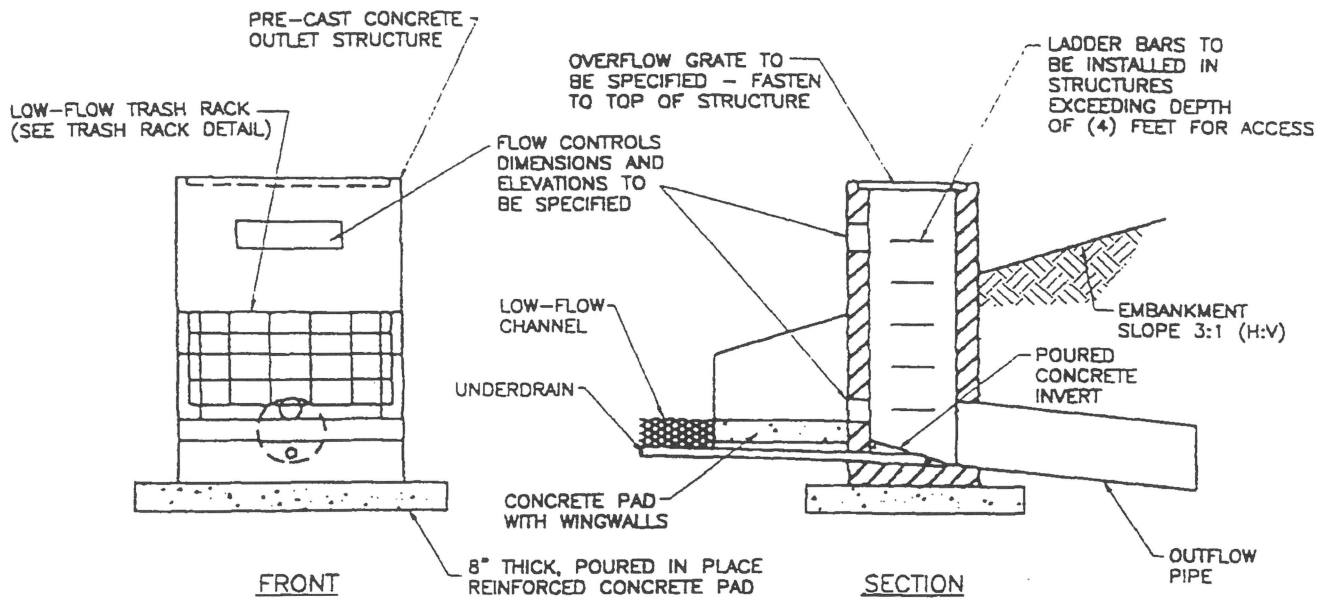
**Detention Facility
Embankment (Typical)**

REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SW-01

Date: 6/26/00



CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

Detention Facility Outlet Structures (Typical)

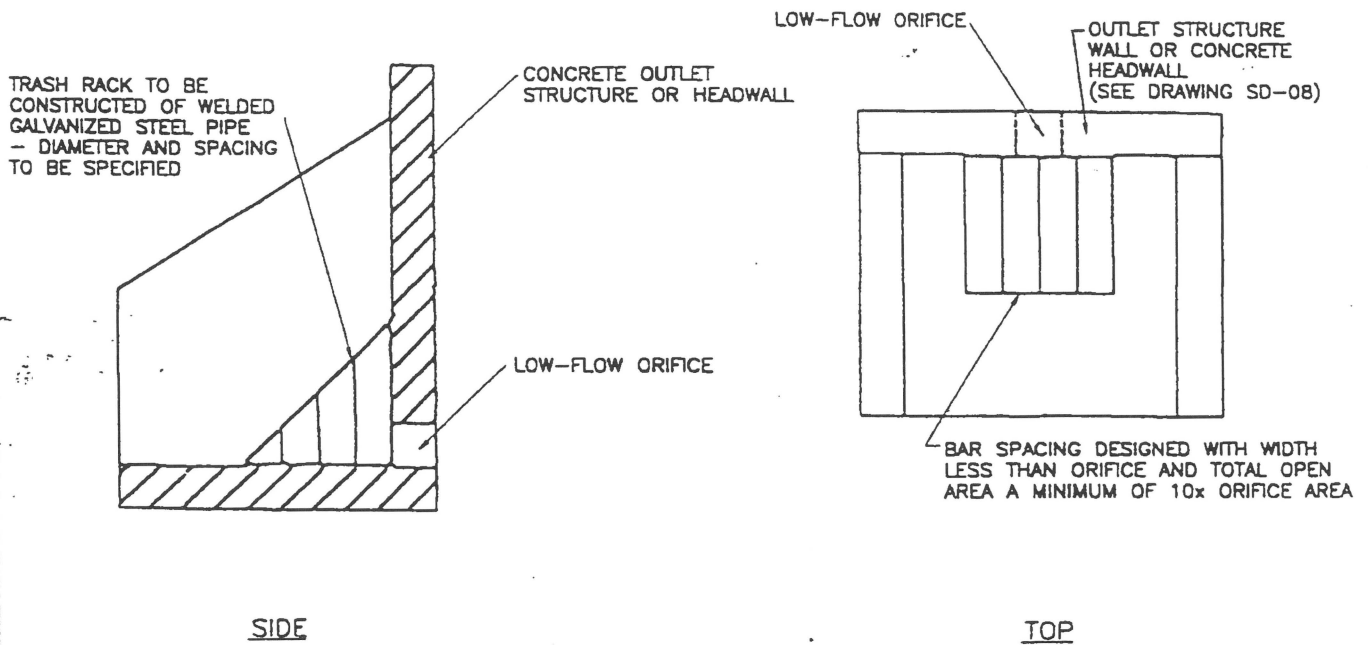
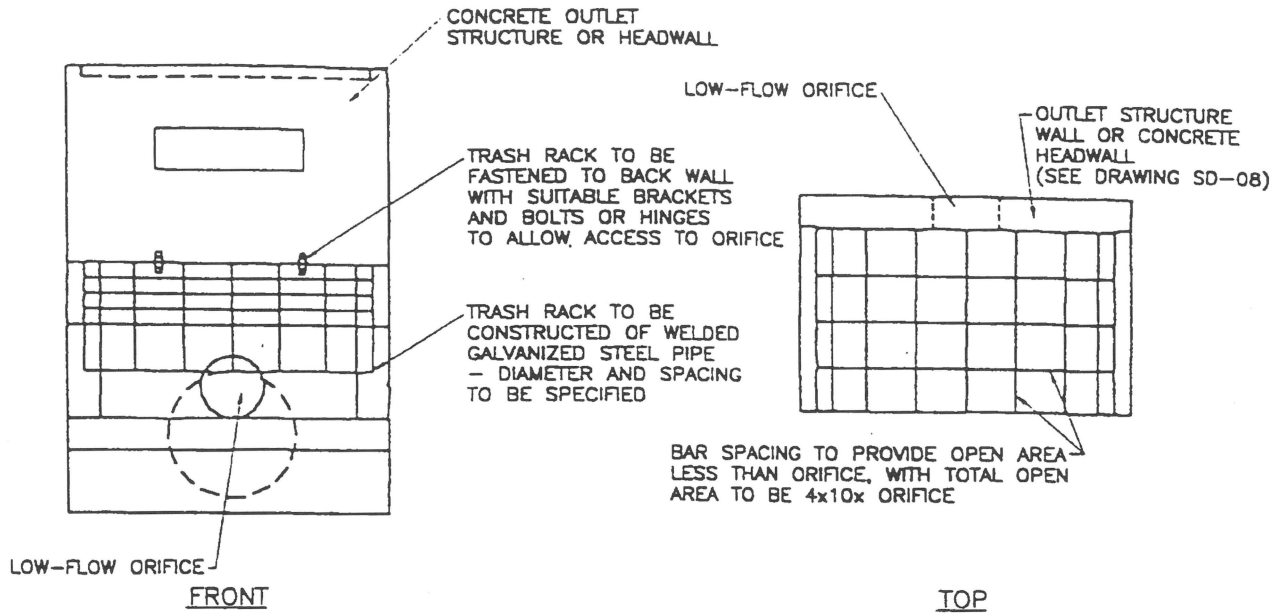
REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SW-02

Date: 6/26/00

Drawing No. 200.7.4.14b

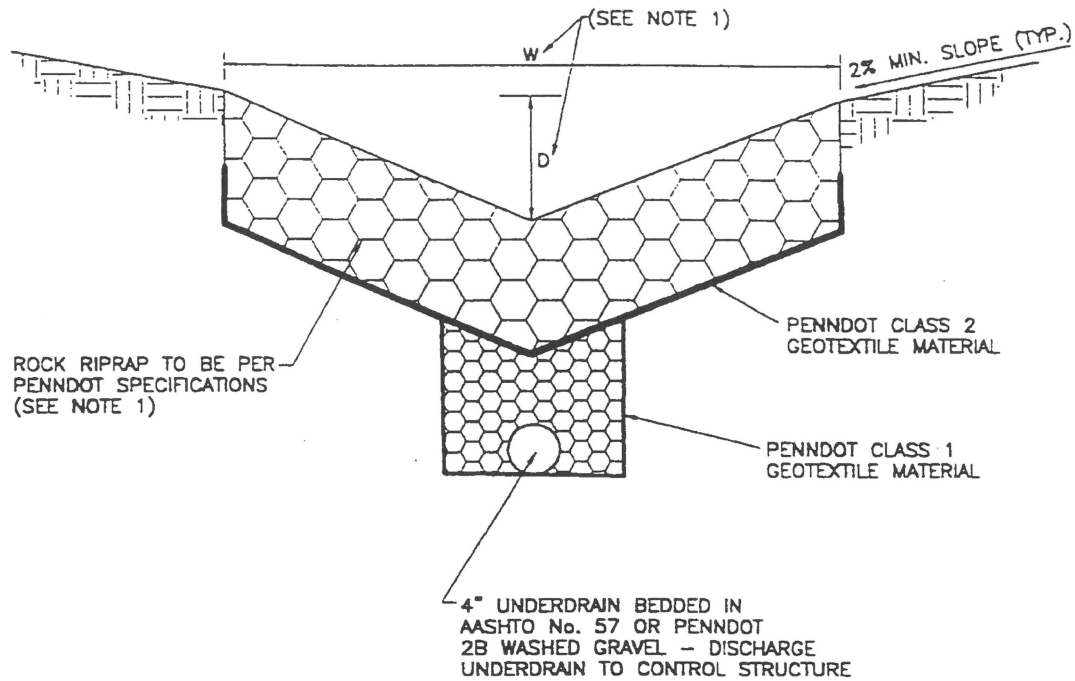


CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

Detention Facility Low-Flow Trash Racks (Typical)

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SW-03
				Date: 6/27/00



NOTES:

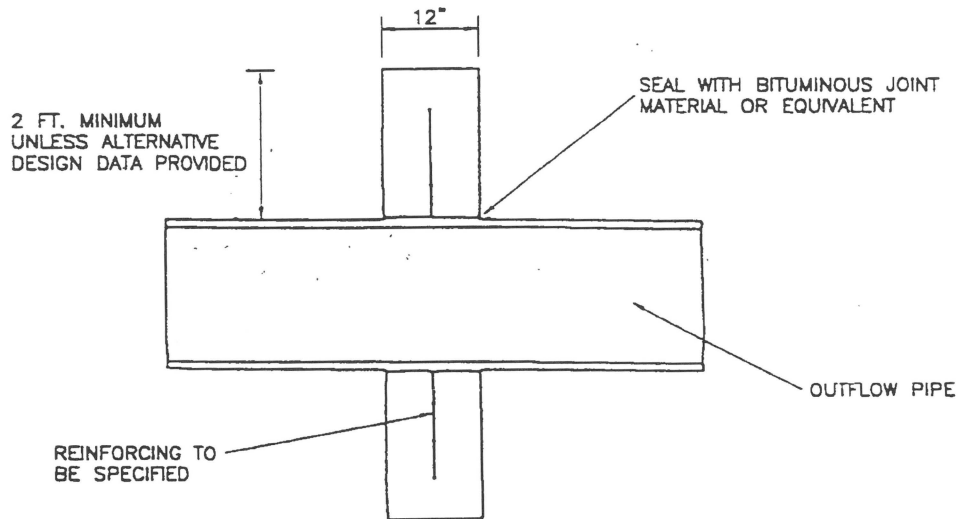
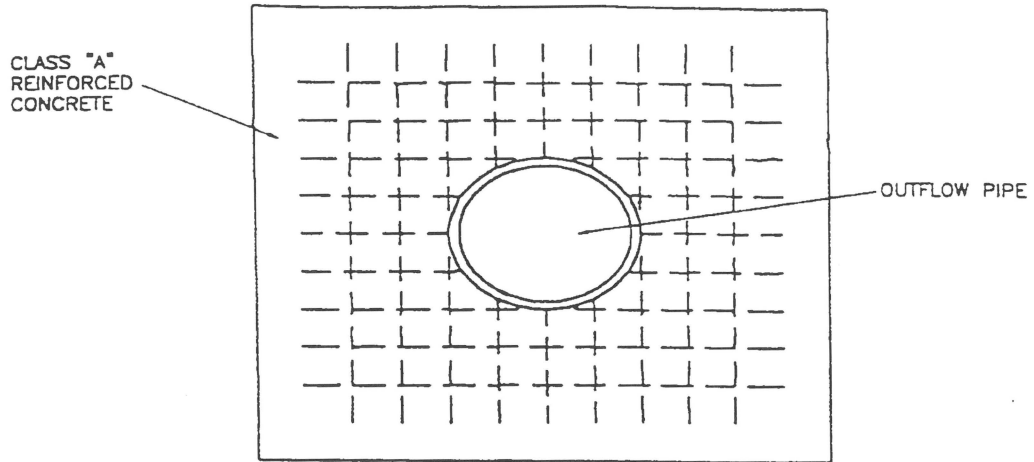
1. CHANNEL DIMENSIONS (W,D) AND RIPRAP SIZE AND THICKNESS TO BE DETERMINED BASED ON DESIGN FLOW AND VELOCITY.
2. CHANNEL SHOULD BE DESIGNED TO HAVE A MINIMUM LONGITUDINAL SLOPE OF 1% TOWARD CONTROL STRUCTURE.

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

**Riprap Pilot Channel
(Typical)**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SW-04 Date: 6/27/00



SECTION

NOTE:

NUMBER OF ANTI-SEEPAGE COLLARS TO BE INSTALLED AND SPACING TO BE SPECIFIED ON DETENTION FACILITY PROFILE.

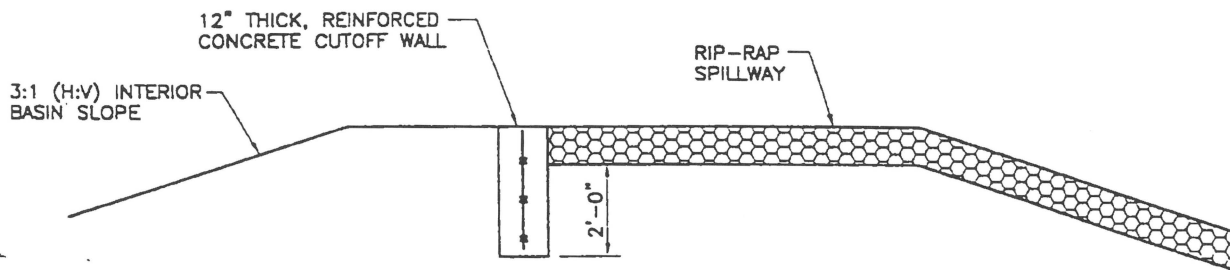
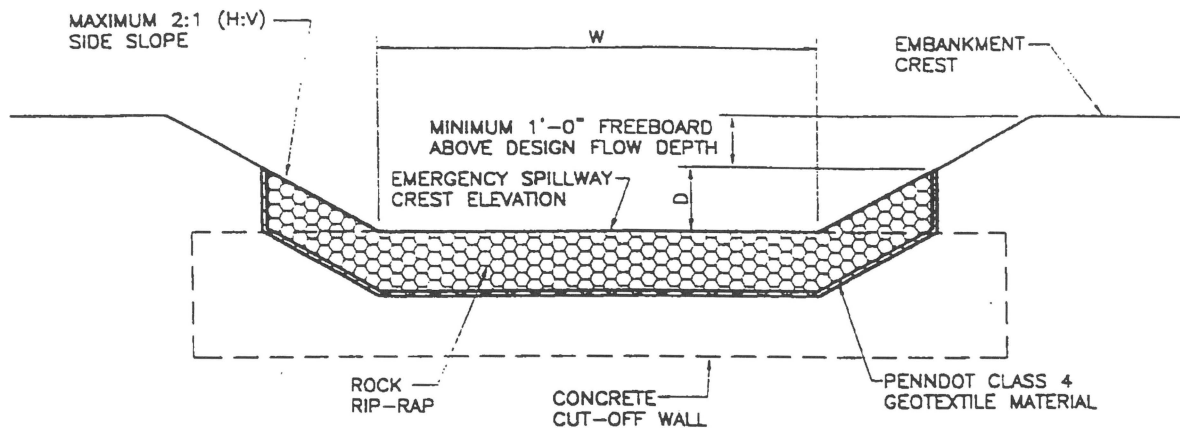
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

Anti-Seepage Collars

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SW-05
				Date: 6/27/00

Drawing No. 200.7.4.9



NOTE:

RIP-RAP DESIGN DATA AND DIMENSIONS
"W" AND "D" TO BE SPECIFIED ON DETAIL

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

Rip-Rap Emergency Spillway

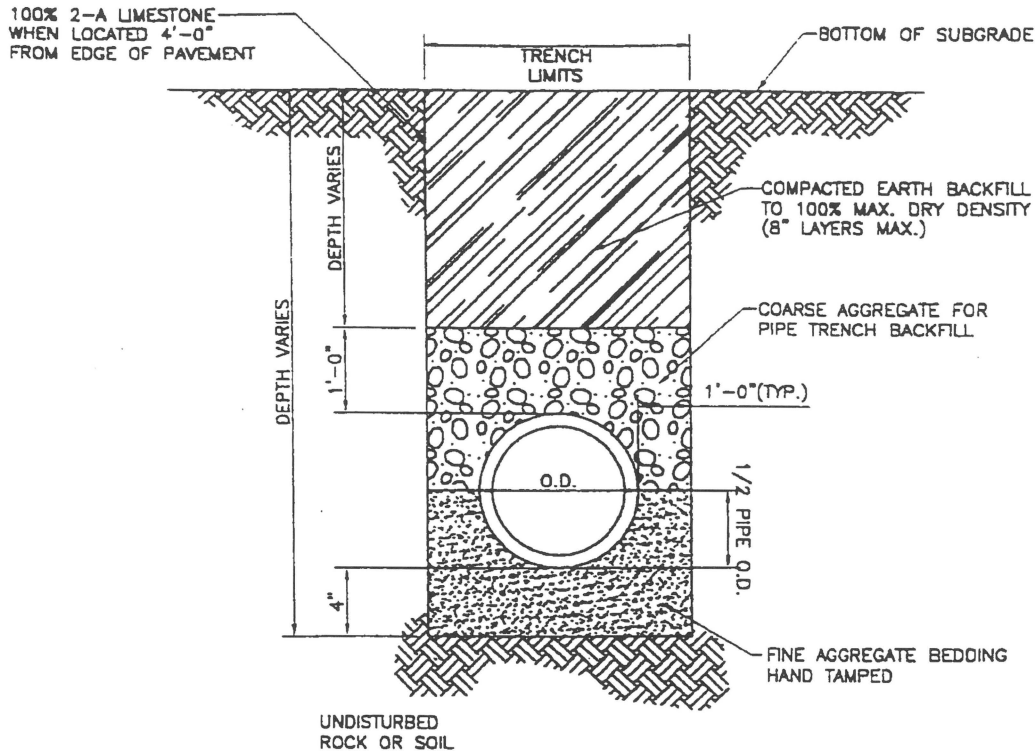
REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SW-06

Date: 6/26/00

Drawing No. 200.8



NOT TO SCALE

NOTES:

1. MATERIAL OBTAINED IN TRENCH EXCAVATION SHALL NOT BE UTILIZED FOR BACKFILL. THIS REQUIREMENT SHALL APPLY TO BACKFILL IN SHOULDER AREAS AS WELL AS BACKFILL WITHIN THE CARTWAY.
2. AGGREGATE MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED EIGHT INCHES AND COMPACTED TO THE FOLLOWING MINIMUM REQUIREMENTS. SHOULDER AREAS AS WELL AS BACKFILL WITHIN THE CARTWAY.

MAXIMUM DRY WEIGHT OF BACKFILL MATERIAL (AS DETERMINED IN ACCORDANCE WITH AASHTO T99)

LESS THE 95.0 LB./CU. FT.
95.0-99.9 LB./CU. FT.
100.0-109.9 LB./CU. FT.
110.0 OR MORE

MAXIMUM FIELD COMPACTION REQUIREMENT (PERCENT OF MAXIMUM DRY WEIGHT)

UNSUITABLE MATERIAL
100.
100.
95%

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

TYPICAL STORM SEWER TRENCH DETAIL-WITHIN R.O.W.

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	

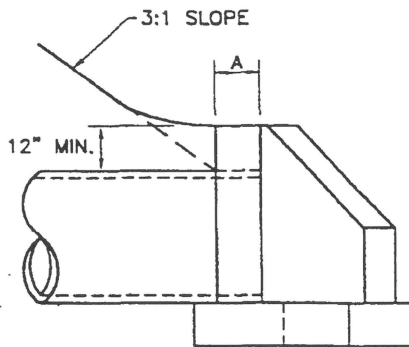
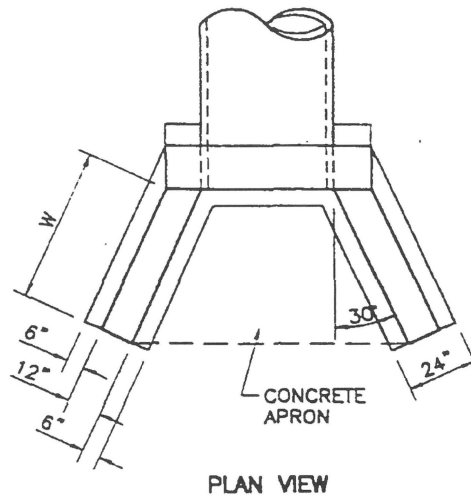
SS-01

Date: 06/13/00

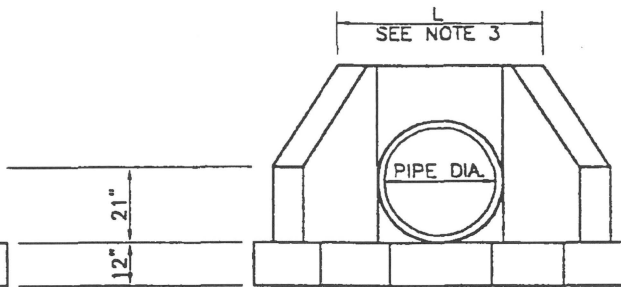
NOTES:

1. CONCRETE SHALL BE CLASS 'A'.
2. EXPOSED EDGES SHALL BE CHAMFERED ONE (1) INCH.
3. ADD 1'-0" TO DIMENSION 'L' WHEN ORIFICE PLATE IS TO BE PLACED ON HEADWALL.

PIPE DIA.	L*	W	A
15"	4.0'	4.0'	12"
18"	4.0'	4.0'	12"
24"	4.5'	4.25'	12"
36"	4.5'	4.25'	12"
48"	5.0'	4.25'	12"



SIDE ELEVATION VIEW



FRONT ELEVATION VIEW

Reference RC-31, PennDOT Pub. 72

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

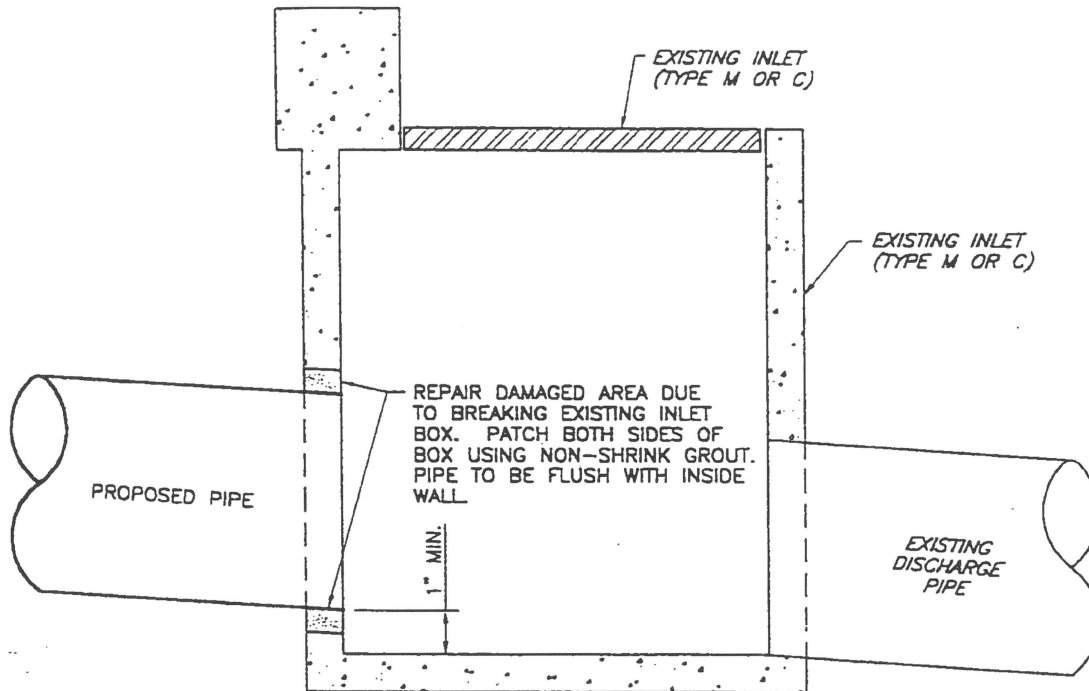
**Standard Type D-W
Endwall/Headwall Detail**

REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SS-02

Date: 6/26/00



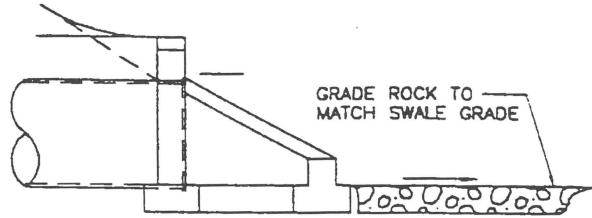
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

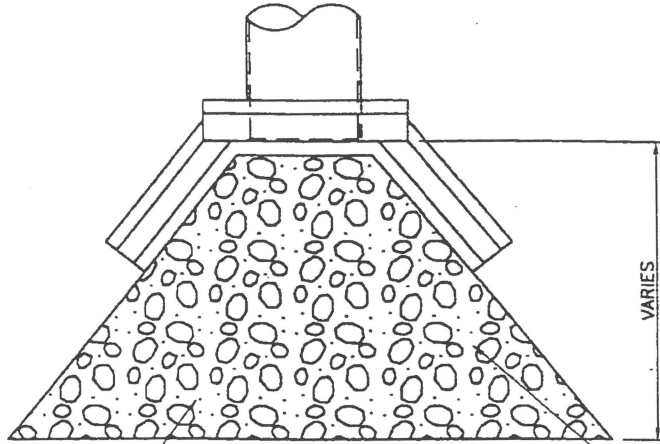
Inlet Connections Detail

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-03
				Date: 6/26/00

Drawing No. 200.10b



PROFILE

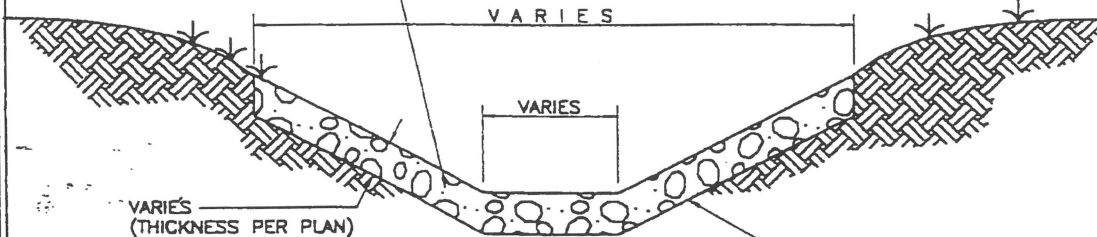


PLAN

SIZE & DEPTH OF ROCK SHALL BE IN ACCORDANCE WITH APPROVED PLANS.

NOTE:

USE THIS CONFIGURATION FOR ALL RIP-RAP PLACEMENT @ ENDWALLS UNLESS OTHERWISE APPROVED
EXAMPLE: R-4 (D50 STONE)
10'L x 12'W x 12" THICK.



SECTION

CLASS 2 GEOTEXTILE MATERIAL* SHALL BE INSTALLED ALONG ALL INTERFACE AREAS WITH GROUND CONTACT

*OR APPROVED EQUAL

NOT TO SCALE

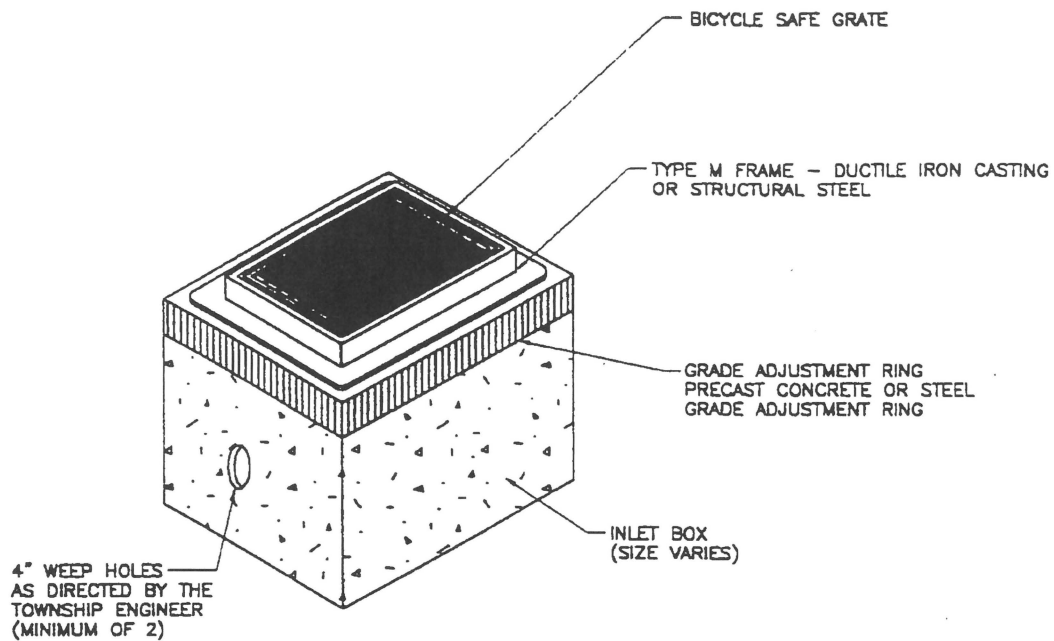
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

**RIP-RAP DETAIL
STORM SEWER OUTFALL**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-04
				Date: 06/13/00

Drawing No. 200.2



NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 605 AND STANDARDS FOR ROADWAY CONSTRUCTION, RC-34. CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
2. ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOMS.

NOT TO SCALE

REFERENCE RC-34 - PENNDOT PUBLICATION 72

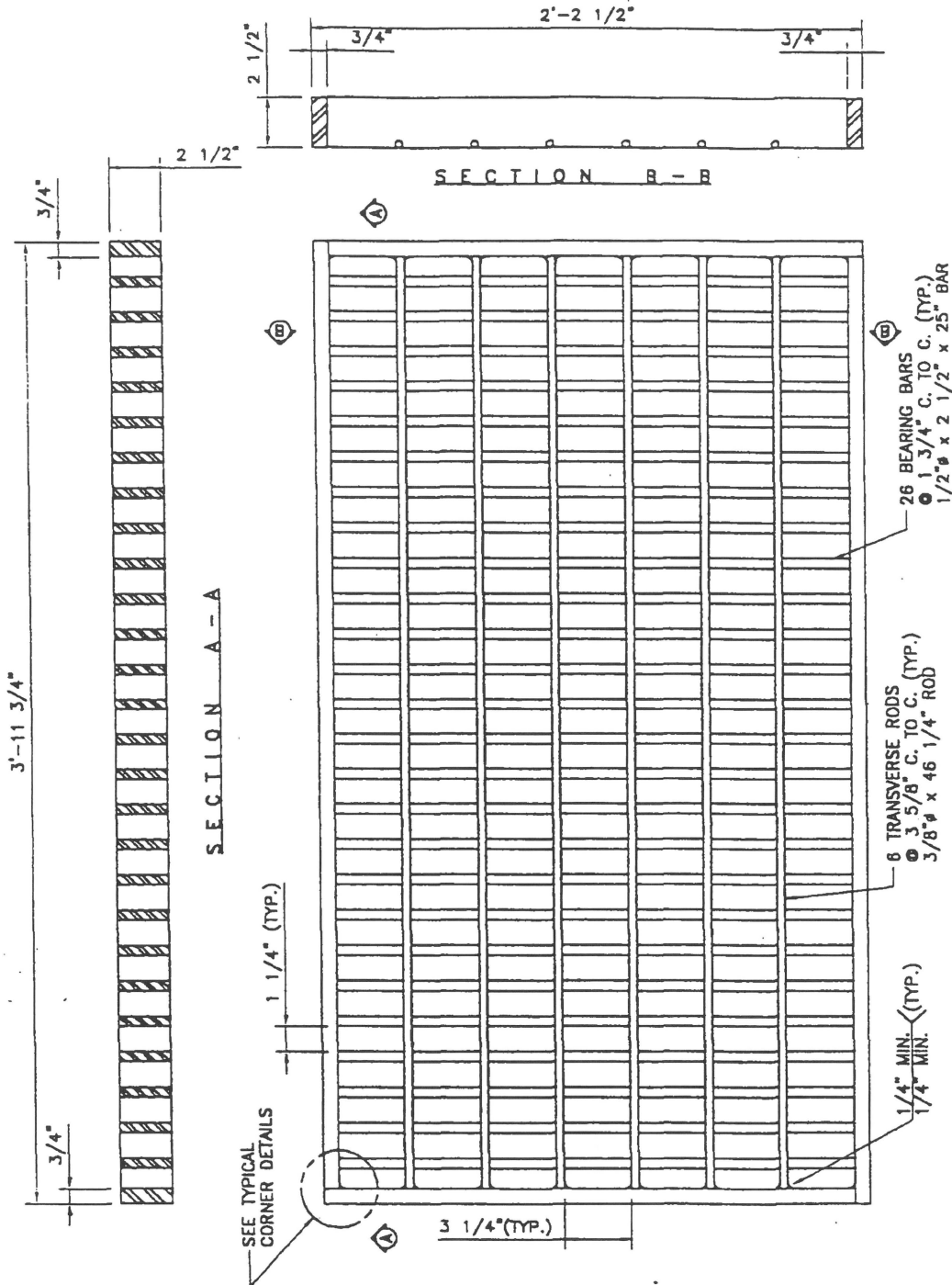
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

**TYPE "M"
INLET DETAIL**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-05 Date: 06/13/00

Drawing No. 200.2.1



REFERENCE RC-34 - PENNDOT PUBLICATION 72

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

STRUCTURAL STEEL BICYCLE SAFE GRATE

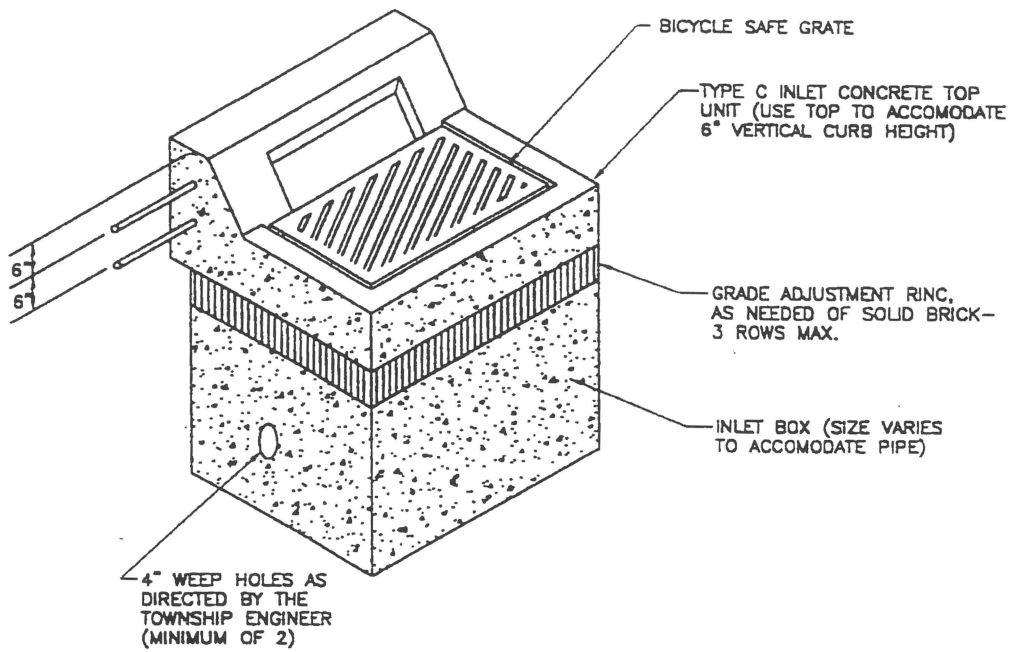
REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SS-05B

Date: 06/13/00

Drawing No. 200.2a



NOT TO SCALE

REFERENCE RC-34 - PENNDOT PUBLICATION 72

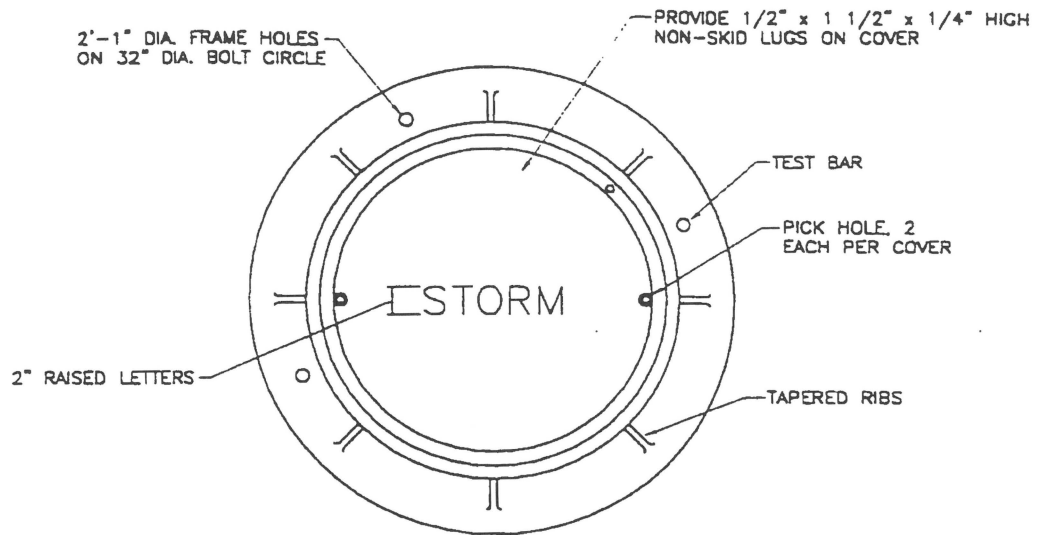
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

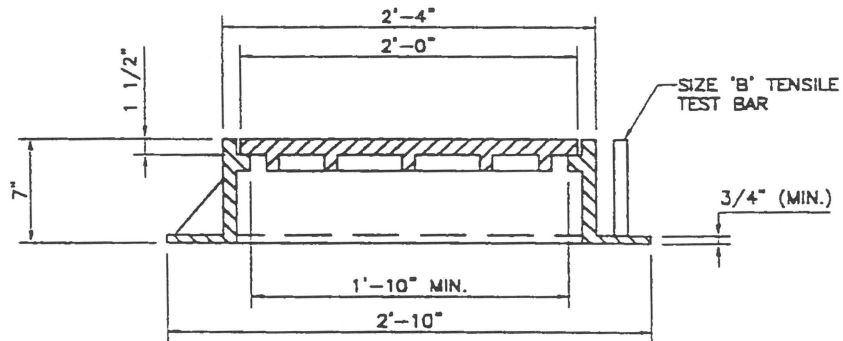
**TYPE "C"
INLET DETAIL**

REVISIONS				Drawing
NO.	DATE	NO.	DATE	
				SS-06 Date: 06/13/00

Drawing No. 200.3.1



PLAN



SECTION

NOT TO SCALE

REFERENCE RC-39 - PENNDOT PUBLICATION 72

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

STANDARD MANHOLE FRAME & COVER

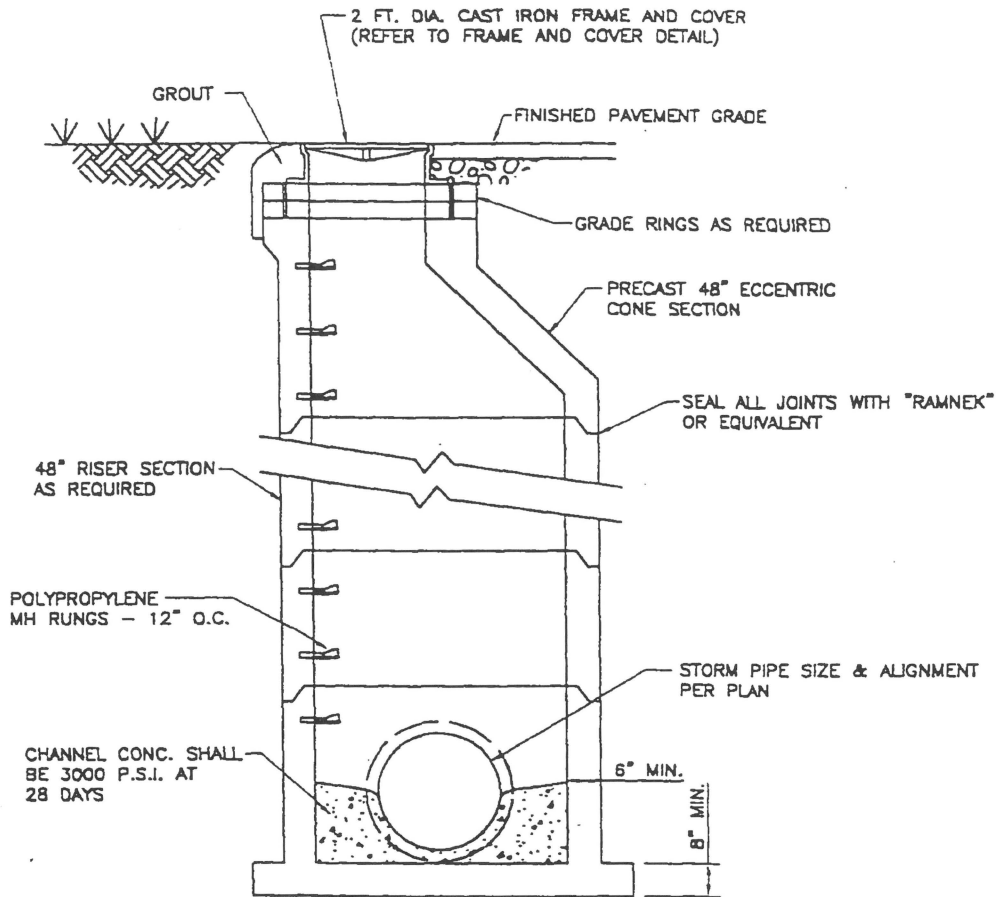
REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SS-07

Date: 06/13/00

Drawing No. 200.3



NOT TO SCALE

REFERENCE RC-39 - PENNDOT PUBLICATION 72

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

STORM MANHOLE DETAIL (TYPICAL SECTION)

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-08
				Date: 06/13/00

Drawing No. 200.3.3

3/4" DIA. ANCHOR BOLTS REQUIRED
WHEN WATERTIGHT CASTINGS ARE
SPECIFIED. ALLEGHENY FOUNDRY
CASTING FRAME #299, COVER # 110,
SEAL PLATE #300 OR LATEST REVISION.

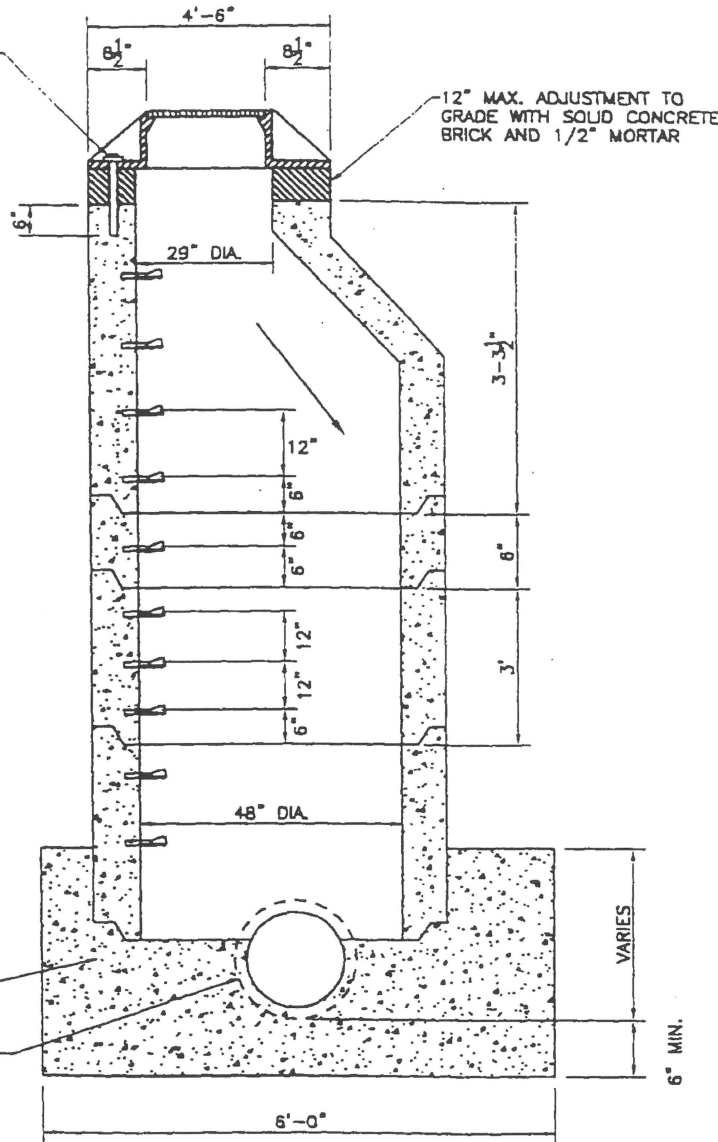
ALLEGHENY FOUNDRY CASTING:
FRAME #26
COVER #25
STEPS #64 (FACTORY INSTALLED)
FRAME #65 MAY BE USED IN
OFF PAVEMENT AREAS

MANHOLE SECTIONS SHALL BE
ASTM C478 PIPE, OR LATEST
REVISION

MANHOLE SECTIONS AND CASTINGS
TO BE SET IN PLACE IN BITUMINOUS
MATERIAL OR CEMENT GROUT. SANITARY
MANHOLE JOINTS SHALL BE RUBBER
TYPE GASKETS ASTM C443 OR LATEST
REVISION.

CLASS "A" CONCRETE

VARIES



NOT TO SCALE

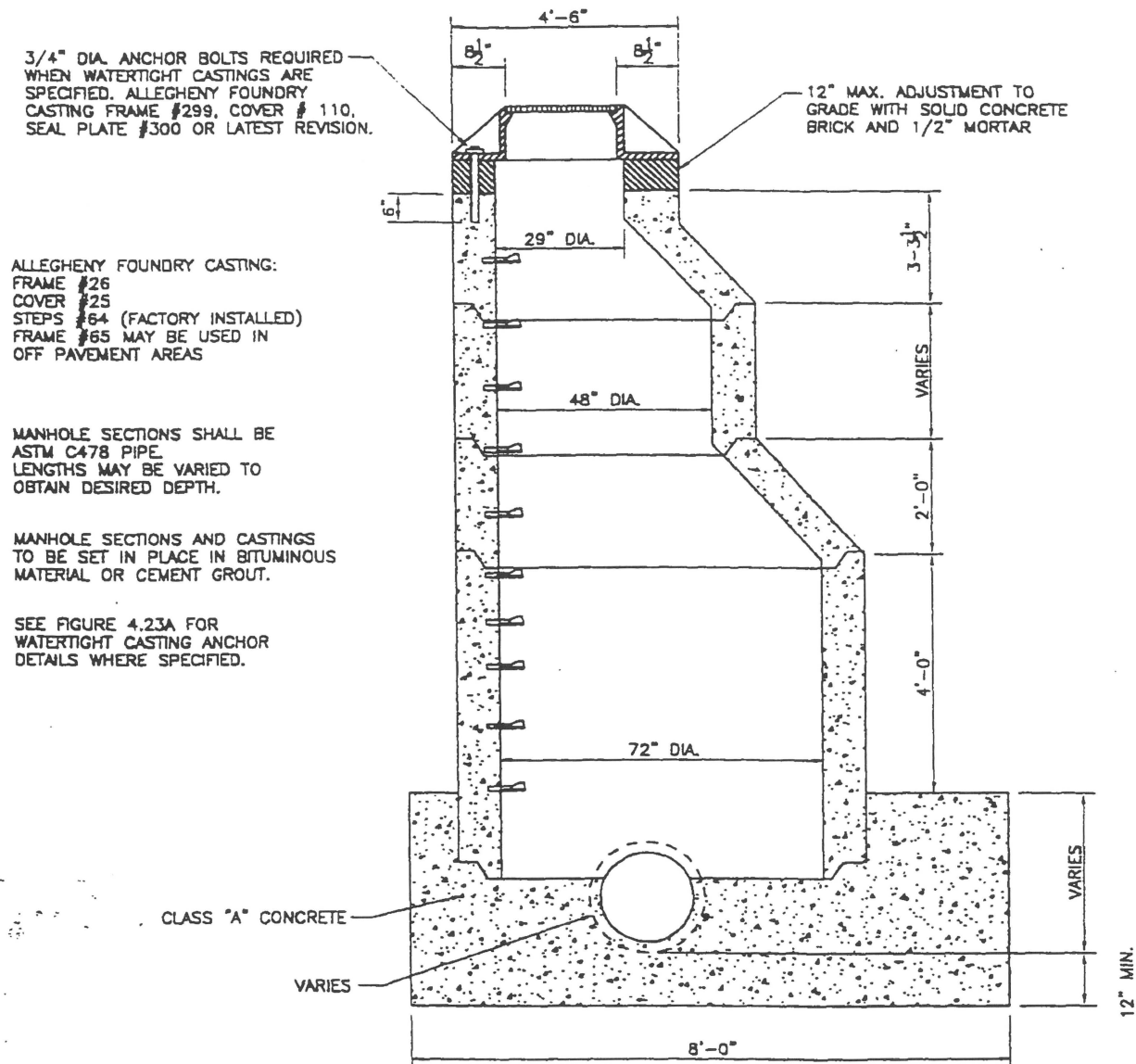
CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

**PRE-CAST CONCRETE MANHOLE
PIPES UNDER 48" DIA**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-09 Date: 06/13/00

Drawing No. 200.3.2



NOT TO SCALE

CHIPPEWA TOWNSHIP
Beaver County

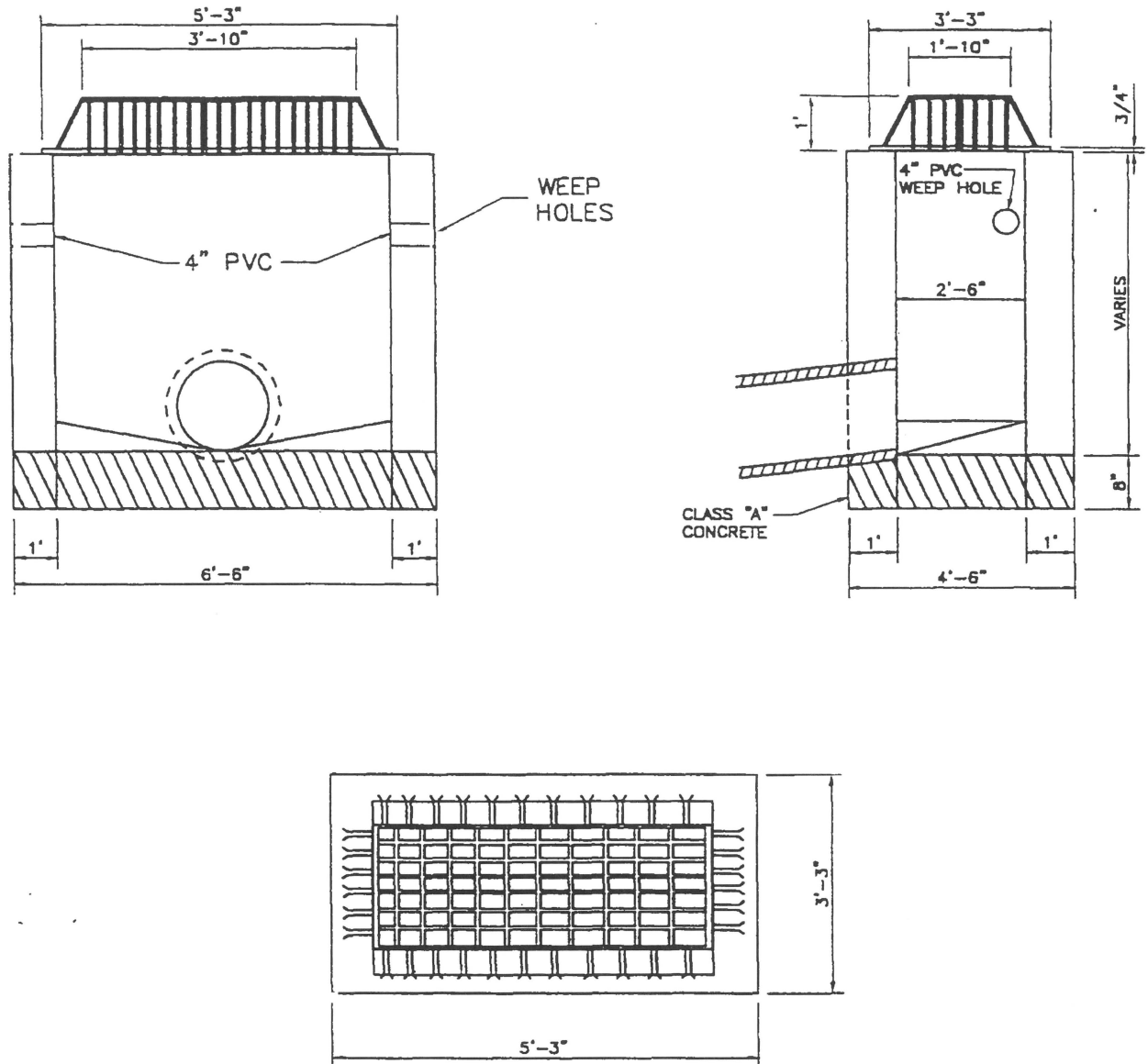
2568 Darlington Road
Beaver Falls, PA 15010

PRE-CAST CONCRETE MANHOLE PIPES OVER 48" DIA.

REVISIONS				SS-10 Date: 06/13/00
NO.	DATE	NO.	DATE	

Drawing No. 200.4.1

CASTING: FOUNDRY FRAME NO. 69, GRATING NO. 68 OR EQUAL



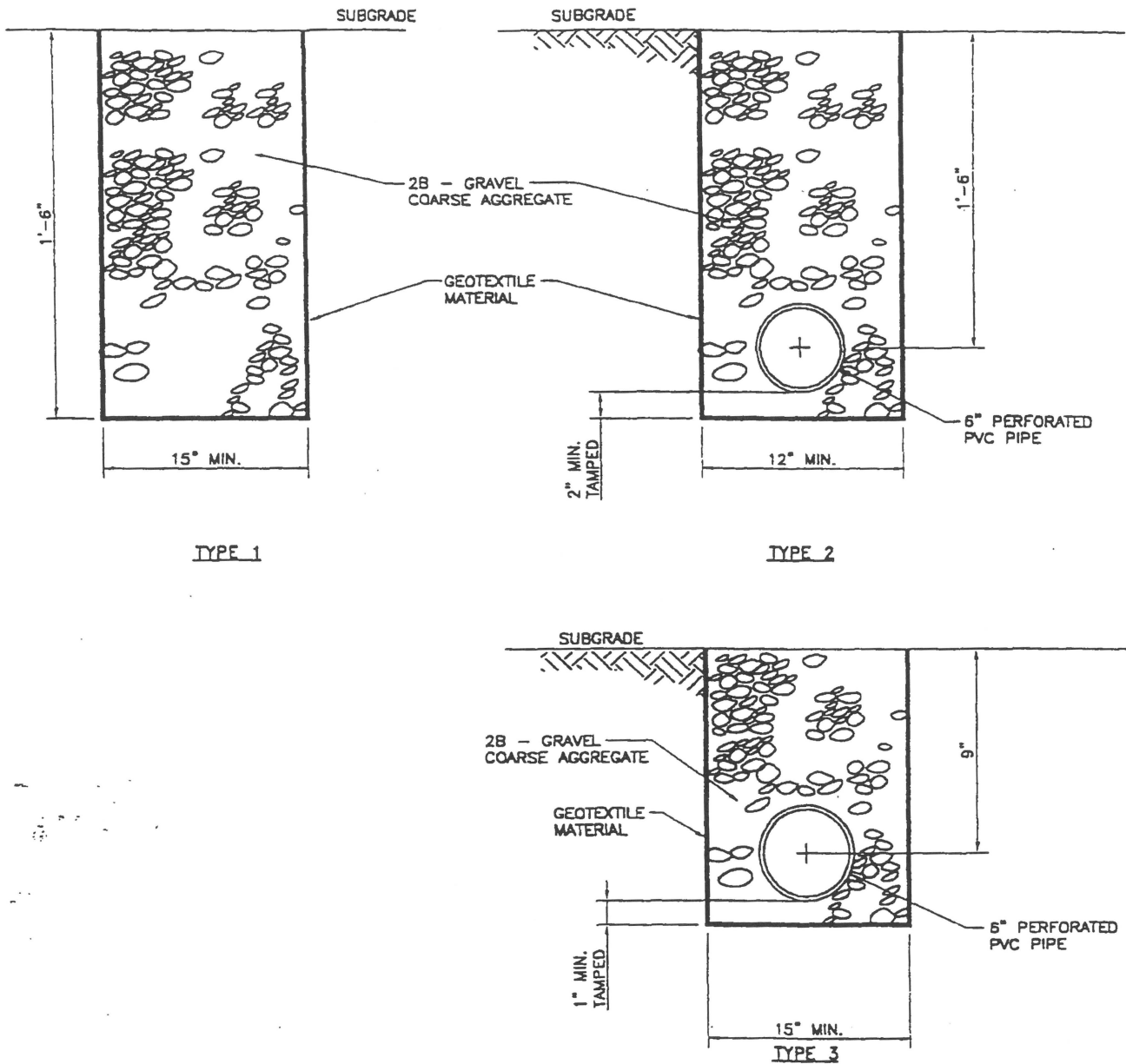
NOT TO SCALE

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

YARD DRAINS

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-11 Date: 06/13/00



NOT TO SCALE

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

SPECIAL UNDERDRAINS

REVISIONS				DATE
NO.	DATE	NO.	DATE	

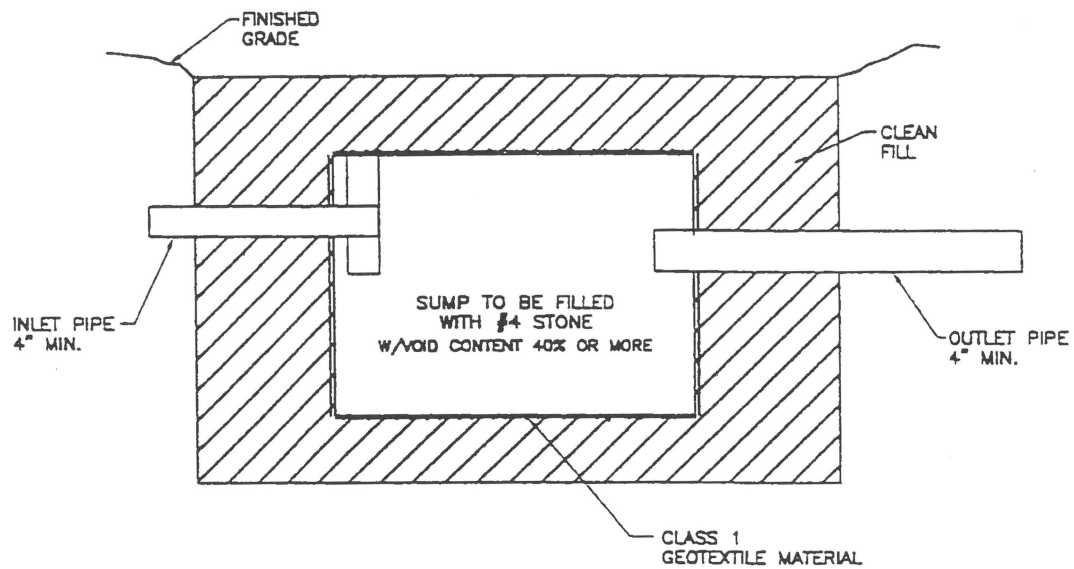
DATE

SS-12

Date: 06/13/00

Drawing No. 200.7.6.2

ALL SUMPS MINIMUM 10 FEET FROM HOUSE



NOT TO SCALE

CHIPPEWA TOWNSHIP
Beaver County

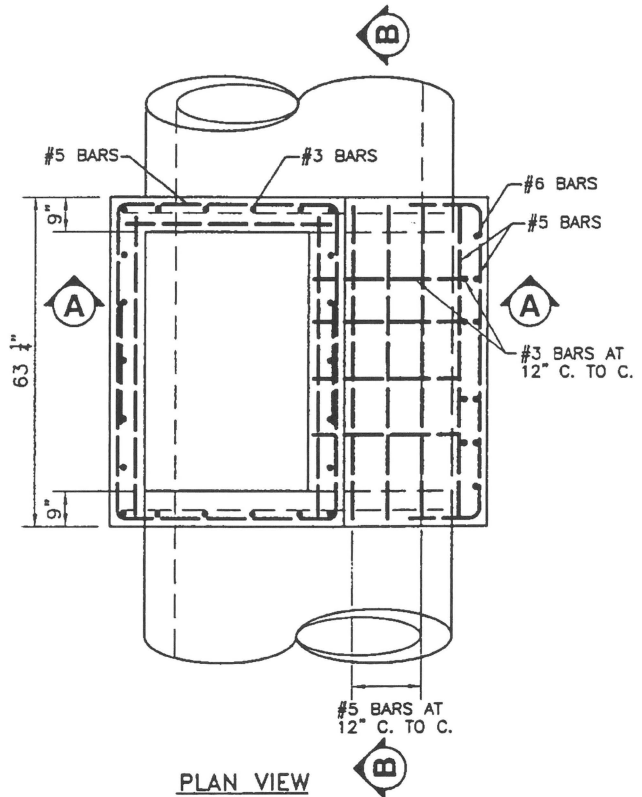
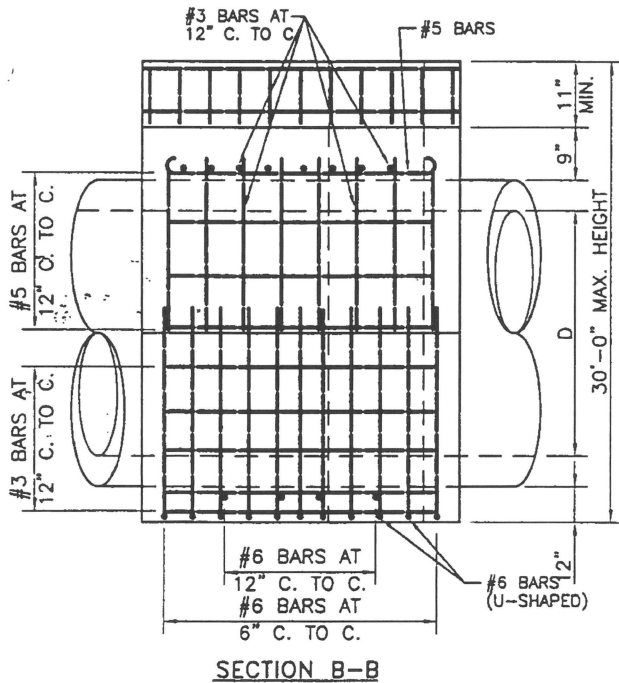
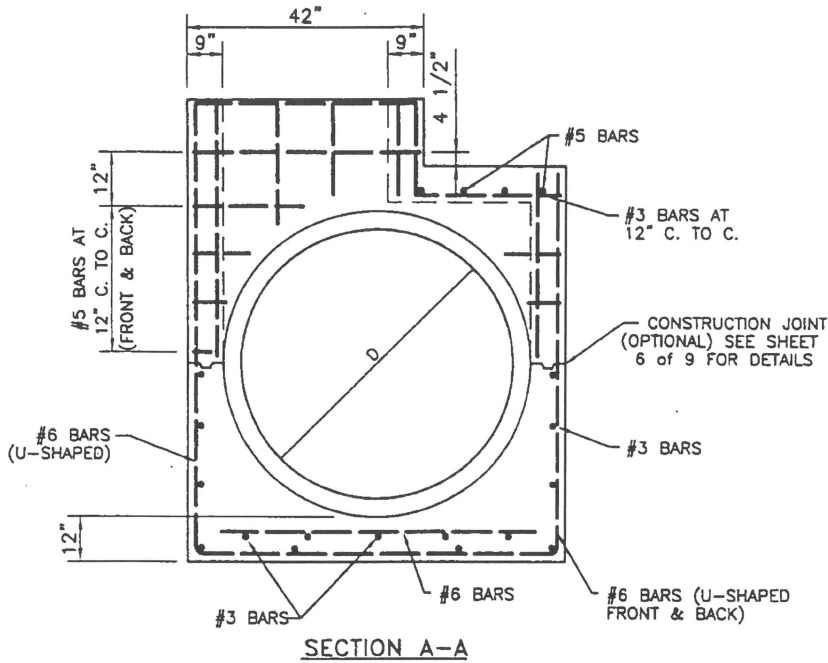
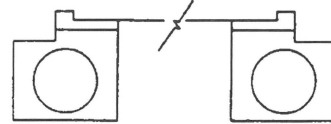
2568 Darlington Road
Beaver Falls, PA 15010

STORM WATER CONTAINMENT SYSTEM

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SS-13 Date: 06/13/00

NOTES

1. CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF OF PUBLICATION 408, SECTION 605 AND SECTION 714.
2. INLETS THAT EXCEED THE MAXIMUM HEIGHT SHOWN SHALL REQUIRE SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE. CONSTRUCT INLETS THAT EXCEED 5 FEET IN HEIGHT WITH STEPS SIMILAR TO MANHOLES. SEE RC-39.
3. WHEN A SITUATION CAN NOT BE SATISFIED BY THE MODIFIED INLET BOXES SHOWN, SPECIAL DETAILS AND DESIGN SHALL BE PROVIDED.
4. FOR ORIENTATION OF THE TYPE C INLET WITH MODIFIED TYPE I INLET BOX, THE TYPICAL INSTALLATION DETAILS ARE SHOWN BELOW. ANY VARIATION SHALL BE SHOWN ON THE CONSTRUCTION DRAWINGS BY SPECIAL DETAILS.
5. PROVIDE A MINIMUM HEIGHT OF 20 INCHES MEASURED FROM THE TOP SURFACE OF THE TOP UNIT TO THE INSIDE TOP OF THE PIPE WHEN THE TOP UNIT AND EITHER A MODIFIED TYPE I OR A MODIFIED TYPE II INLET BOX ARE CONSTRUCTED MONOLITHICALLY.
6. ONLY PRECAST MODIFIED INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" x 36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.



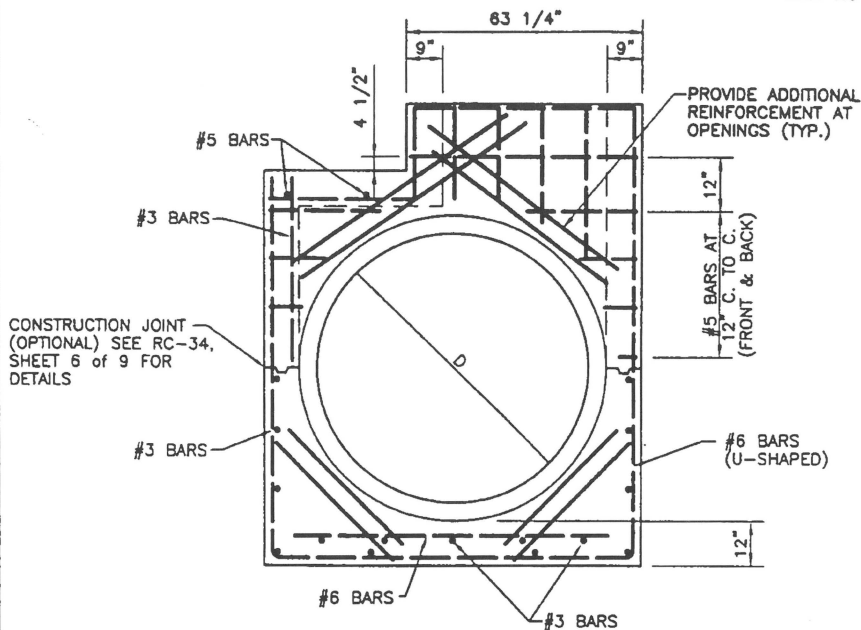
CHIPPEWA TOWNSHIP

Beaver County, PA

2568 Darlington Road
Beaver Falls, Pennsylvania 15010

**Inlet Box
Modified Type I**

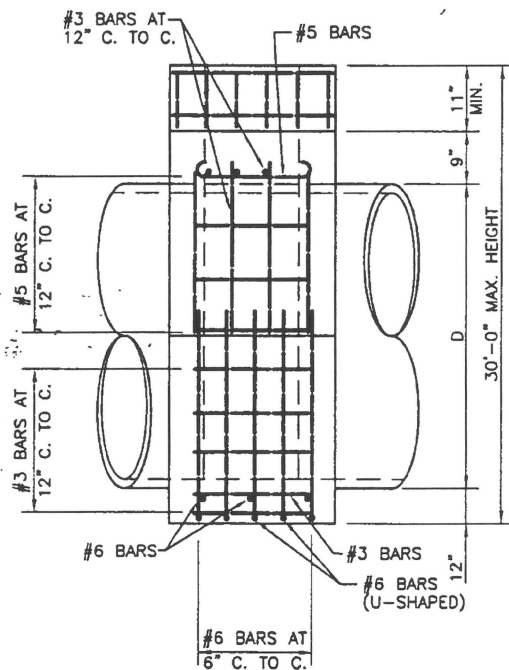
REVISIONS				DRAWING SS14 Date: 10/02/02
NO.	DATE	NO.	DATE	



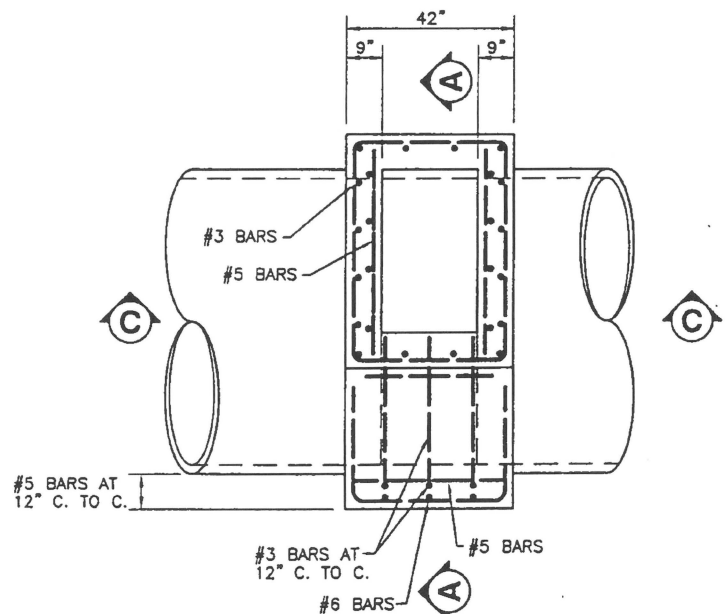
SECTION A-A

NOTES

1. CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF OF PUBLICATION 408, SECTION 805 AND SECTION 714.
 2. INLETS THAT EXCEED THE MAXIMUM HEIGHT SHOWN SHALL REQUIRE SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE. CONSTRUCT INLETS THAT EXCEED 5 FEET IN HEIGHT WITH STEPS SIMILAR TO MANHOLES. SEE RC-39.
 3. WHEN A SITUATION CAN NOT BE SATISFIED BY THE MODIFIED INLET BOXES SHOWN, SPECIAL DETAILS AND DESIGN SHALL BE PROVIDED.
 4. FOR ORIENTATION OF THE TYPE C INLET WITH MODIFIED TYPE I INLET BOX, THE TYPICAL INSTALLATION DETAILS ARE SHOWN BELOW. ANY VARIATION SHALL BE SHOWN ON THE CONSTRUCTION DRAWINGS BY SPECIAL DETAILS.
-
5. PROVIDE A MINIMUM HEIGHT OF 20 INCHES MEASURED FROM THE TOP SURFACE OF THE TOP UNIT TO THE INSIDE TOP OF THE PIPE WHEN THE TOP UNIT AND EITHER A MODIFIED TYPE I OR A MODIFIED TYPE II INLET BOX ARE CONSTRUCTED MONOLITHICALLY.
 6. ONLY PRECAST MODIFIED INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22" x 36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.



SECTION C-C



PLAN VIEW

CHIPPEWA TOWNSHIP
Beaver County, PA

2568 Darlington Road
Beaver Falls, Pennsylvania 15010

Inlet Box Modified Type II

REVISIONS			
NO.	DATE	NO.	DATE

DRAWING

SS15

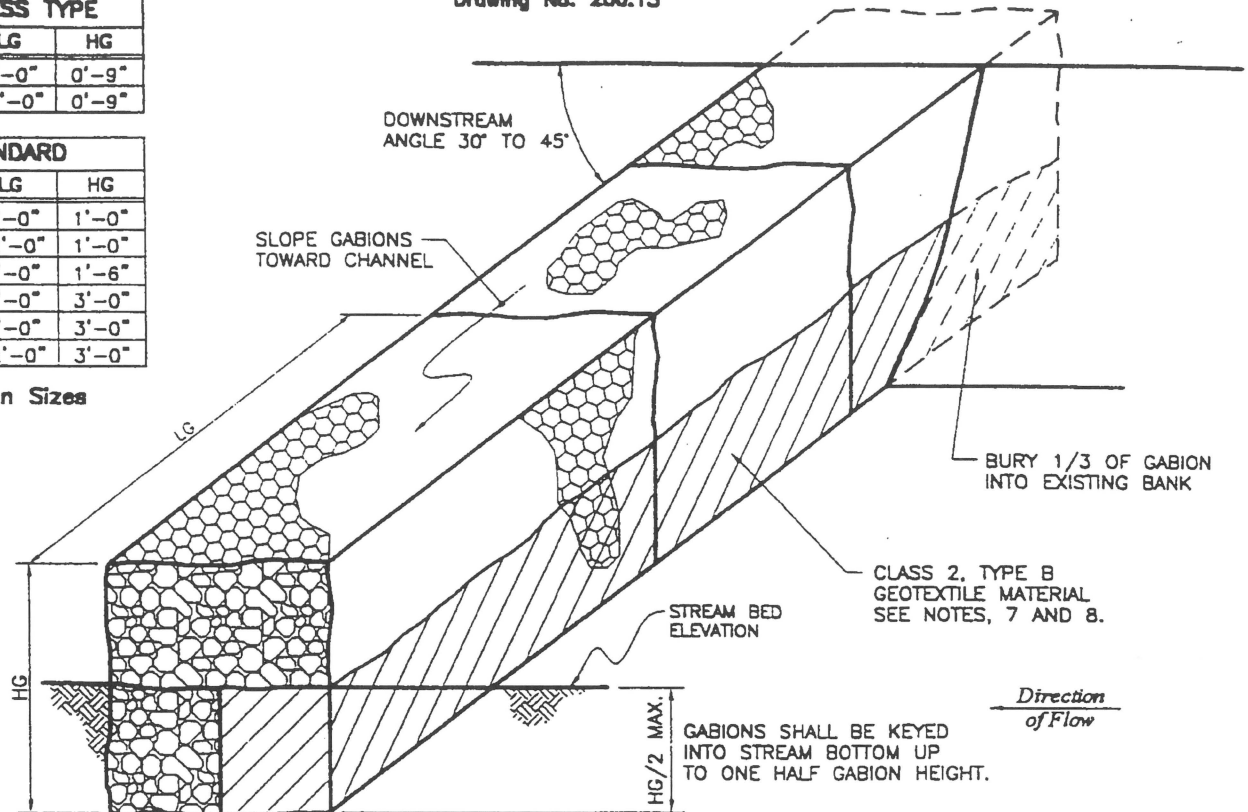
Date: 10/02/02

MATTRESS TYPE		
WG	LG	HG
6'-0"	9'-0"	0'-9"
6'-0"	12'-0"	0'-9"

STANDARD		
WG	LG	HG
3'-0"	6'-0"	1'-0"
3'-0"	12'-0"	1'-0"
3'-0"	9'-0"	1'-6"
3'-0"	6'-0"	3'-0"
3'-0"	9'-0"	3'-0"
3'-0"	12'-0"	3'-0"

Gabion Sizes

Drawing No. 200.15



NOTES:

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 626, GABIONS.
2. TYPE A GABIONS SHALL CONSIST OF WIRE-MESH BASKETS FILLED BY HAND PLACEMENT OF COARSE AGGREGATE, AT LEAST ALONG THE EXPOSED SURFACES, FOR A UNIFORM APPEARANCE.
3. TYPE B GABIONS SHALL CONSIST OF WIRE-MESH BASKETS FILLED BY HAND PLACEMENT OR SMALL POWER EQUIPMENT PLACEMENT OF COARSE AGGREGATE.
4. CORROSION RESISTANT TYPE A AND TYPE B GABIONS SHALL BE THE SAME AS TYPE A AND TYPE B GABIONS EXCEPT THAT THE WIRE MESH SHALL BE SHEATHED IN POLYVINYL CHLORIDE PLASTIC.
5. THE APRON OR TOE WALL IS REQUIRED WHERE THE SLOPE WALL IS INSTALLED ADJACENT TO WATER. THE APRON SHOULD BE APPROXIMATELY TWO TIMES AS WIDE AS THE ANTICIPATED DEPTH OF SCOUR AND THE TOE WALL HEIGHT SHOULD BE AT LEAST EQUAL TO THE ANTICIPATED DEPTH OF SCOUR.
6. WHEN GABIONS ARE PLACED ON A 1-1/2:1 SIDE SLOPE OR STEEPER, DRIVE HARDWOOD STAKES THROUGH THE GABIONS, ALONG THE TOP EDGE, TO ANCHOR THE INSTALLATION. MINIMUM EMBEDMENT OF STAKES BELOW GABION BOTTOM SHALL BE 18 INCHES.
7. PROVIDE GEOTEXTILE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 212 AND SECTION 735.
8. INSTALL GEOTEXTILE MATERIAL ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

Reference RC-43, PennDOT Pub. 72

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

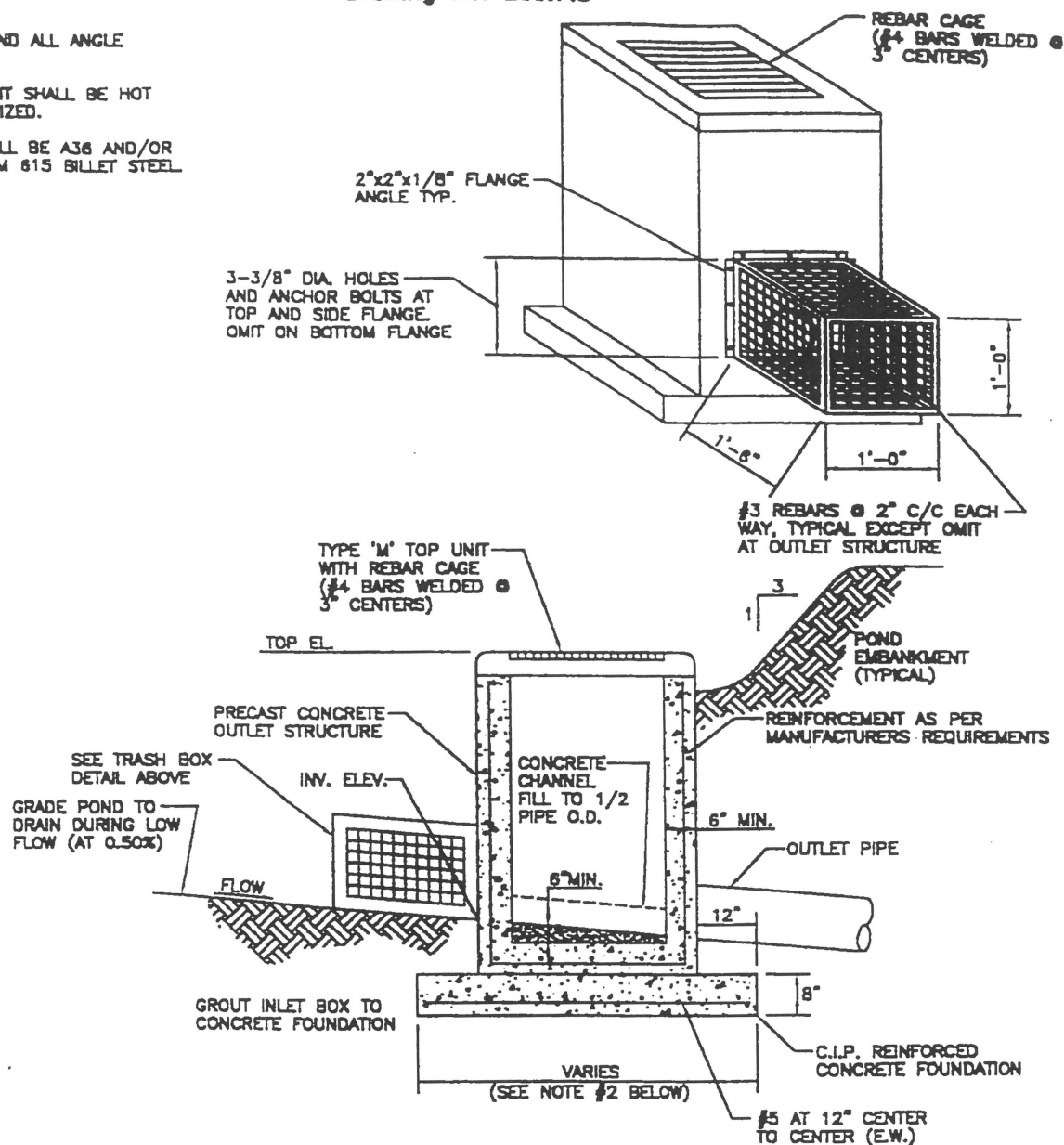
**Gabions Used for
Channel Deflector**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SD-04 Date: 6/26/00

NOTES:

1. WELD REBAR AND ALL ANGLE CONNECTIONS.
2. COMPLETED UNIT SHALL BE HOT DIPPED GALVANIZED.
3. MATERIALS SHALL BE A36 AND/OR GRADE 60 ASTM 615 BILLET STEEL

Drawing No. 200.7.5



NOTES:

1. PROVIDE FIELD PLACED CONCRETE FILL IN THE BOTTOM OF ALL OUTLET STRUCTURES TO A DEPTH OF 1/2 OF THE PIPE I.D. PROVIDE AN ADEQUATE FLOW CHANNEL FOR THE TRANSITION TO THE OUTLET PIPE. SHAPE BOX BOTTOM FOR POSITIVE DRAINAGE.
2. CONSTRUCT THE REINFORCED COCNETE FOUNDATION TO A DIMENSION 24" LARGER THAN THE OUTSIDE DIMENSION OF THE OUTLET STRUCTURE.
3. TRASH BOX TO BE PROVIDED AT INFLOW OPENING OF THE OUTLET STRUCTURE.

NOT TO SCALE

CHIPPEWA TOWNSHIP
Beaver County

2568 Darlington Road
Beaver Falls, PA 15010

OUTLET STRUCTURE DETAIL

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				SD-08
				Date: 06/14/00