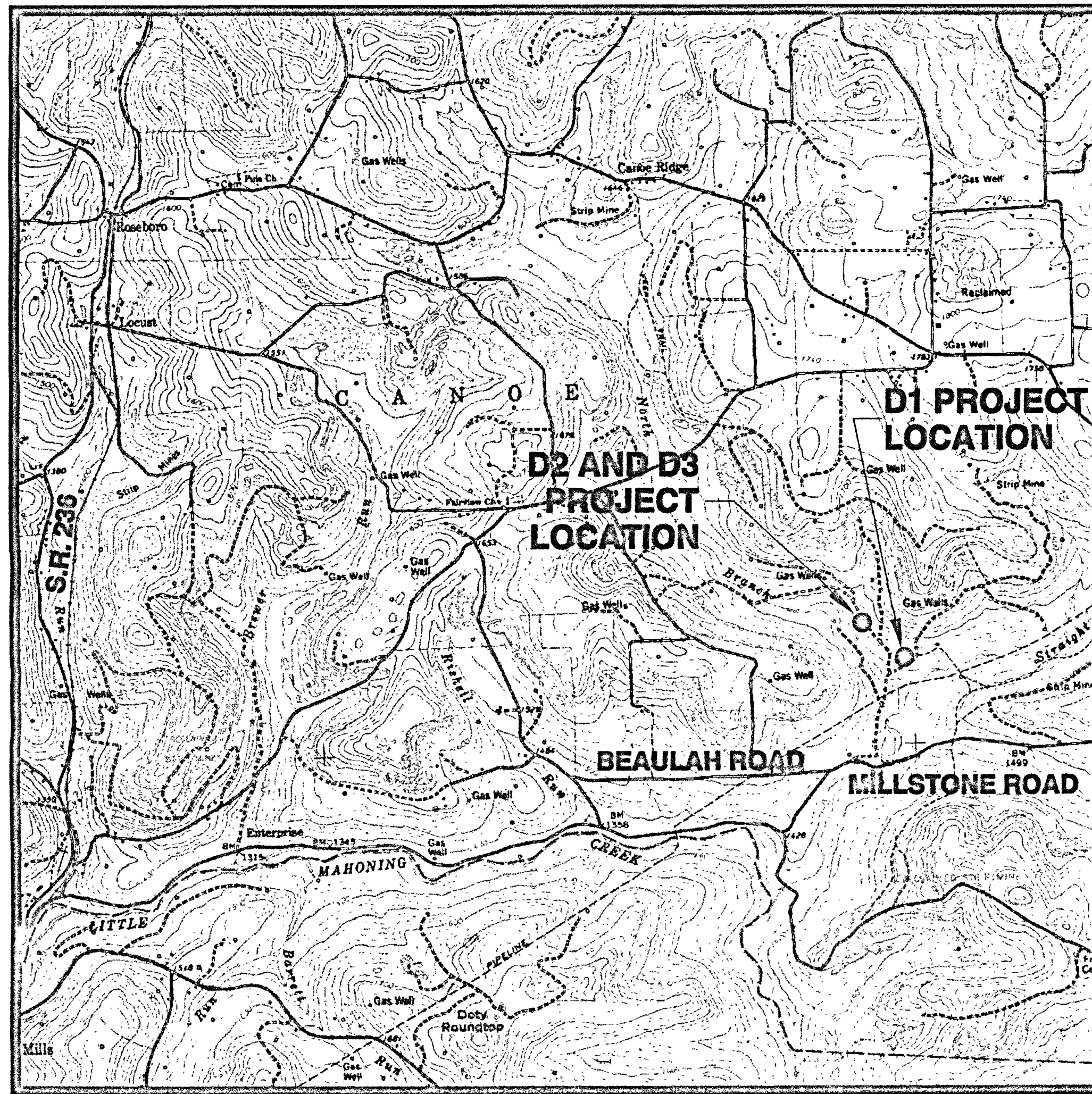
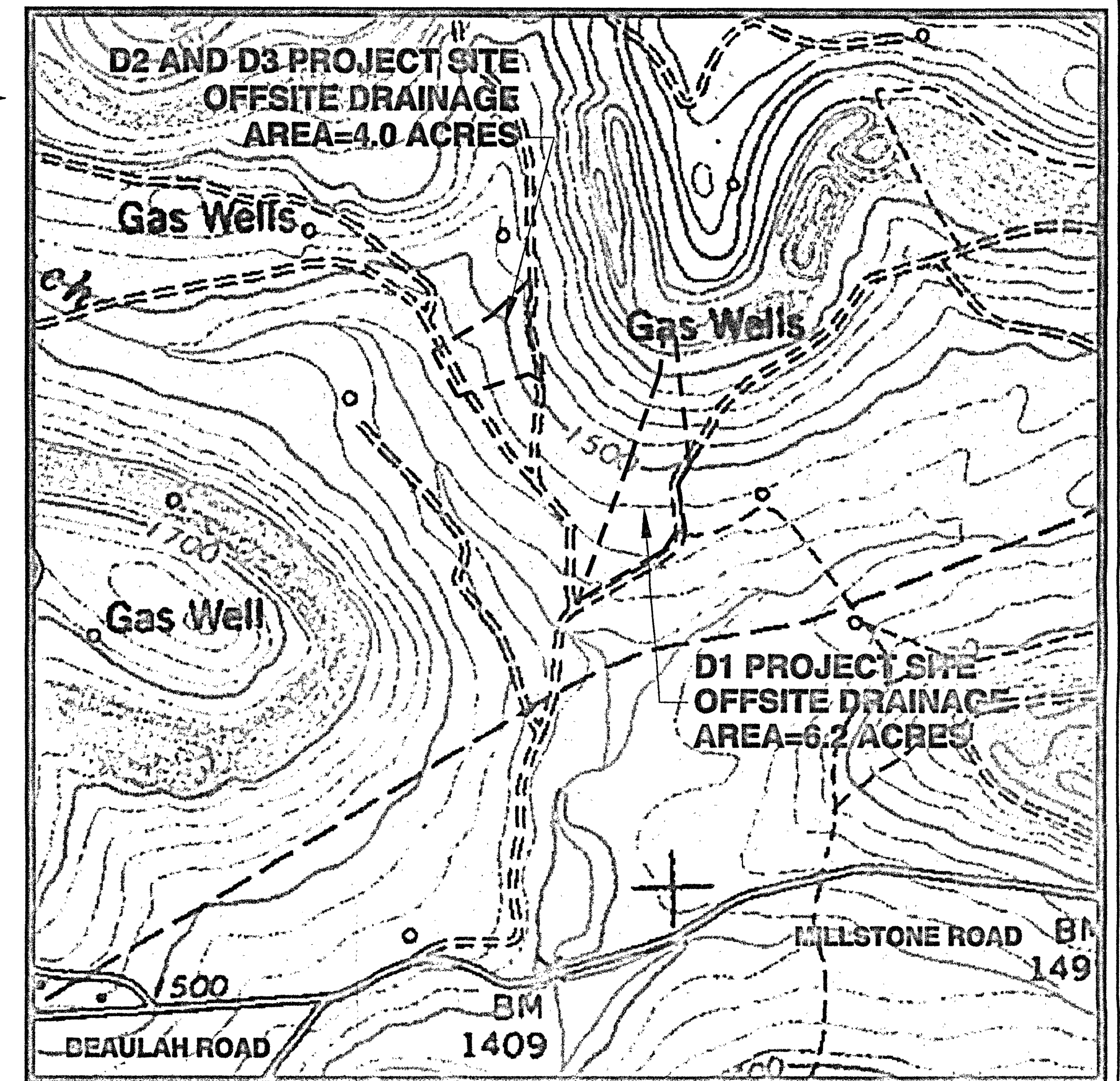
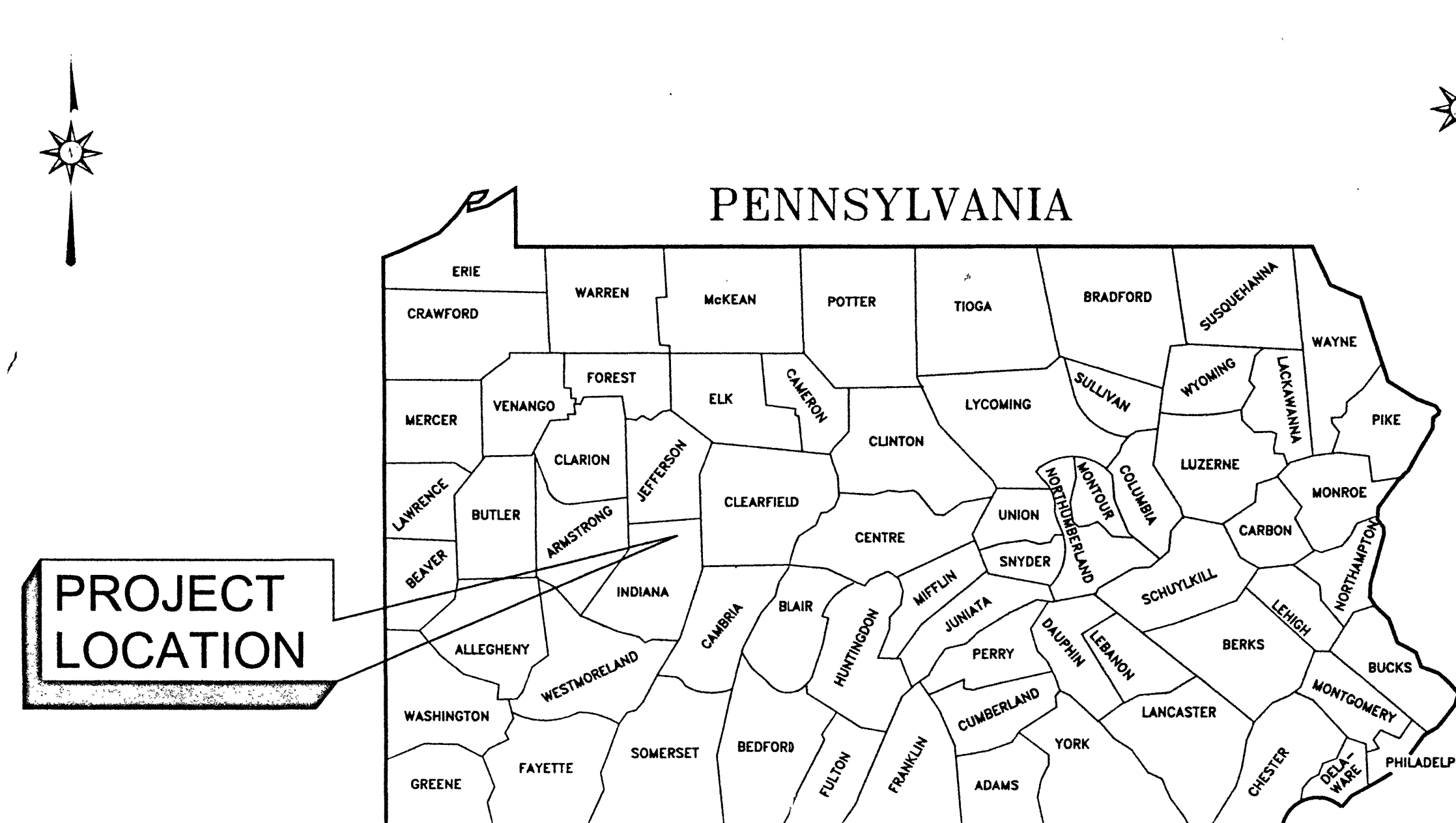




SCALE: 1" = 2,000'
ROCHESTER MILLS USGS QUAD



SCALE: 1" = 500'
ROCHESTER MILLS USGS QUAD

CESSNA RUN ACID MINE DRAINAGE PROJECT

CANOE TOWNSHIP, INDIANA COUNTY, PA

INDEX

DRAWING NO.	DESCRIPTION
C-1	COVER SHEET
C-2	D1 SITE PLAN
C-3	D2 AND D3 SITE PLAN
C-4	D2 AND D3 E&S CONTROL PLAN
C-5	D2 AND D3 DETAILS
C-6	D2 AND D3 DETAILS
C-7	D2 AND D3 DETAILS

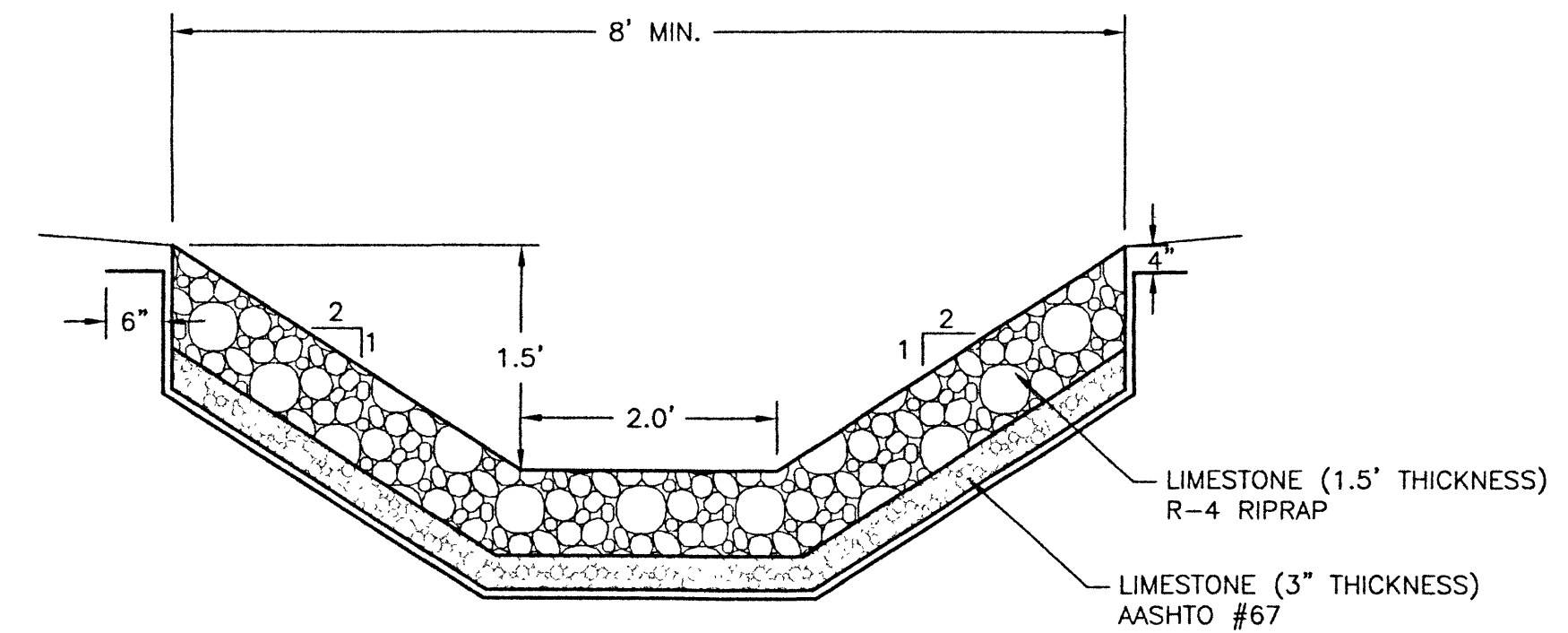
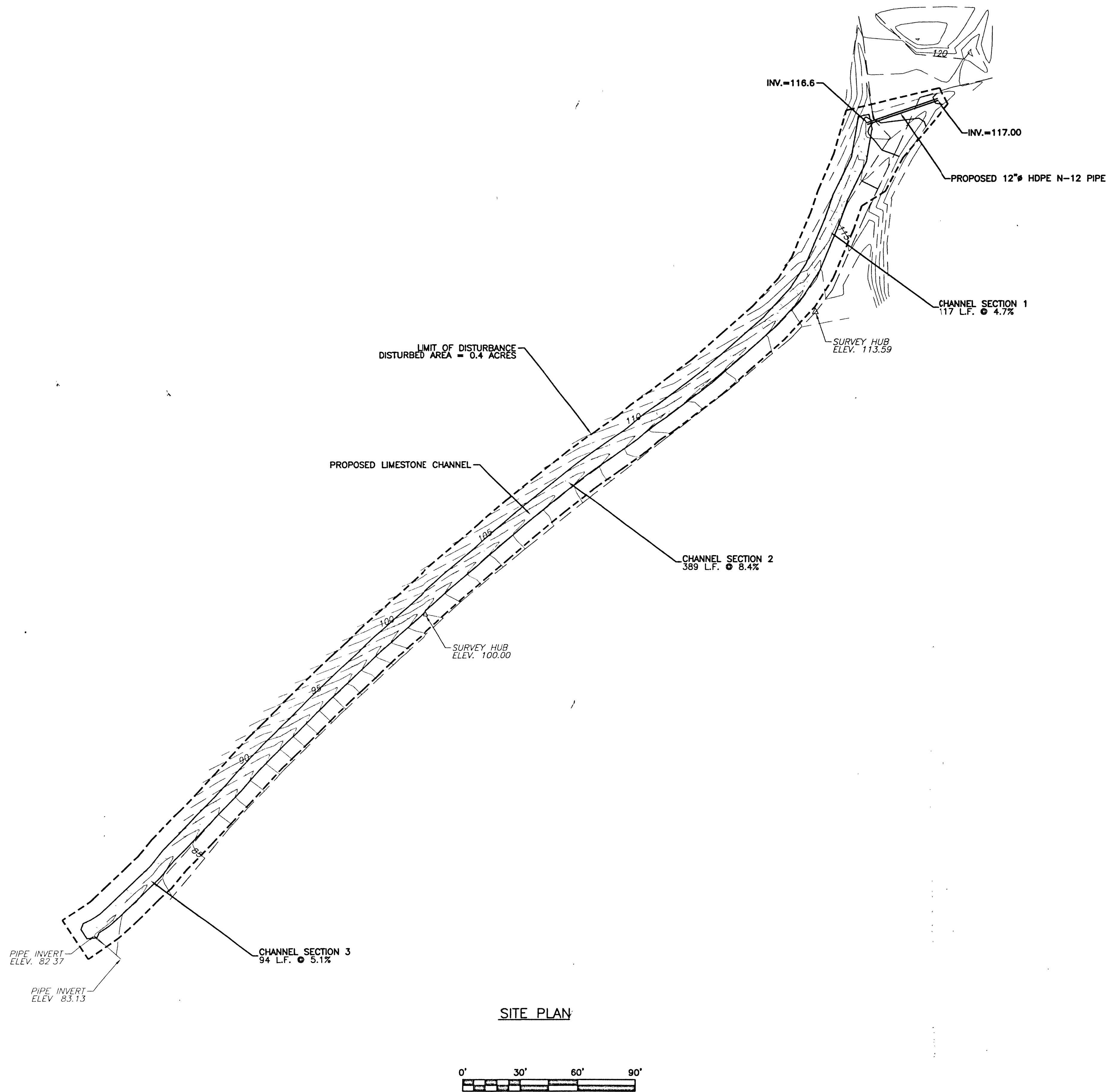
FEBRUARY 25, 2005

SKELLY AND LOY, Inc.
Engineers-Consultants

2601 North Front Street
Harrisburg, Pennsylvania 17110
(717) 232-0593
1-800-892-6532
Fax (717) 232-1799

REVISIONS

DESCRIPTION	DATE



CONSTRUCTION SEQUENCE

1. MOBILIZE EQUIPMENT AND PERSONNEL TO SITE.
2. PERFORM CLEARING AND GRUBBING OPERATIONS OF WORK AREAS AS NECESSARY.
3. EXCAVATE EXISTING CHANNEL TO ACCOMMODATE CLASS 4 GEOTEXTILE AND LIMESTONE PLACEMENT. OVER-EXCAVATION IS REQUIRED TO PRODUCE FINAL CHANNEL DIMENSIONS. EXCAVATION SHALL TAKE PLACE IN STAGES WITH EACH STAGE EXCAVATING ONLY AS MUCH CHANNEL AS CAN BE ROCK LINED AND STABILIZED IN A THE SAME DAY.
4. PLACE CLASS 4 GEOTEXTILE IN EXCAVATED CHANNEL AS SHOWN ON DRAWING.
5. PLACE AASHTO #67 LIMESTONE IN CHANNEL OVER CLASS 4 GEOTEXTILE.
6. PLACE R-4 LIMESTONE IN CHANNEL ON TOP OF AASHTO #67 LIMESTONE.
7. SEED AND MULCH SITE.
8. REMOVE ALL CONSTRUCTION WASTE FROM SITE.
9. REMOVE EROSION AND SEDIMENT CONTROLS ONCE 70% VEGETATIVE COVER HAS BEEN ACHIEVED.

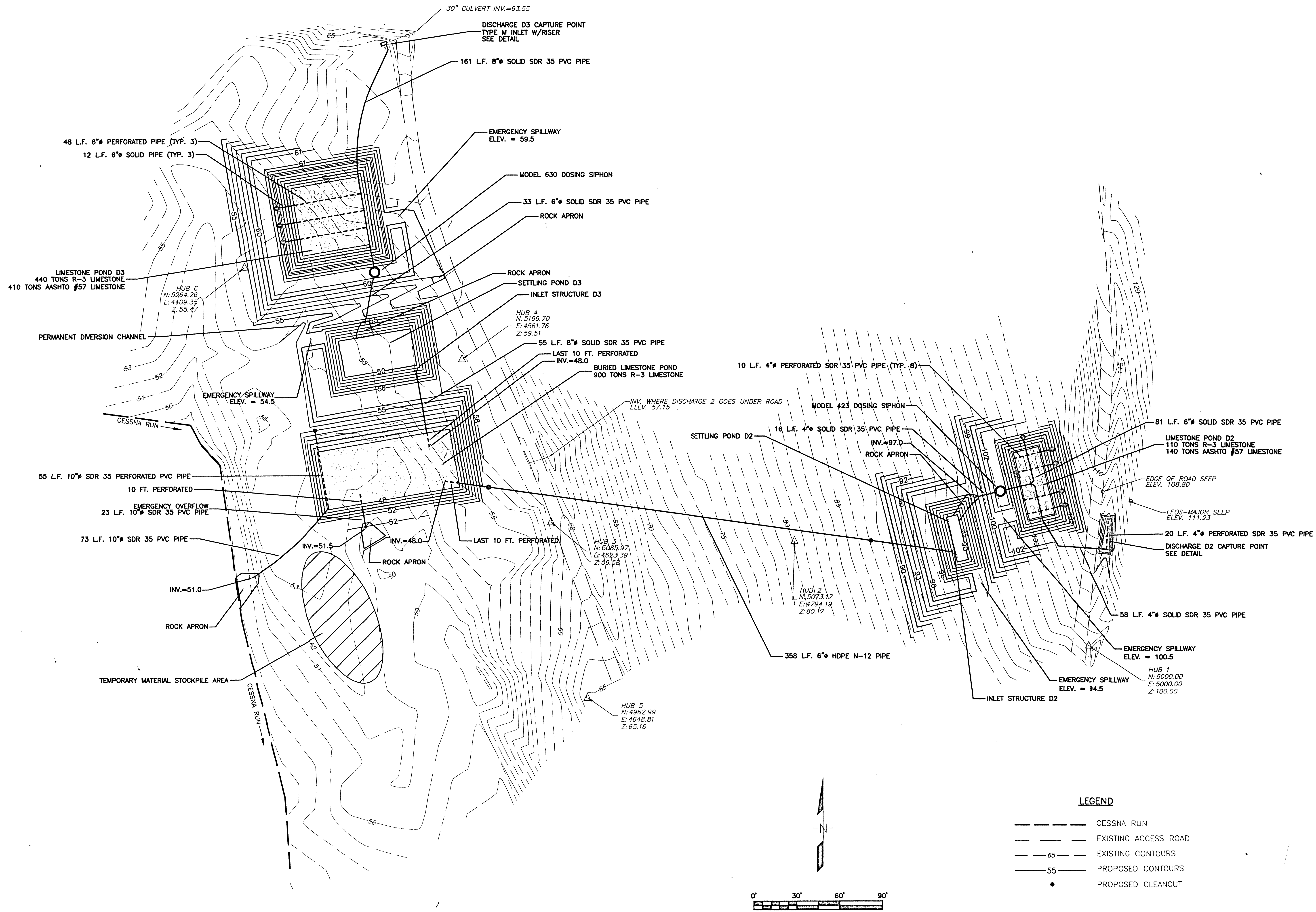
LEGEND

— — — — —	EXISTING ACCESS ROAD
— 105 — — —	EXISTING CONTOURS
— 55 — — —	PROPOSED CONTOURS
- - - - -	LIMIT OF DISTURBANCE
▨ ▨ ▨ ▨ ▨	PROPOSED LIMESTONE CHANNEL

NOTES:

1. THE MAPPING SHOWN ON THIS PLAN WAS PROVIDED BY THE NATURAL RESOURCES CONSERVATION SERVICE.
2. THE CONTRACTOR SHALL EXCAVATE THE PROPOSED CHANNEL LOCATION IN ORDER TO PROVIDE THE NECESSARY LIMESTONE IN ACCORDANCE WITH THE LIMESTONE CHANNEL SECTION SHOWN ON THIS SHEET.

DRAWING NO. C-2		SHEET 2 OF 7	
"PLAN" FOR INDIANA COUNTY CONSERVATION DISTRICT CESSNA RUN AND REMEDIATION PROJECT INDIANA COUNTY, PA CANOE TOWNSHIP			
DATE 2/25/05		DATE 2/25/05	
DESIGN N.A.W.	DATE 2/25/05	CHKD T.W.S.	DATE 2/25/05
APPV	SCALE 1"=30'		
REV		BY	APPV
DESCRIPTION			
SKELLY AND LOY, INC. ENGINEERS-CONSULTANTS 2801 NORTH FRONT STREET HARRISBURG, PENNSYLVANIA (717) 233-6033 (800) 233-6033 FAX (717) 233-1799 email: skellyloy@skellyloy.com			
JOB NUMBER: 1503298		DATE: DECEMBER 3 2004	



SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS
2001 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA
(717) 225-0000 FAX (717) 225-1799
www.skellyloy.com

C-3
SHEET
3 OF 7

D2 AND D3 SITE PLAN

INDIANA COUNTY CONSERVATION DISTRICT
CESSNA RUN AID REMEDIATION PROJECT
CANOE TOWNSHIP

PLAN FOR

INDIANA COUNTY, PA

DATE
2/25/05

DATE
2/25/05

DATE
2/25/05

SCALE
1" = 30'

BY

DATE

DESCRIPTION

REV

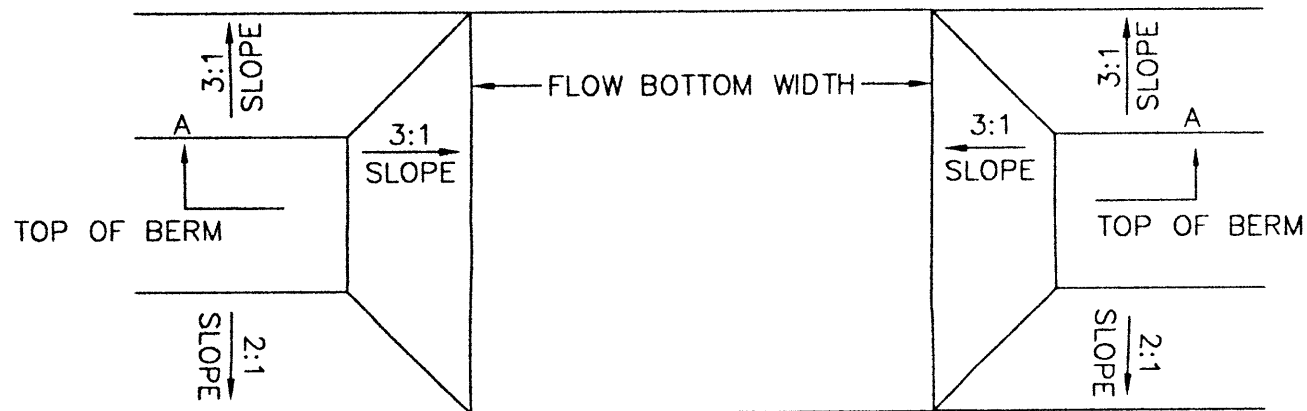
APPROVED

JOB NUMBER
1503298

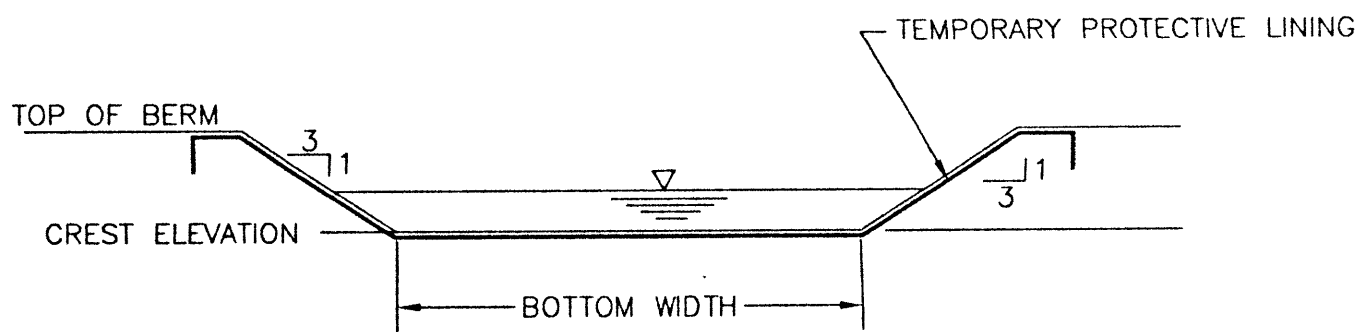
DATE
FEBRUARY 25
2005

DATE
FEBRUARY 25
2005

BASIN	TOP OF BERM ELEV.	SPILLWAY CREST ELEV.	FLOW BOTTOM WIDTH (FT)	TEMPORARY SPILLWAY LINING
LIMESTONE POND D2	102.0	100.5	6	JUTE MAT
SETTLING POND D2	96.0	94.5	6	JUTE MAT
LIMESTONE POND D3	61.0	59.5	6	JUTE MAT
SETTLING POND D3	56.0	54.5	6	JUTE MAT



PLAN VIEW

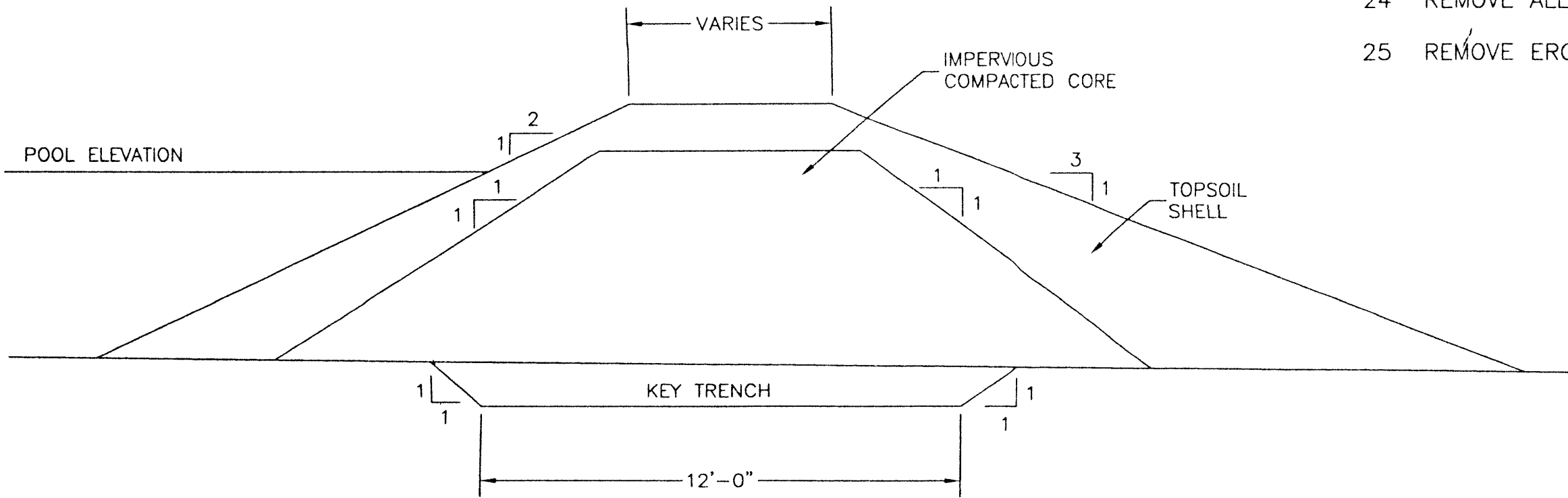


SECTION A-A

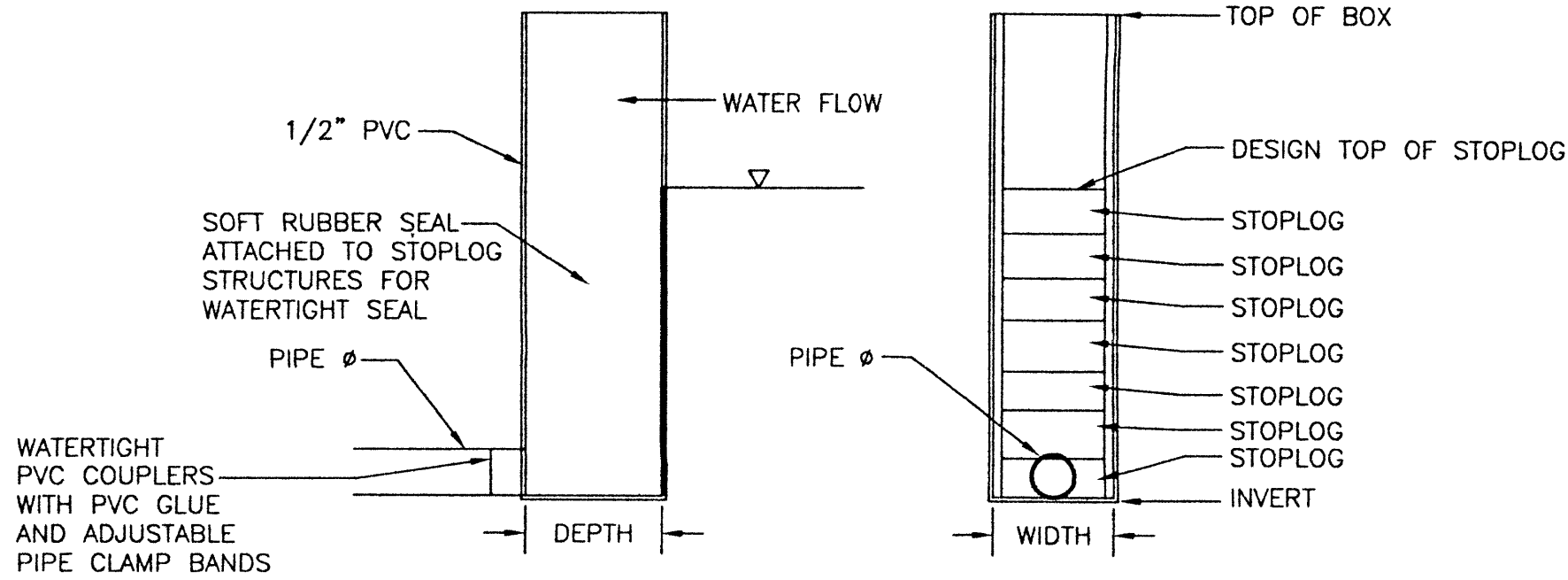
TYPICAL GRASS-LINED EMERGENCY SPILLWAY DETAIL
NO SCALE

CONSTRUCTION SEQUENCE

1. MOBILIZE EQUIPMENT AND PERSONNEL TO SITE.
2. STAKE OUT LIMITS OF WORK.
3. INSTALL ROCK FILTER, 18" AND 30" FILTER FABRIC FENCE AT LOCATIONS SHOWN.
4. PERFORM CLEARING AND GRUBBING OPERATIONS OF WORK AREAS AS NECESSARY.
5. GRADE AND CONSTRUCT LIMESTONE POND D3 AND SETTLING POND D3.
6. GRADE AND CONSTRUCT PERMANENT DIVERSION CHANNEL TO CONVEY ROAD CULVERT OUTFALL ACROSS WORK SITE.
7. EXCAVATE BURIED LIMESTONE POND. STOCKPILE MATERIAL IN DESIGNATED TEMPORARY MATERIAL STOCKPILE AREA.
8. INSTALL MODEL 630 DOSING SIPHON, ASSOCIATED PIPING NETWORK, AND ROCK APRON IN LIMESTONE POND D3.
9. INSTALL A PORTION OF 8"Ø SOLID SDR 35 PVC PIPE BETWEEN LIMESTONE POND D3 AND DISCHARGE D3 CAPTURE POINT (TO BE INSTALLED LATER). BACKFILL A PORTION OF THE PIPE TRENCH TO ALLOW PLACEMENT OF LIMESTONE IN LIMESTONE POND D3.
10. INSTALL INLET STRUCTURE D3 AND ASSOCIATED OUTLET PIPE BETWEEN SETTLING POND D3 AND BURIED LIMESTONE POND. PERFORATE LAST 10 FEET OF PIPE AS SHOWN ON DRAWINGS.
11. GRADE AND CONSTRUCT SETTLING POND D2.
12. GRADE AND CONSTRUCT LIMESTONE POND D2.
13. INSTALL MODEL 423 DOSING SIPHON, ASSOCIATED PIPING NETWORK, AND ROCK APRON IN LIMESTONE POND D3.
14. INSTALL A PORTION OF 4"Ø SOLID SDR 35 PVC PIPE BETWEEN LIMESTONE POND D2 AND DISCHARGE 2 CAPTURE POINT (TO BE INSTALLED LATER). BACKFILL A PORTION OF THE PIPE TRENCH TO ALLOW PLACEMENT OF LIMESTONE IN LIMESTONE POND D2.
15. PERFORM TRENCHING OPERATION TO RECEIVE 6"Ø N-12 PIPE BETWEEN SETTLING POND D2 AND BURIED LIMESTONE POND.
16. INSTALL 6"Ø N-12 PIPE AND INLET STRUCTURE D2. HAND PERFORATE THE LAST 10 FEET OF THE N-12 PIPE AS SHOWN ON DRAWINGS. BACKFILL PIPING TRENCH.
17. PLACE REQUIRED QUANTITIES OF R-3 LIMESTONE IN LIMESTONE PONDS D2, D3 AND BURIED LIMESTONE POND.
18. PLACE REQUIRED QUANTITIES OF AASHTO #57 LIMESTONE IN LIMESTONE POND D2 AND D3.
19. INSTALL 10"Ø SDR 35 PVC PRIMARY AND EMERGENCY OUTLET PIPES AND ROCK APRONS IN BURIED LIMESTONE POND
20. PLACE CLASS 4 GEOTEXTILE AND SOIL CAP ON TOP OF LIMESTONE IN BURIED LIMESTONE POND.
21. CONSTRUCT DISCHARGE D2 CAPTURE POINT AND CONNECT TO PIPING NETWORK IN LIMESTONE POND D2.
22. CONSTRUCT DISCHARGE D3 CAPTURE POINT AND CONNECT TO PIPING NETWORK IN LIMESTONE POND D3.
23. SEED AND MULCH SITE.
24. REMOVE ALL CONSTRUCTION WASTE FROM SITE.
25. REMOVE EROSION AND SEDIMENT CONTROLS ONCE 70% VEGETATIVE COVER HAS BEEN ACHIEVED.

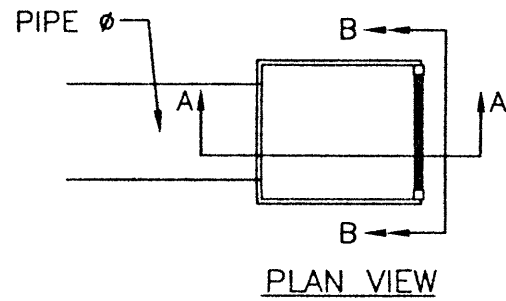


TYPICAL BERM SECTION
NO SCALE



SECTION A-A

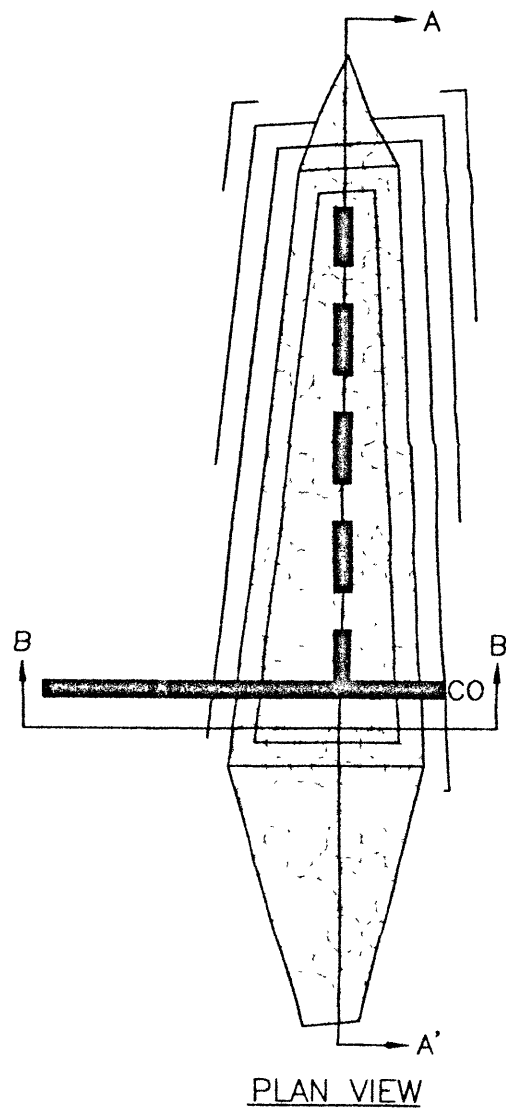
SECTION B-B



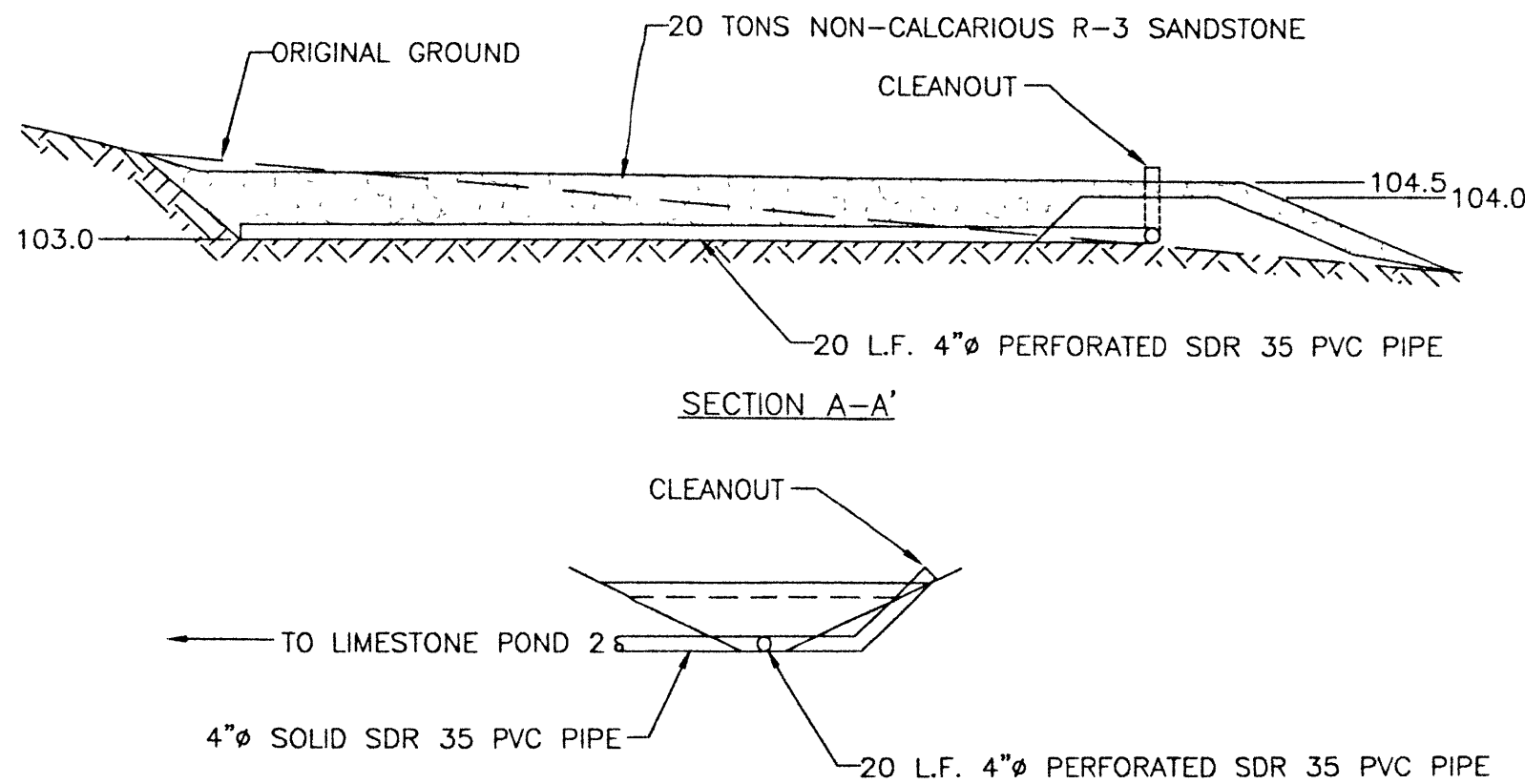
PLAN VIEW

INLET STRUCTURE	TOP OF BOX ELEV.	INVERT BOX ELEV.	STRUCTURE HEIGHT (FT)	INSIDE DIMENSION WIDTH	INSIDE DIMENSION DEPTH	PIPE Ø (IN)	PIPE TYPE IN/OUT	TOP STOPLOG ELEV.
D2	95.0	90.0	5	8"	5"	6	PVC SDR 35	94.0
D3	55.0	51.0	4	12"	6"	8	PVC SDR 35	54.0

PVC INLET WATER LEVEL CONTROL STRUCTURE
NO SCALE



PLAN VIEW



SECTION B-B'

DISCHARGE 2 CAPTURE POINT DETAIL
NO SCALE

DRAWING NO.
C-5

SHEET
5 OF 7

"PLAN" FOR
INDIANA COUNTY CONSERVATION DISTRICT
CESSNA RUN AID REMEDIATION PROJECT
CANGE TOWNSHIP
INDIANA COUNTY, PA

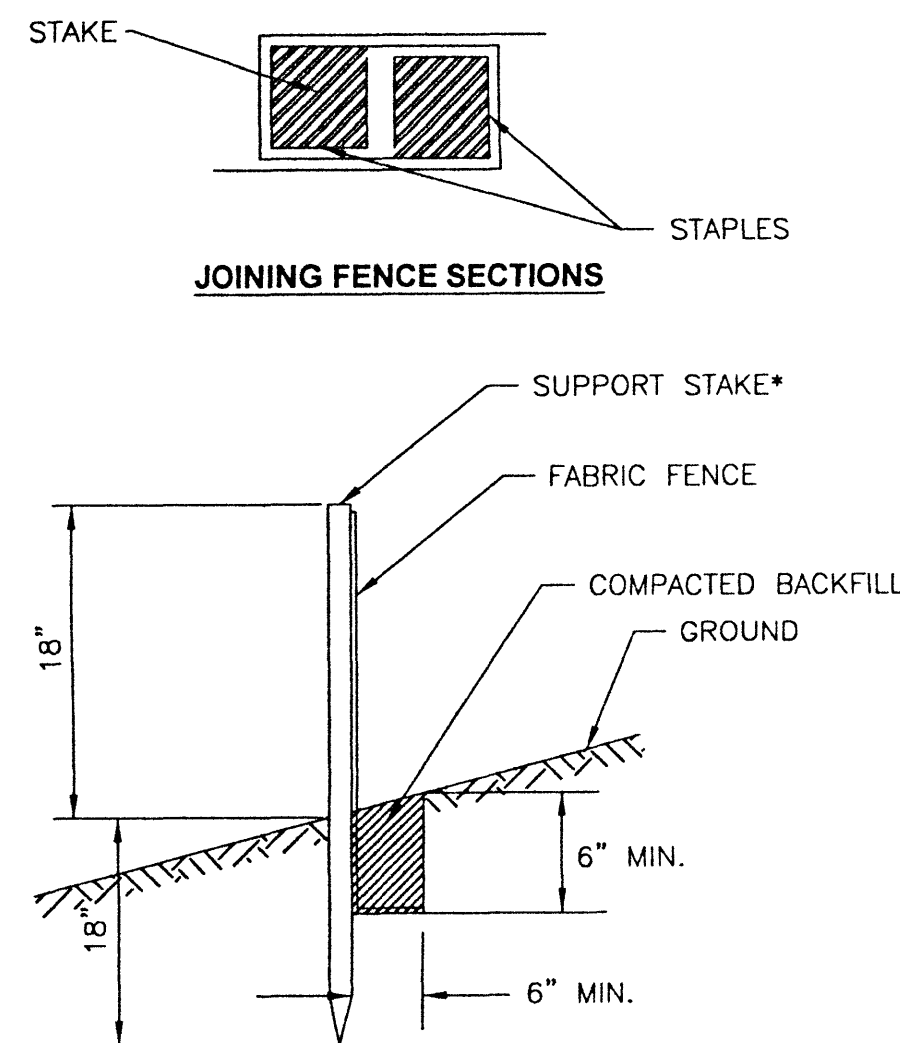
DATE
2/25/05
DATE
2/25/05
DATE
2/25/05
SCALE
AS SHOWN

REV
BY
DATE
DESCRIPTION

SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS
2201 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA
717.225-4224 (610)225-4225 FAX (717)225-1770
email: skellyloy@skellyloy.com

JOB NUMBER:
1503298
DATE:
FEBRUARY 25
2005

STANDARD CONSTRUCTION DETAIL #19 STANDARD FILTER FABRIC FENCE (18" HIGH)



* STAKES SPACED @ 8' MAXIMUM. USE 2" X 2" WOOD OR EQUIVALENT STEEL STAKES.

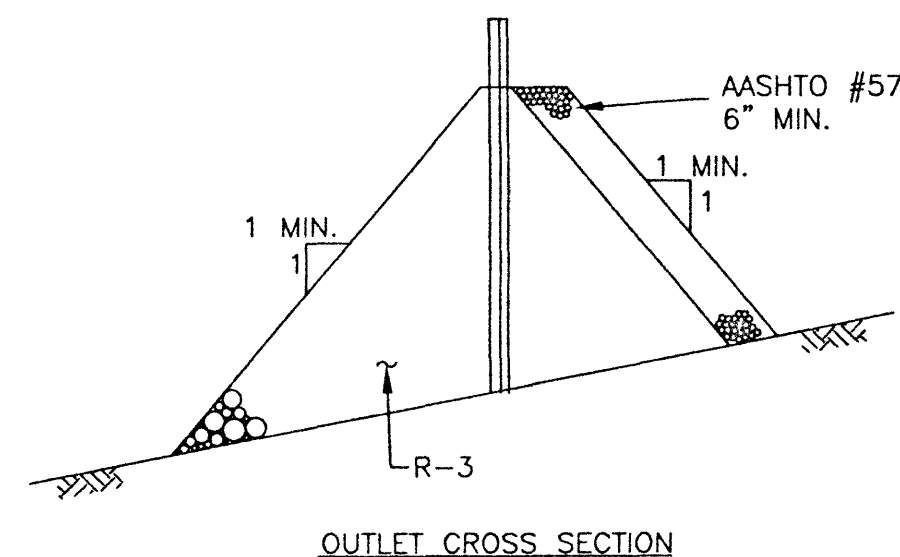
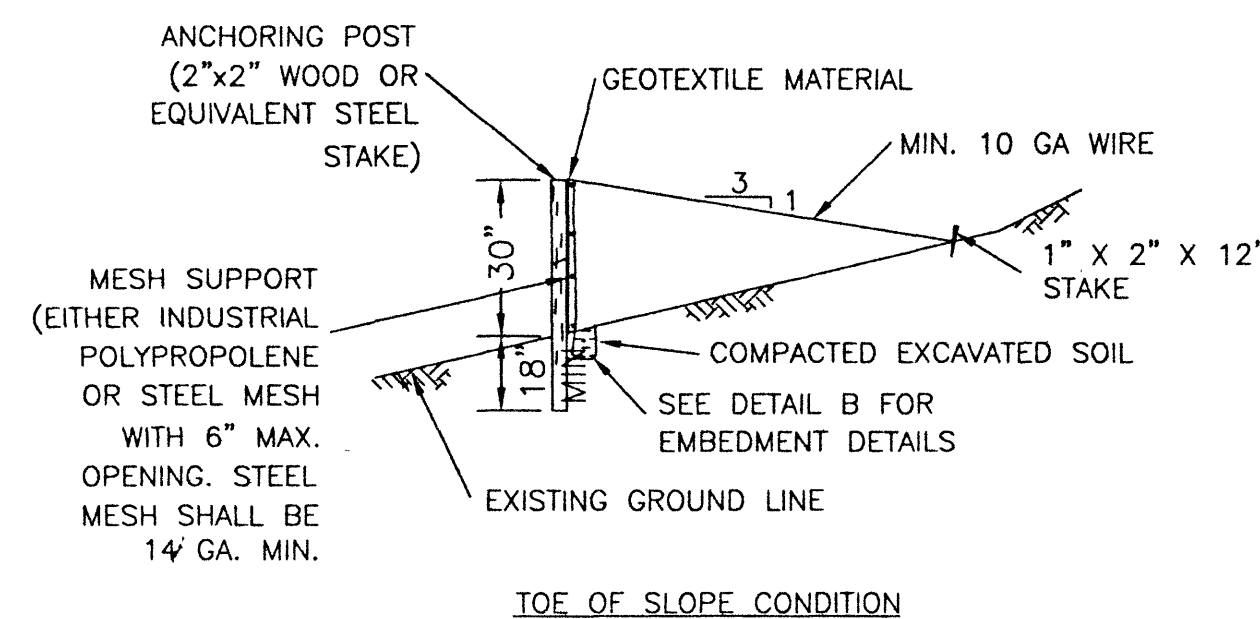
FILTER FABRIC FENCE MUST BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE BARRIER MUST BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.

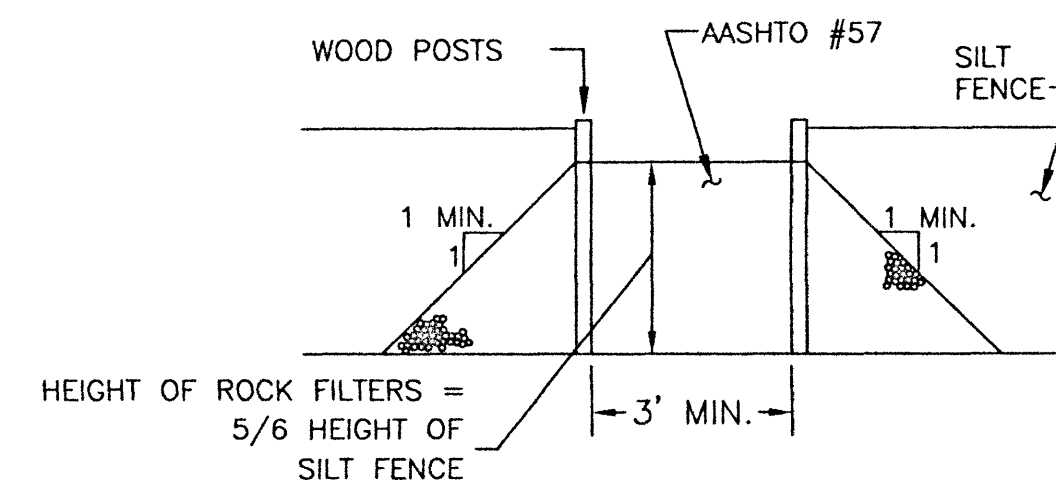
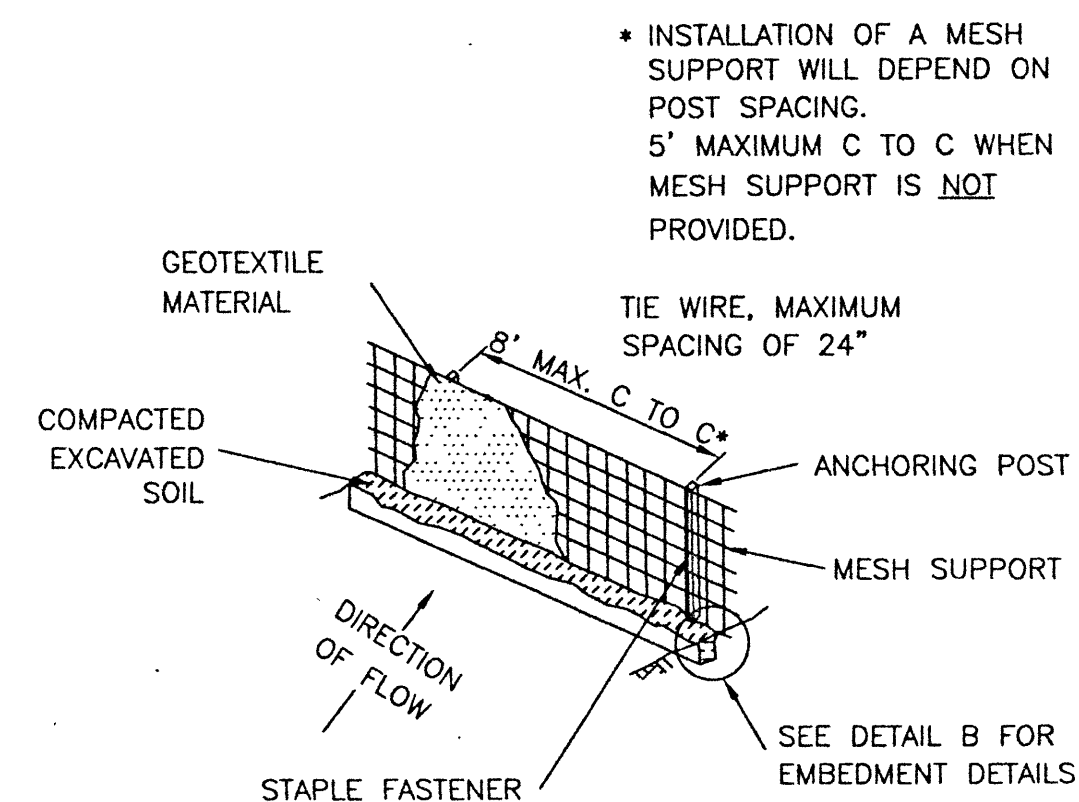
ANY SECTION OF FILTER FABRIC FENCE WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. SEE STANDARD CONSTRUCTION DETAIL #18.

TYPICAL FILTER FABRIC FENCE DETAIL (18" HIGH)

NO SCALE



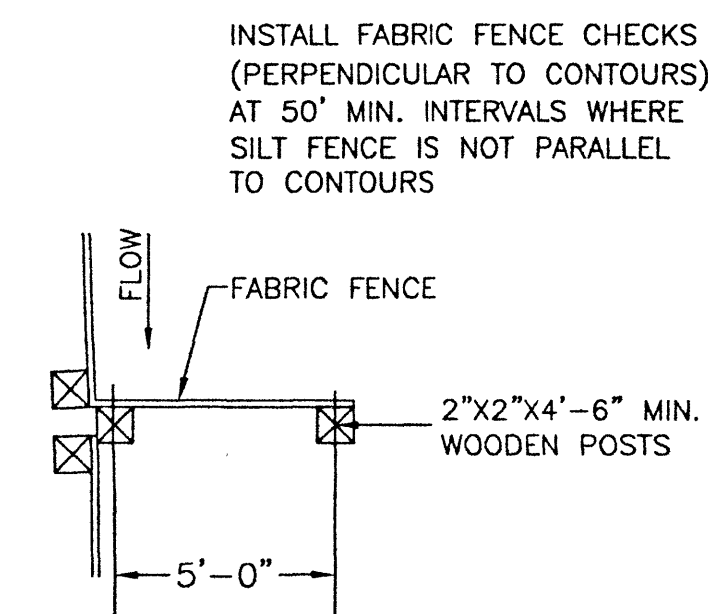
OUTLET CROSS SECTION



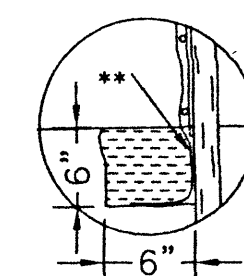
UPSLOPE FACE

TYPICAL FILTER FABRIC FENCE DETAIL (30" HIGH)

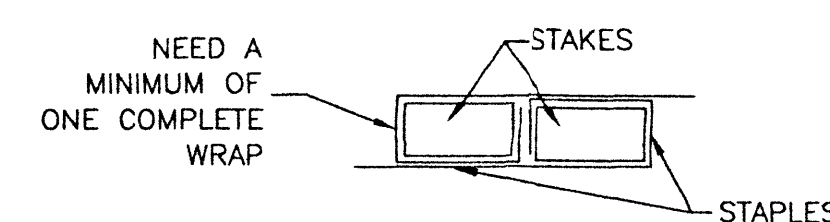
NO SCALE



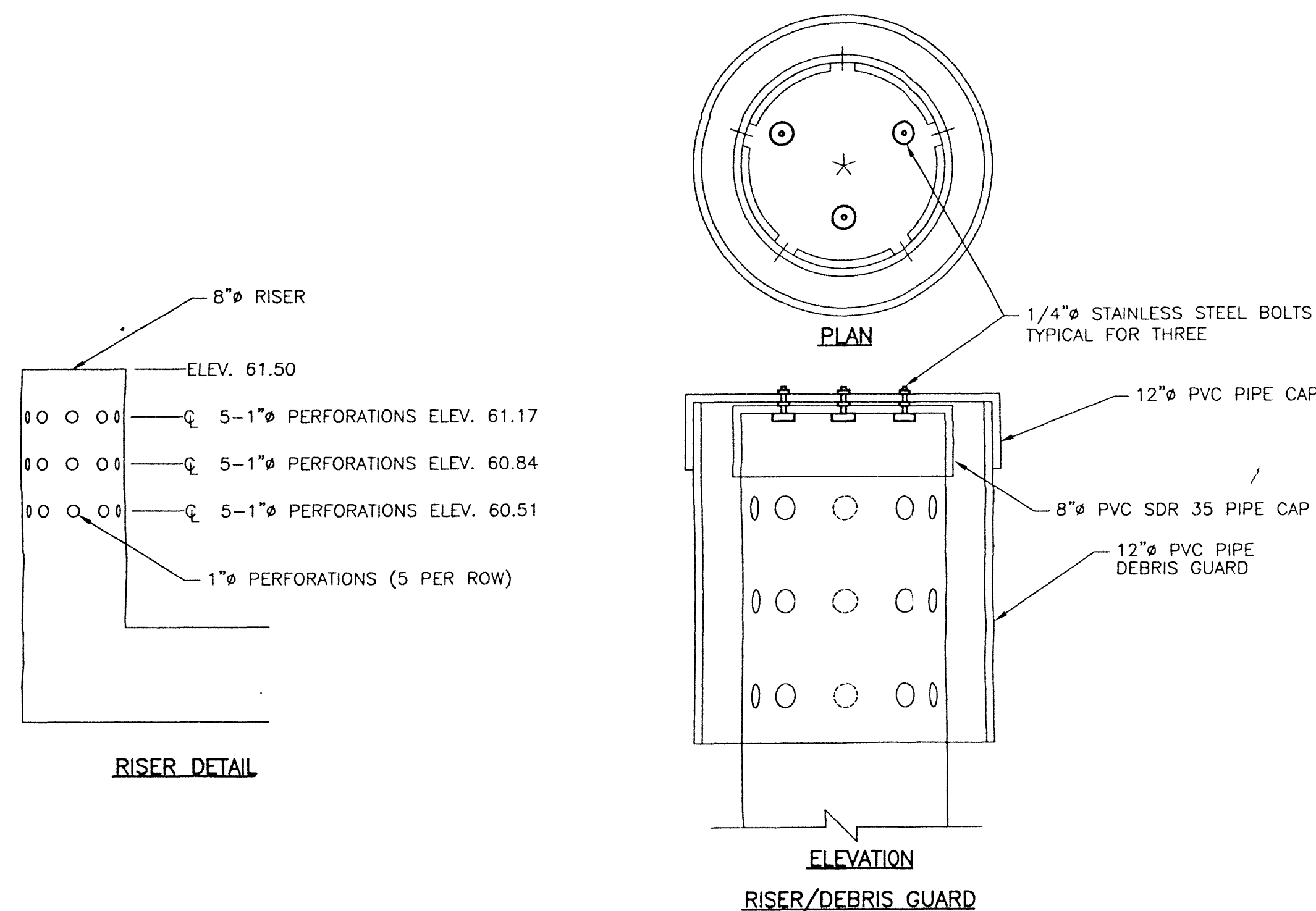
FENCE CHECK



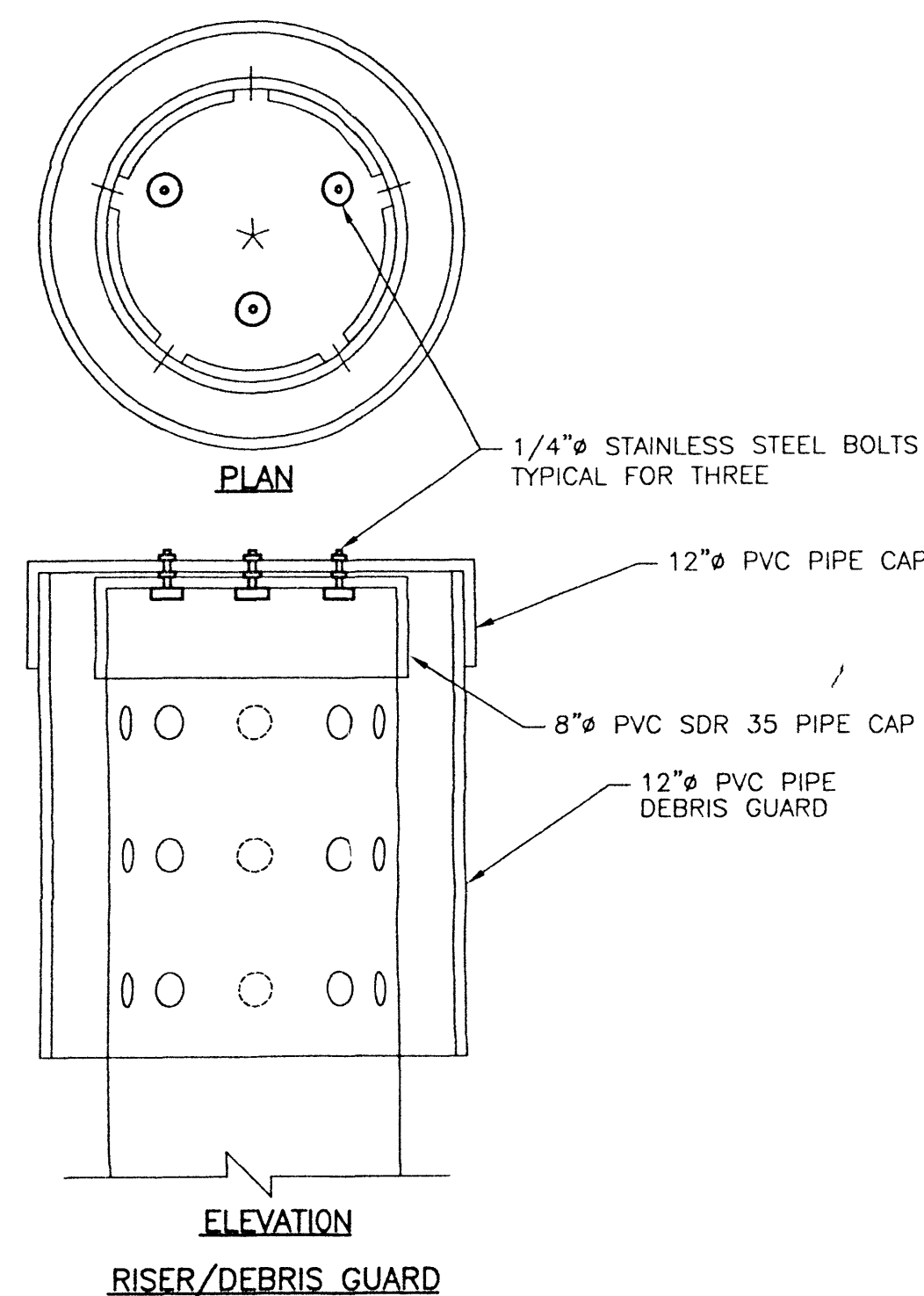
**EXTEND FABRIC 8" TO 12" INTO EXCAVATED TRENCH.



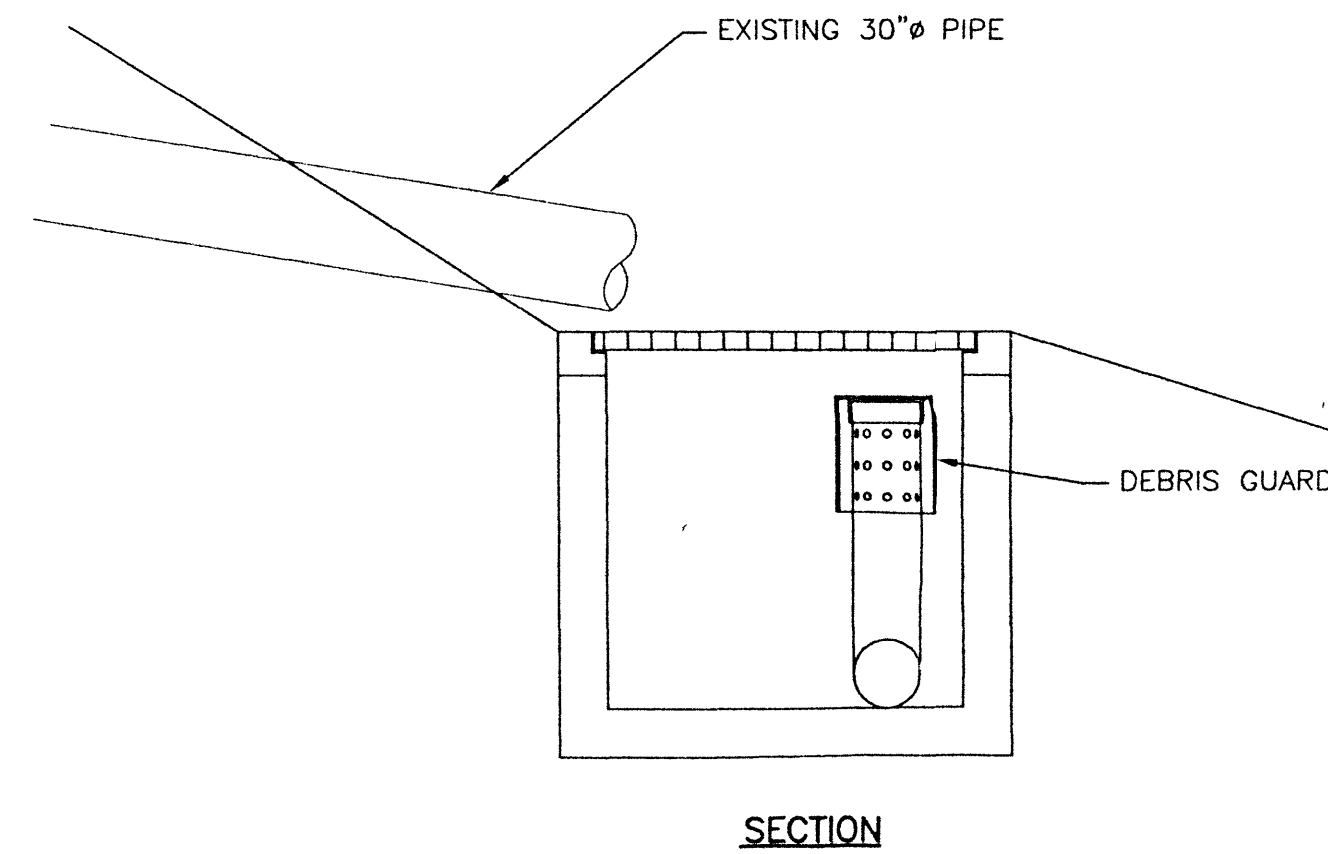
JOINING FENCE SECTIONS



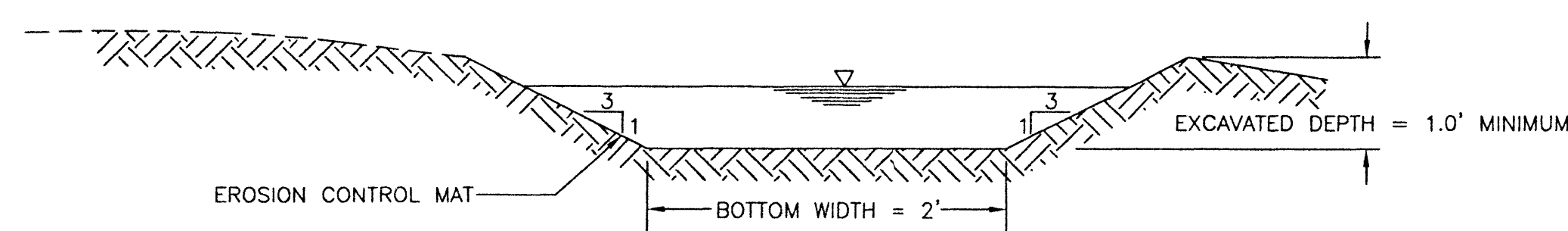
RISER DETAIL



RISER/DEBRIS GUARD

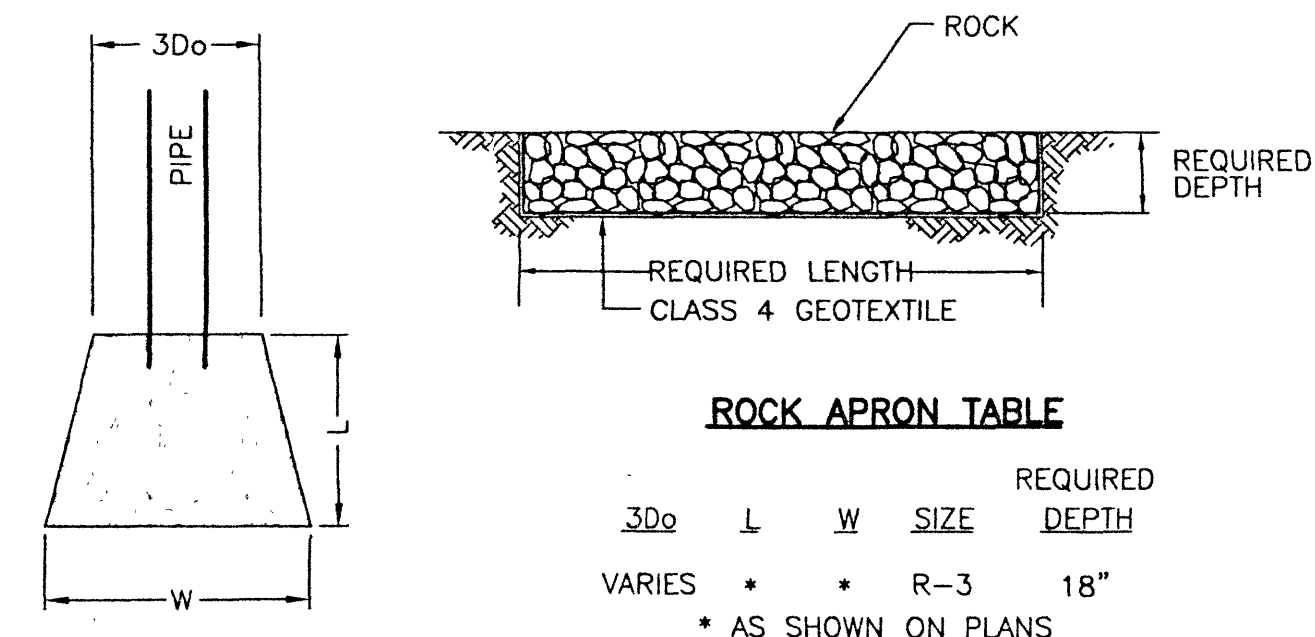


SECTION



PERMANENT DIVERSION CHANNEL

NO SCALE

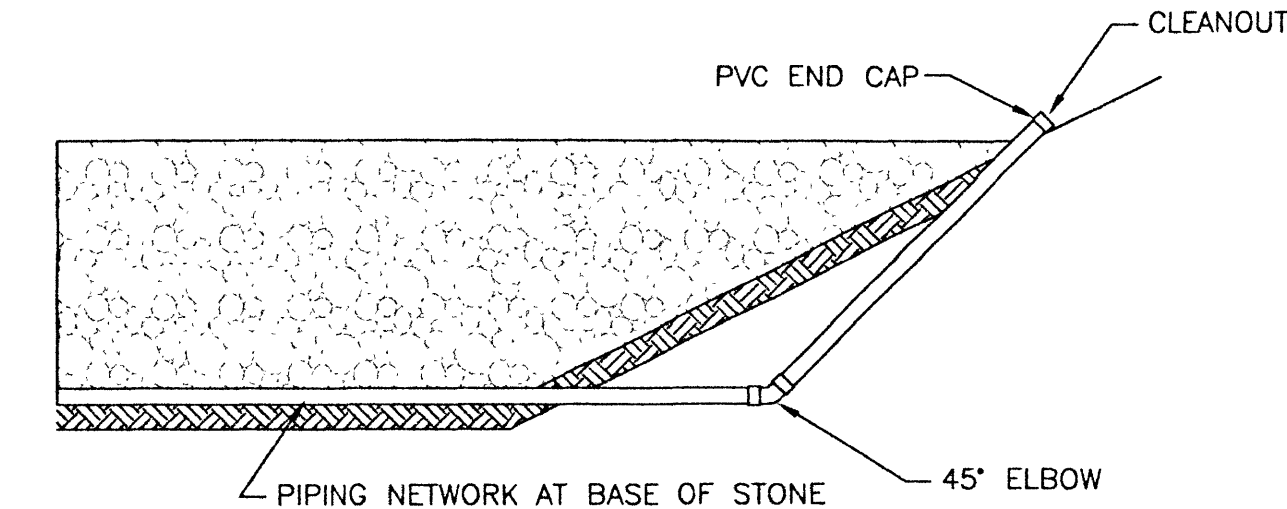


ROCK APRON TABLE

30'	L	W	SIZE	REQUIRED DEPTH
VARIES	*	*	R-3	18"
* AS SHOWN ON PLANS				

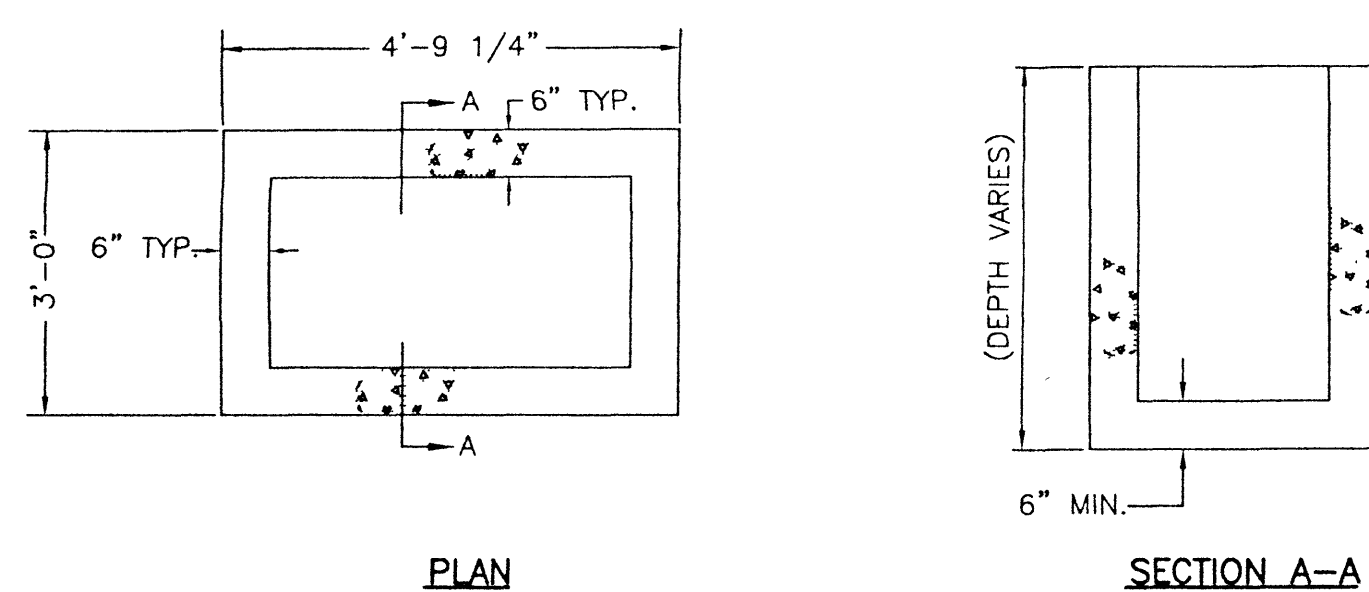
ROCK APRON

NO SCALE

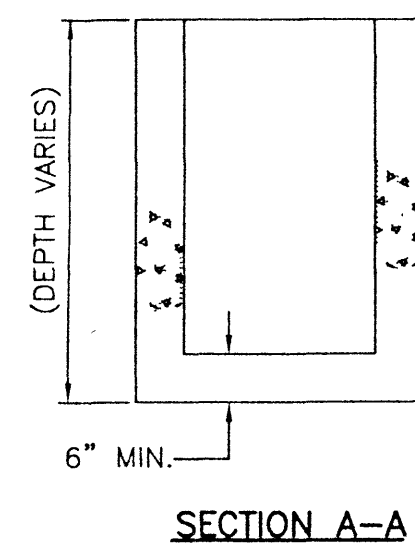


LIMESTONE POND CLEANOUT DETAIL

NO SCALE



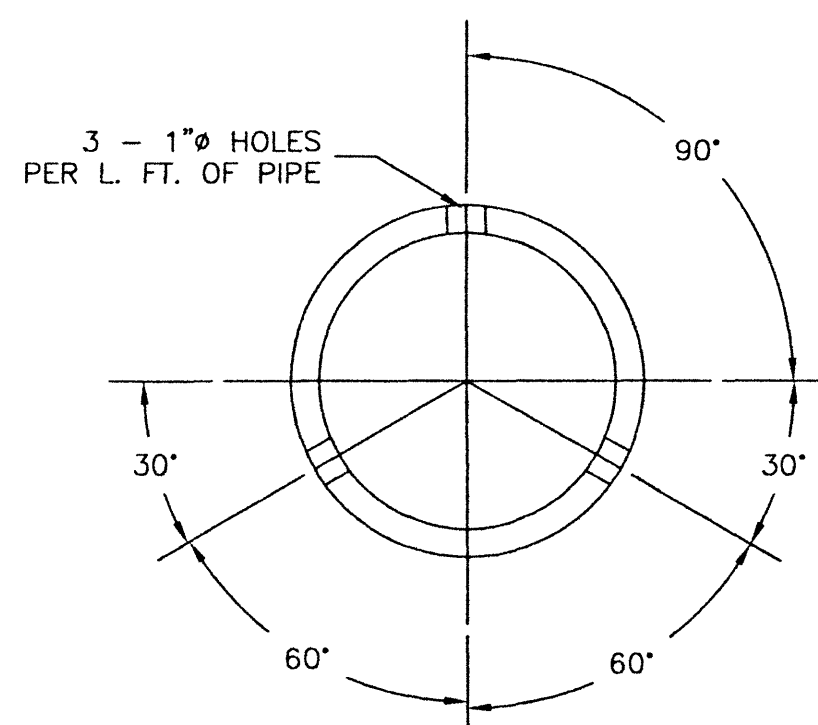
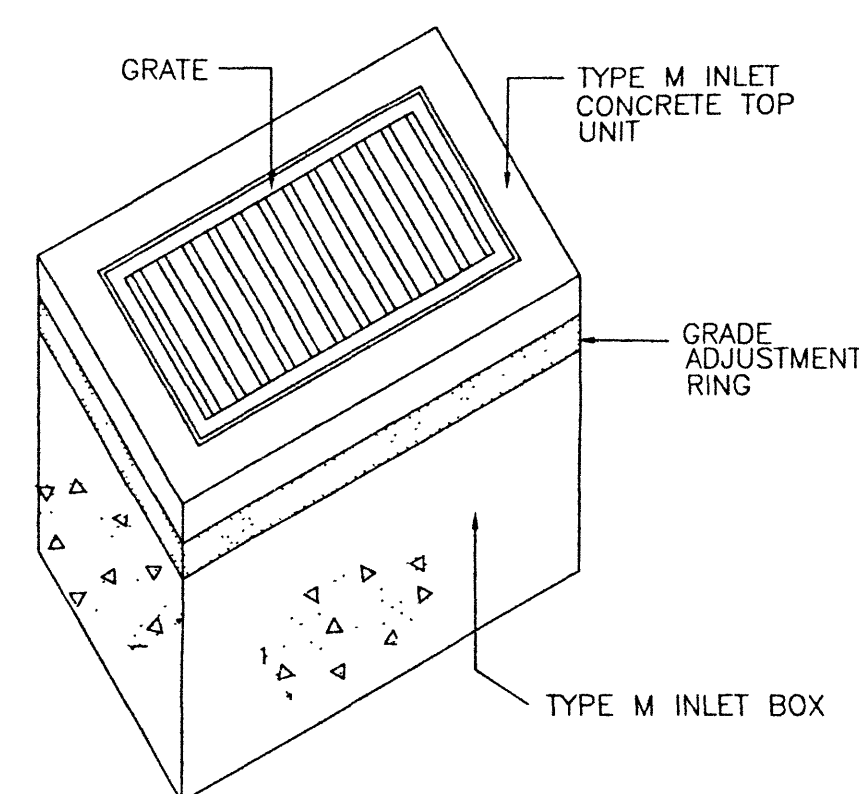
PLAN



SECTION A-A

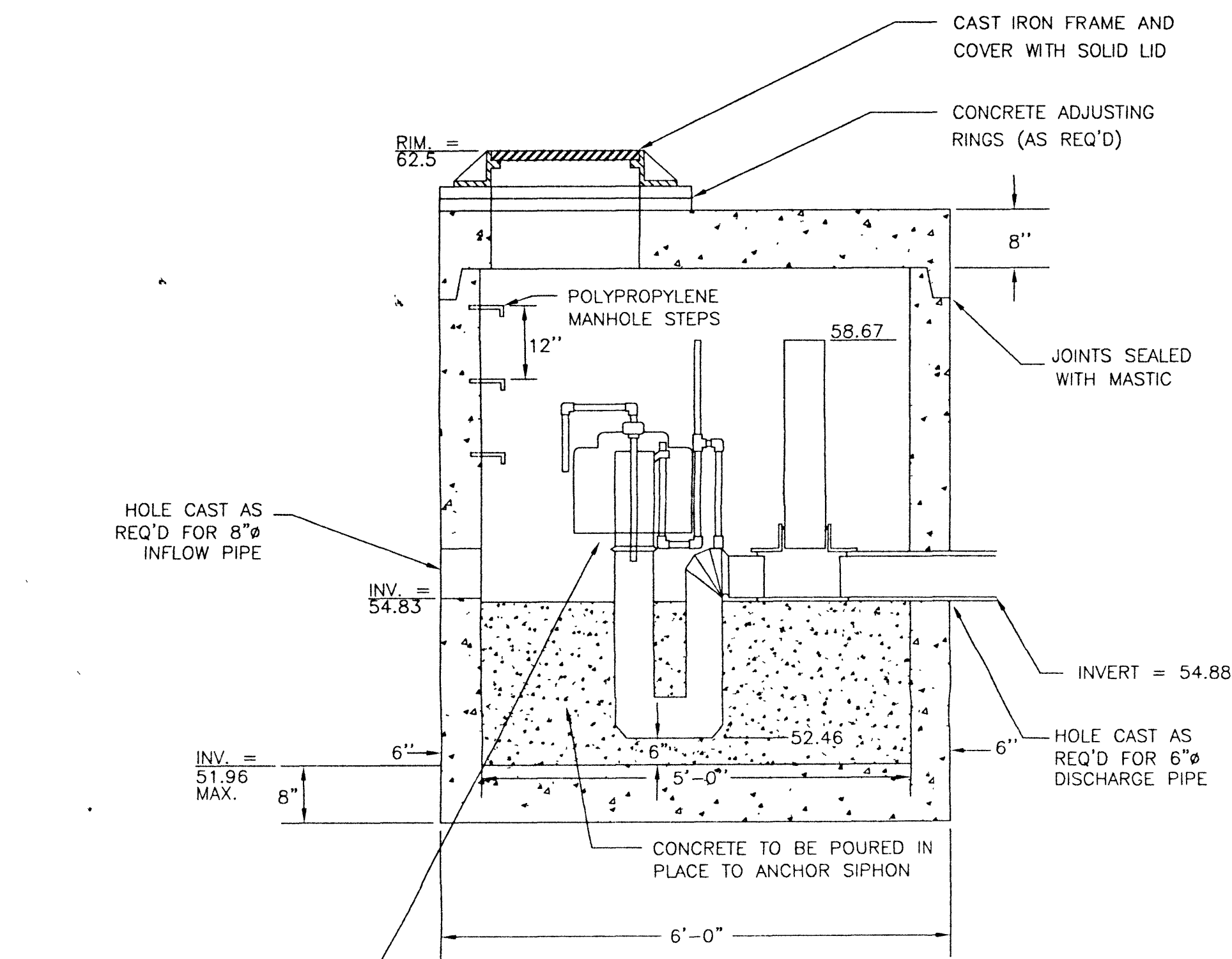
DISCHARGE 3 CAPTURE POINT - TYPE M INLET W/RISER DETAIL

NO SCALE



SDR 35 PVC PIPE PERFORATIONS

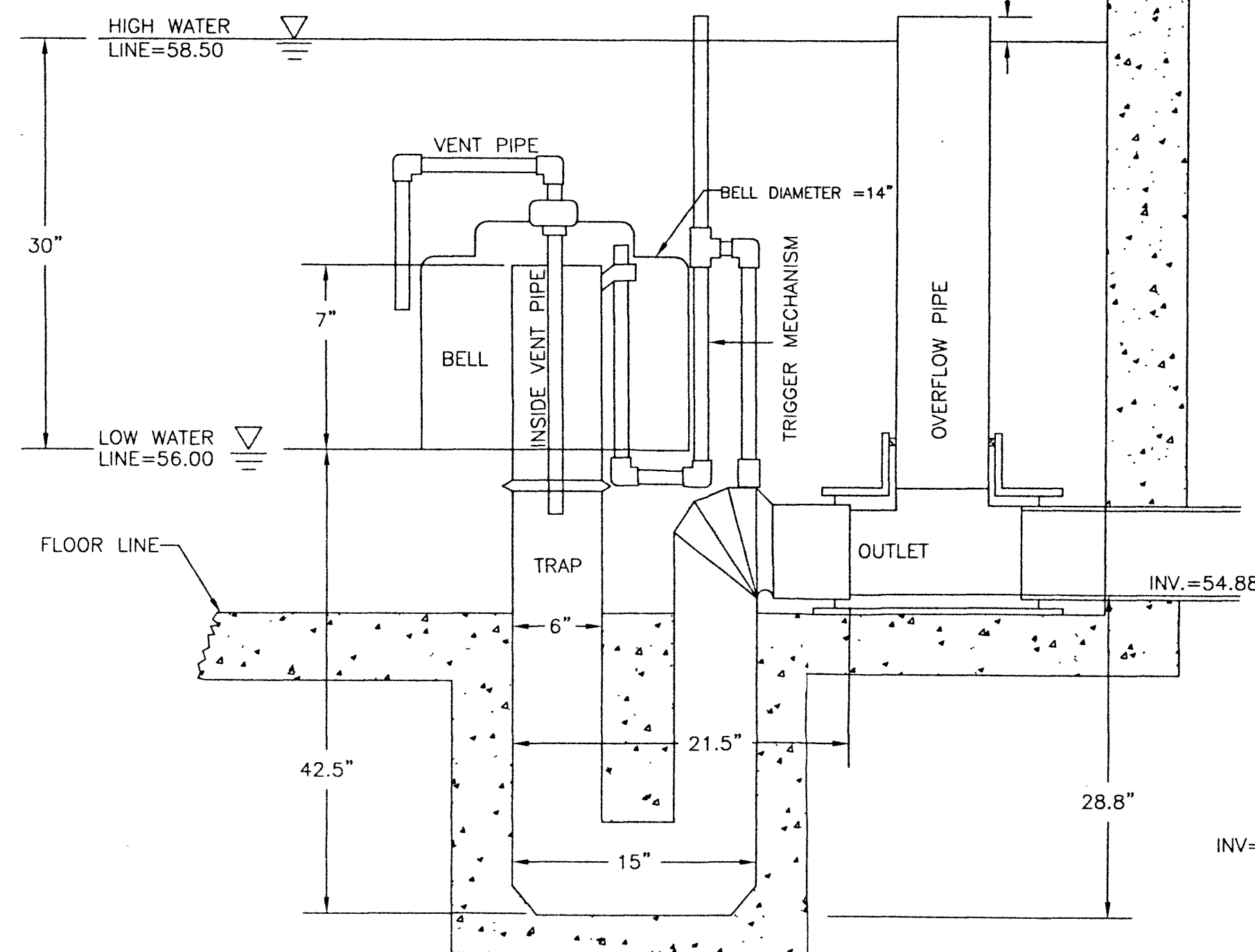
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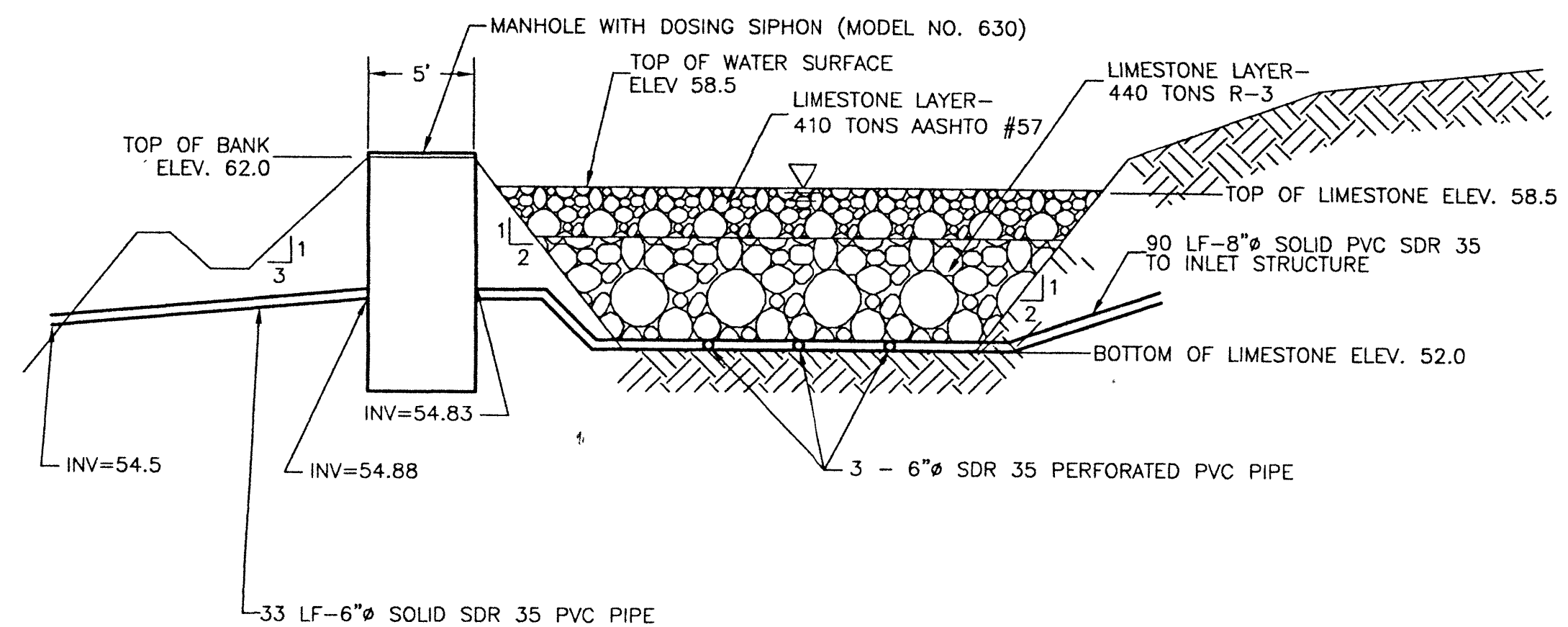
PRECAST CONCRETE MANHOLE - 5' DIAMETER
NO SCALE

AUTOMATIC DOSING SIPHON TO BE MODEL 630 AS MANUFACTURED BY FLUID DYNAMIC SIPHONS, INC., STEAMBOAT SPRINGS, CO, OR APPROVED EQUIVALENT.

MODEL 630 DOSING MANHOLE
NO SCALE

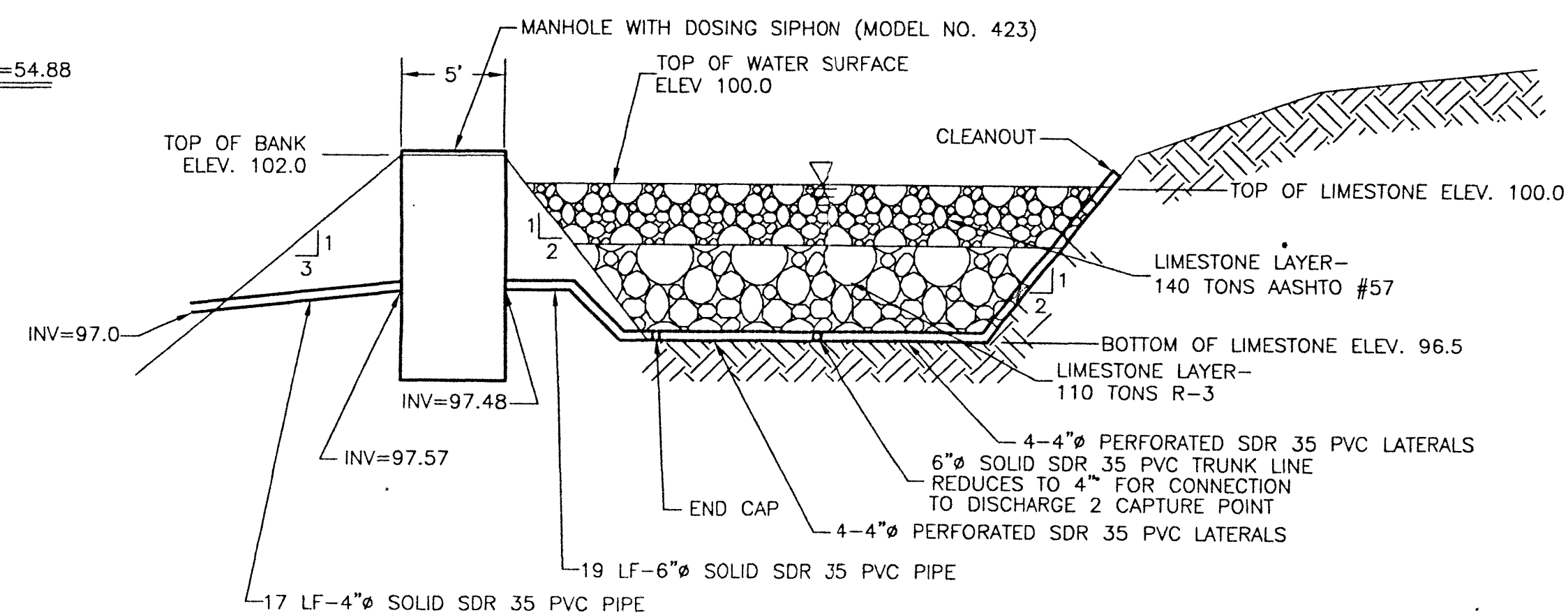


AUTOMATIC DOSING SIPHON
NO SCALE



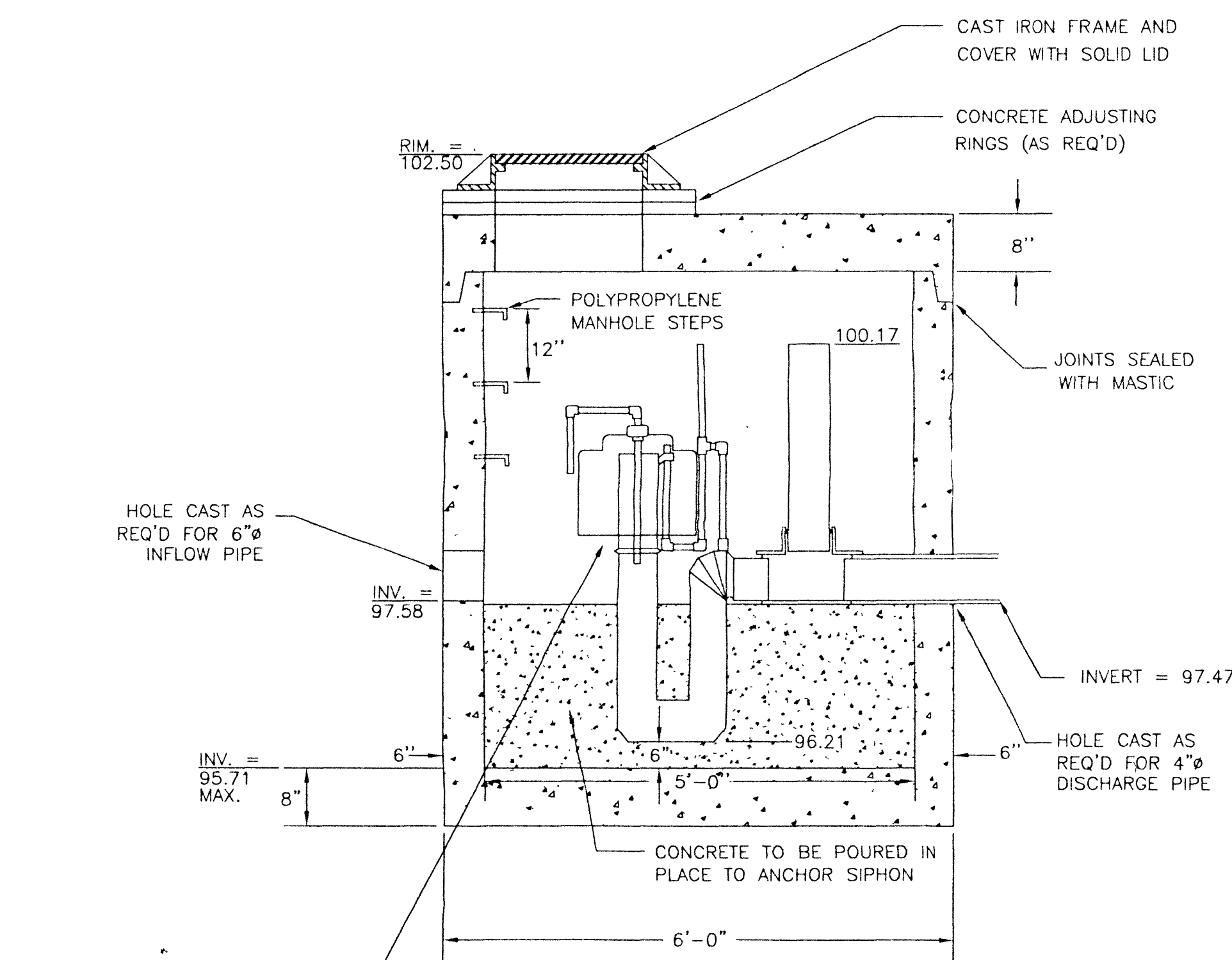
LIMESTONE POND D3 SECTION

NO SCALE
NOTE: CAP ALL OPEN PIPE ENDS INSIDE LIMESTONE POND



LIMESTONE POND D2 SECTION

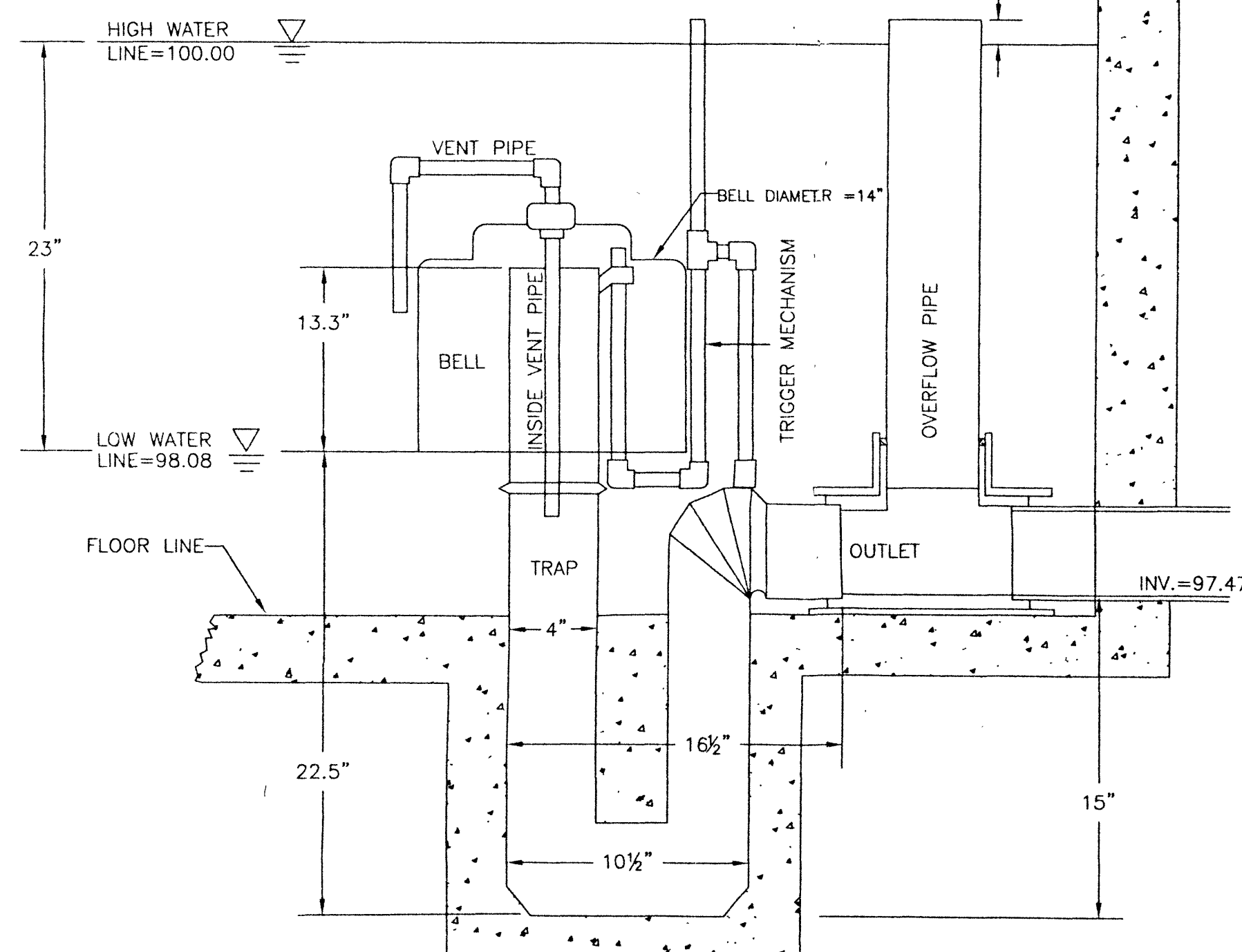
NO SCALE
NOTE: CAP ALL OPEN PIPE ENDS INSIDE LIMESTONE POND



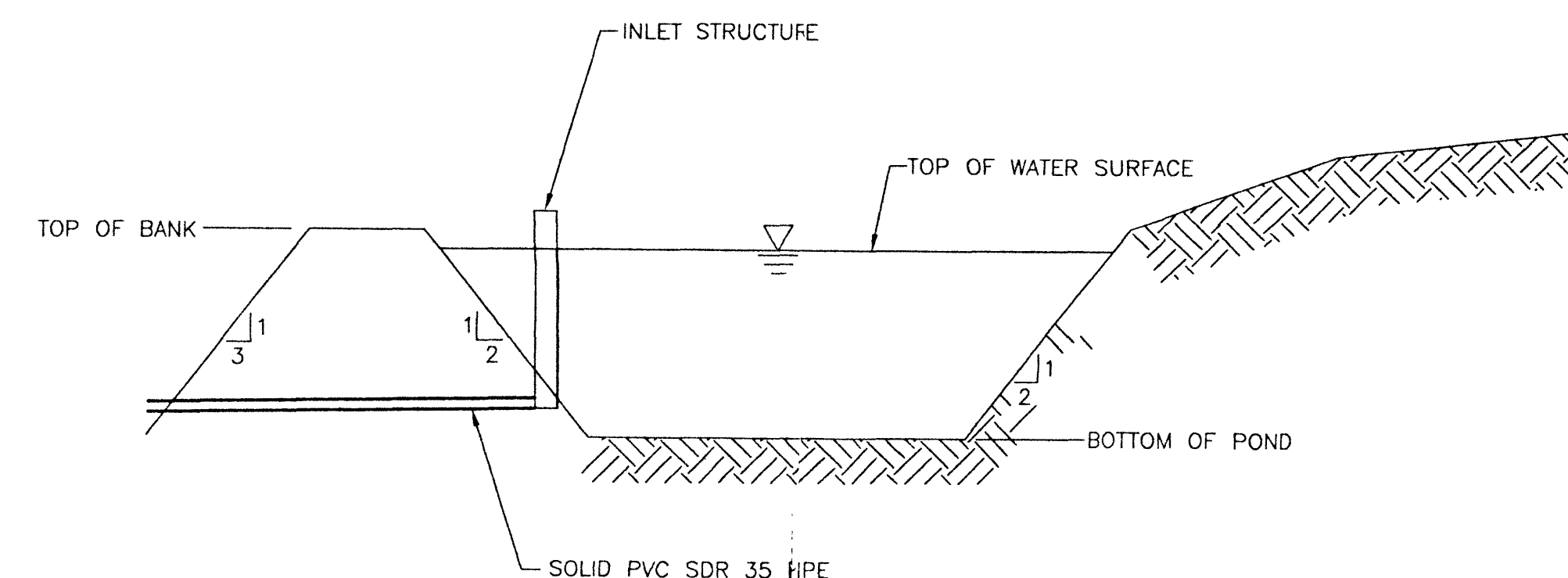
PRECAST CONCRETE MANHOLE - 5' DIAMETER
NO SCALE

AUTOMATIC DOSING SIPHON TO BE MODEL 423 AS MANUFACTURED BY FLUID DYNAMIC SIPHONS, INC., STEAMBOAT SPRINGS, CO, OR APPROVED EQUIVALENT.

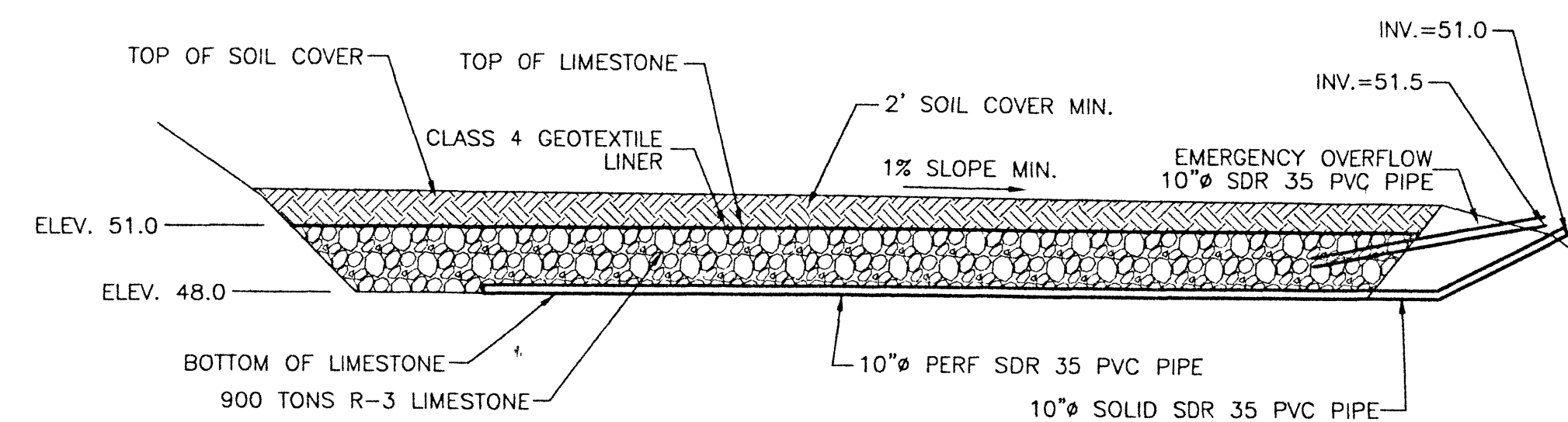
MODEL 423 DOSING MANHOLE
NO SCALE



AUTOMATIC DOSING SIPHON
NO SCALE



TYPICAL SETTLING POND SECTION
NO SCALE



BURIED LIMESTONE POND SECTION
NO SCALE

DRAWING NO. **C-7**

SHEET 7 OF 7

INDIANA COUNTY CONSERVATION DISTRICT
CESSNA RUN AND REMEDIATION PROJECT
CANCE TOWNSHIP
INDIANA COUNTY, PA

DATE 2/25/05

DESIGNER N.A.W.

CHECKED J.S.W.

DATE 2/25/05

SCALE AS SHOWN

DATE

BY

APPROVED

DESCRIPTION

SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS

2031 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA 17102-1700
TEL: 717-222-4000 FAX: 717-222-1700
WWW.SKELLYANDLOY.COM

JOB NUMBER: 1503298

DATE: FEBRUARY 25, 2005

DATE: 2/25/05