

west virginia department of environmental protection

EARL RAY TOMBLIN, GOVERNOR

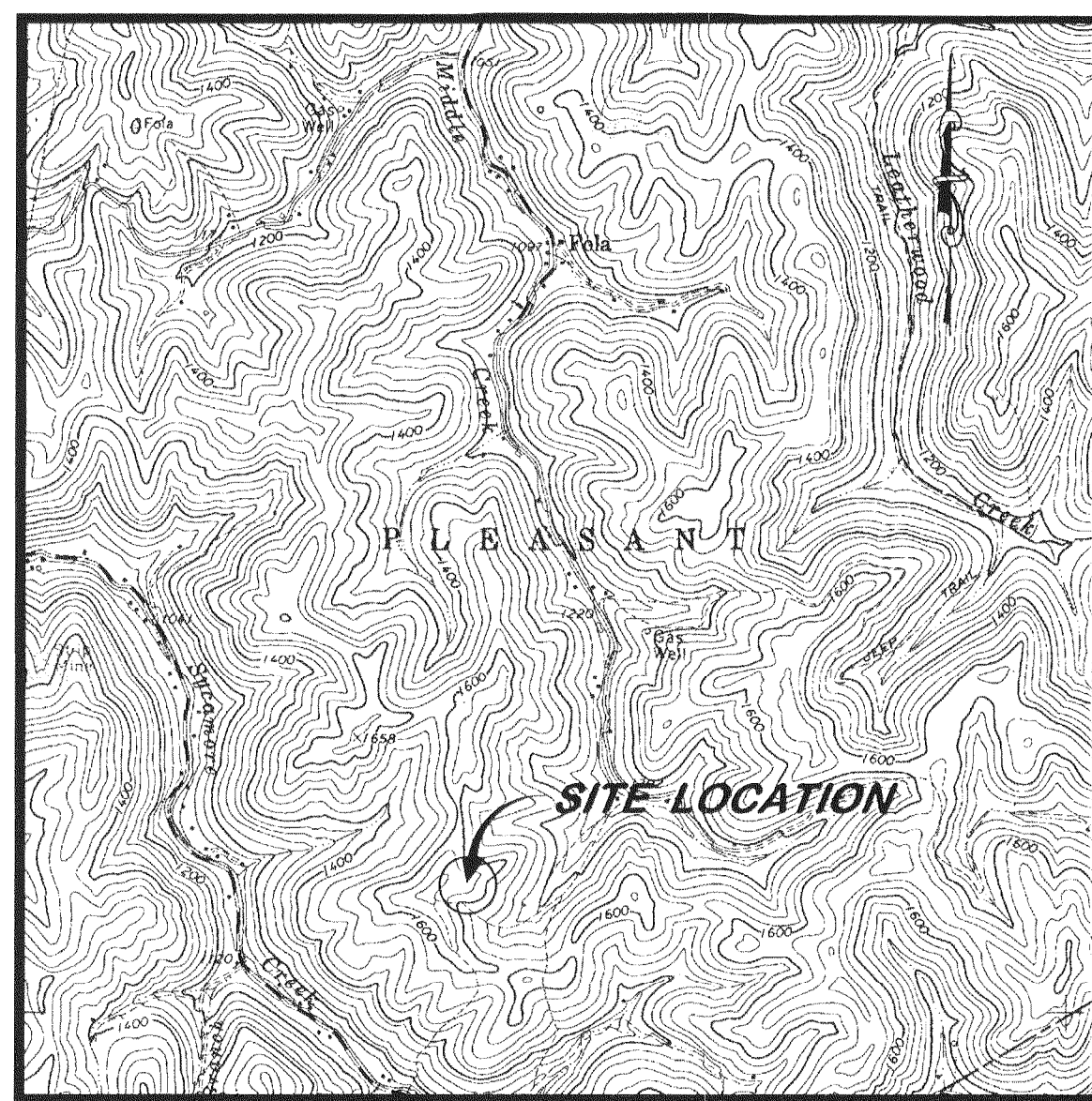
RANDY C. HUFFMAN, CABINET SECRETARY

OFFICE OF ABANDONED MINE LANDS AND RECLAMATION

INDORE (OSBORNE) PORTALS

AT INDORE,
CLAY COUNTY, WEST VIRGINIA

VICINITY MAP



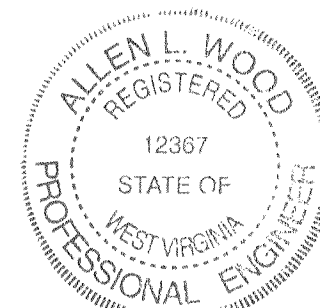
USGS 7.5' QUAD (LEAD MINE)

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
2	EXISTING CONDITIONS AND TAX MAP OVERLAY
3	RECLAMATION AND SEDIMENT CONTROL PLAN
4	SUPPLEMENTAL/COMPOSITE RECLAMATION PLAN (PORTALS NO. 6 AND 7)
5	DITCH CLEANING AND SEEP COLLECTOR PROFILES AND TYPICAL SECTIONS
6	TYPICAL DETAILS (1)
7	TYPICAL DETAILS (2)
8	SEDIMENT CONTROL DETAILS

BID SCHEDULE

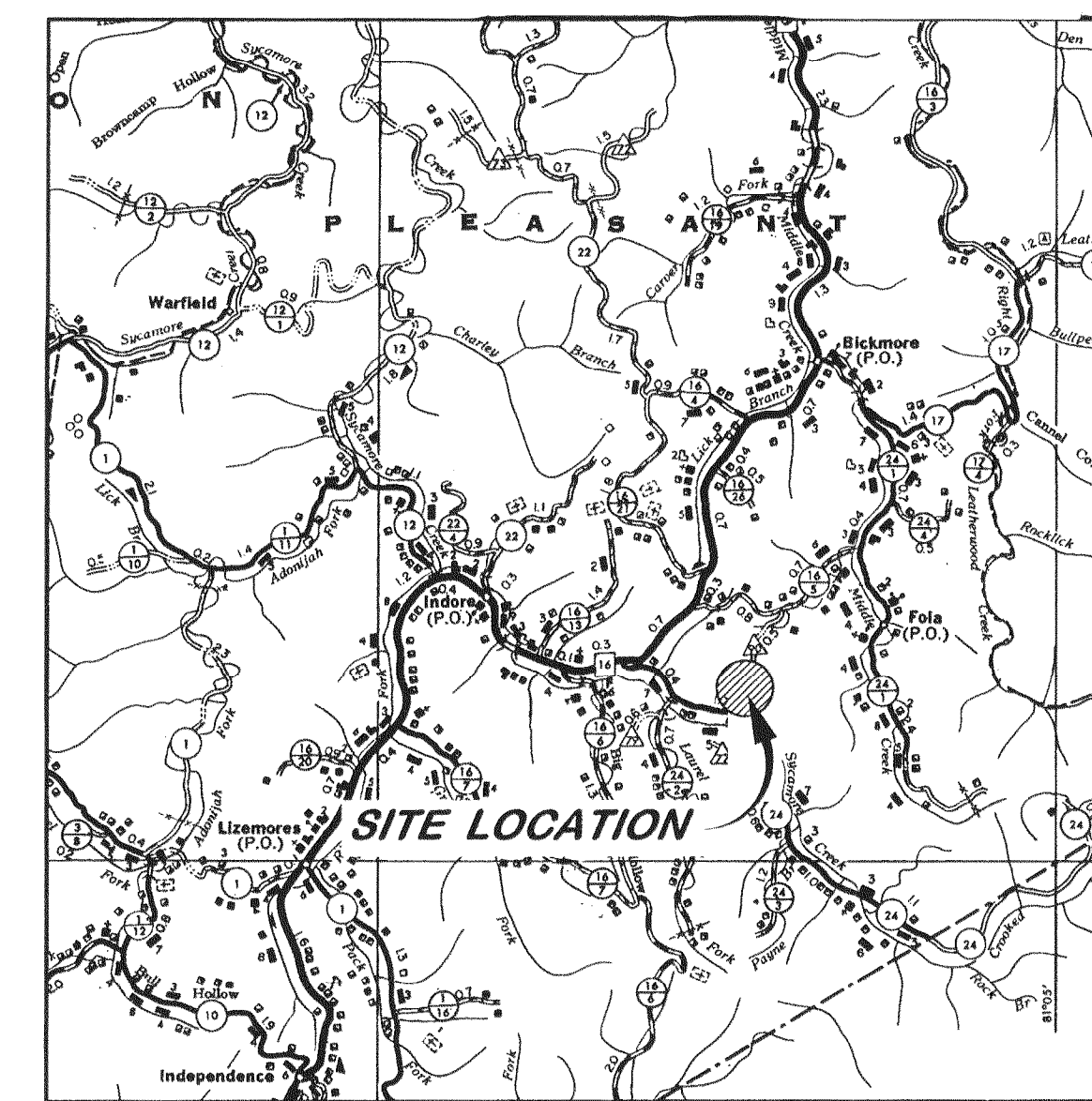
ITEM NO.	DESCRIPTION	QUANTITY
1.0	MOBILIZATION AND DEMOBILIZATION (LIMITED TO 10% OF TOTAL BID)	LS
2.0	CONSTRUCTION LAYOUT (LIMITED TO 5% OF TOTAL BID)	LS
3.0	QUALITY CONTROL (LIMITED TO 3% OF TOTAL BID)	LS
4.0	SITE PREPARATION (LIMITED TO 10% OF TOTAL BID)	LS
4.1	GRAVEL DRIVE REHABILITATION	50 TONS
4.2	ACCESS ROAD STONE	50 TONS
5.2.1	SILT FENCE SEDIMENT CONTROL	350 LF
5.2.3	STONE CONSTRUCTION ENTRANCE	25 TONS
6.0	REVEGETATION	LS
7.0	CHANNEL CLEANOUT	366 LF
9.1	GROUTED ROCK RIPRAP PORTAL SEAL	2 EA.
9.2	DRY MINE SEAL	3 EA.
9.3	BAT GATE MINE SEAL	2 EA.
9.4	48" HDPE BAT GATE PIPE	80 LF
9.5	SPLASH PAD	2 EA.
9.6	TEMPORARY STREAM CROSSING	2 EA.
10.1	SEEP COLLECTOR	100 LF
10.2	CONVEYANCE PIPE (8" SDR-35 PVC)	75 LF



Allen L. Wood
APPROVED

2/15
DATE

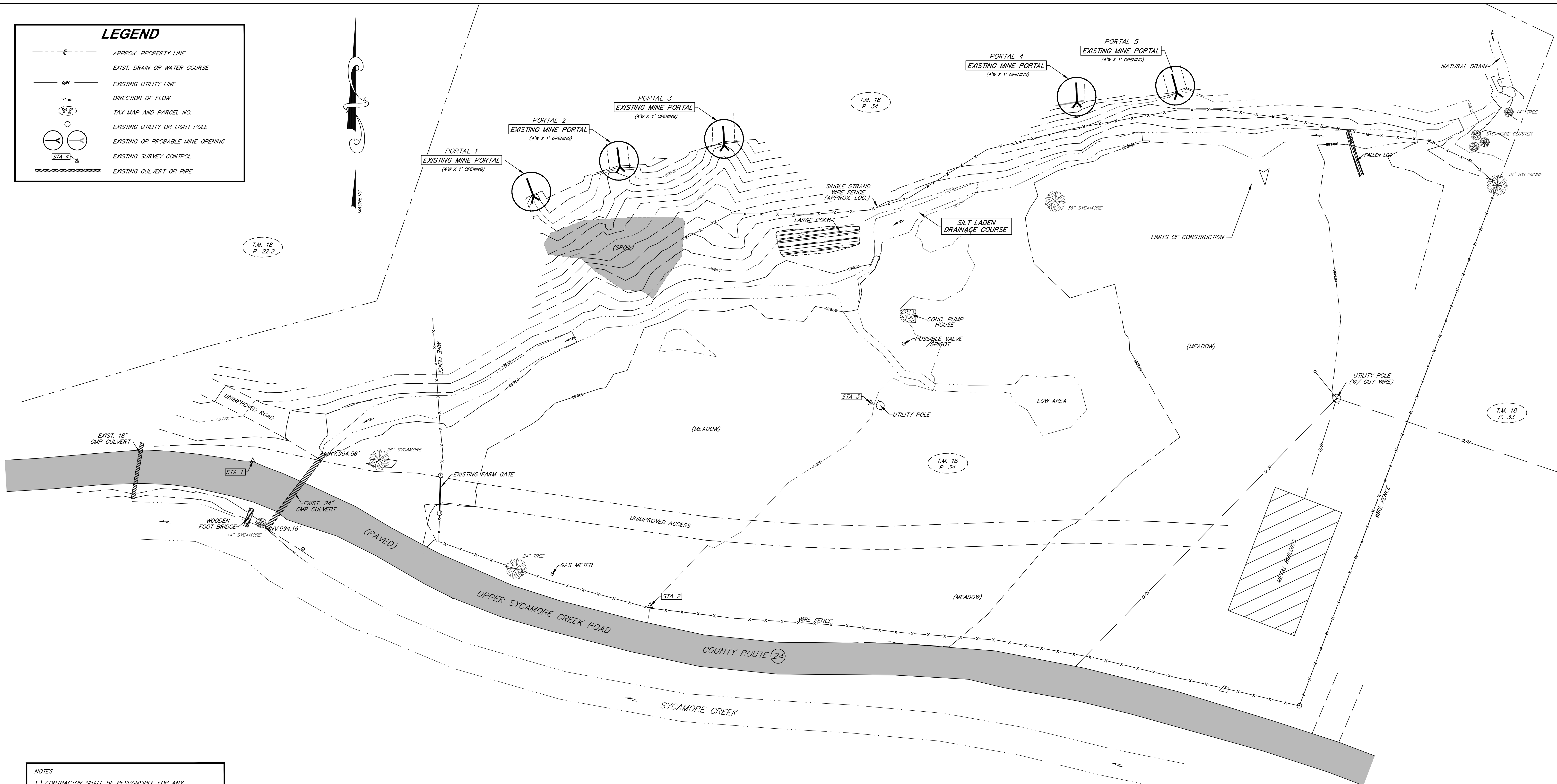
COUNTY MAP



COUNTY HIGHWAY MAP, 1" = 1 MI.

LEGEND

	APPROX. PROPERTY LINE
	EXIST. DRAIN OR WATER COURSE
	EXISTING UTILITY LINE
	DIRECTION OF FLOW
	TAX MAP AND PARCEL NO.
	EXISTING UTILITY OR LIGHT POLE
	EXISTING OR PROBABLE MINE OPENING
	EXISTING SURVEY CONTROL
	EXISTING CULVERT OR PIPE



- NOTES:**
- 1.) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERMIT REQUIREMENTS.
 - 2.) CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND VERIFICATION OF ANY AND ALL UTILITIES LOCATED WITHIN THE CONSTRUCTION LIMITS.
 - 3.) ALL AREAS AFFECTED BY ACCESS AND/OR CONSTRUCTION SHALL BE REGRADED, SEEDED AND MULCHED UPON COMPLETION OF PROJECT.
 - 4.) ANY PROPERTY CORNERS (I.E. IRON RODS, REBARS, CONC. MONUMENTS AND SIGNS) DISTURBED SHALL BE RE-ESTABLISHED AND RESET UPON COMPLETION OF PROJECT.

PROPERTY LINE AND ROAD NUMBER INFORMATION REPRESENTS AN APPROXIMATE BEST FIT ESTIMATE OF PROPERTY LINE BOUNDARIES AS OBTAINED FROM COUNTY TAX MAPS ACQUIRED THROUGH THE WEST VIRGINIA STATE TAX DEPARTMENT IN CHARLESTON, WV. PROPERTY LINES SET OUT AND DESIGNATED WITHIN THESE CONSTRUCTION PLANS DO NOT REPRESENT A TRUE AND ACCURATE BOUNDARY SURVEY.

SURVEY CONTROL

NO.	NORTHING	EASTING	ELEV.	DESC.
STA 1	10002.7586	9842.8358	997.39	NAIL/RIBBON
STA 2	9938.5264	9893.2080	1005.53	NAIL/RIBBON
STA 3	10000.0000	10000.0000	1000.00	NAIL/RIBBON

(HORIZONTAL AND VERTICAL SURVEY DATUM IS BASED ON AN ASSUMED GRID SYSTEM)

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Department of Environmental Protection
Abandoned Mine Lands and Reclamation

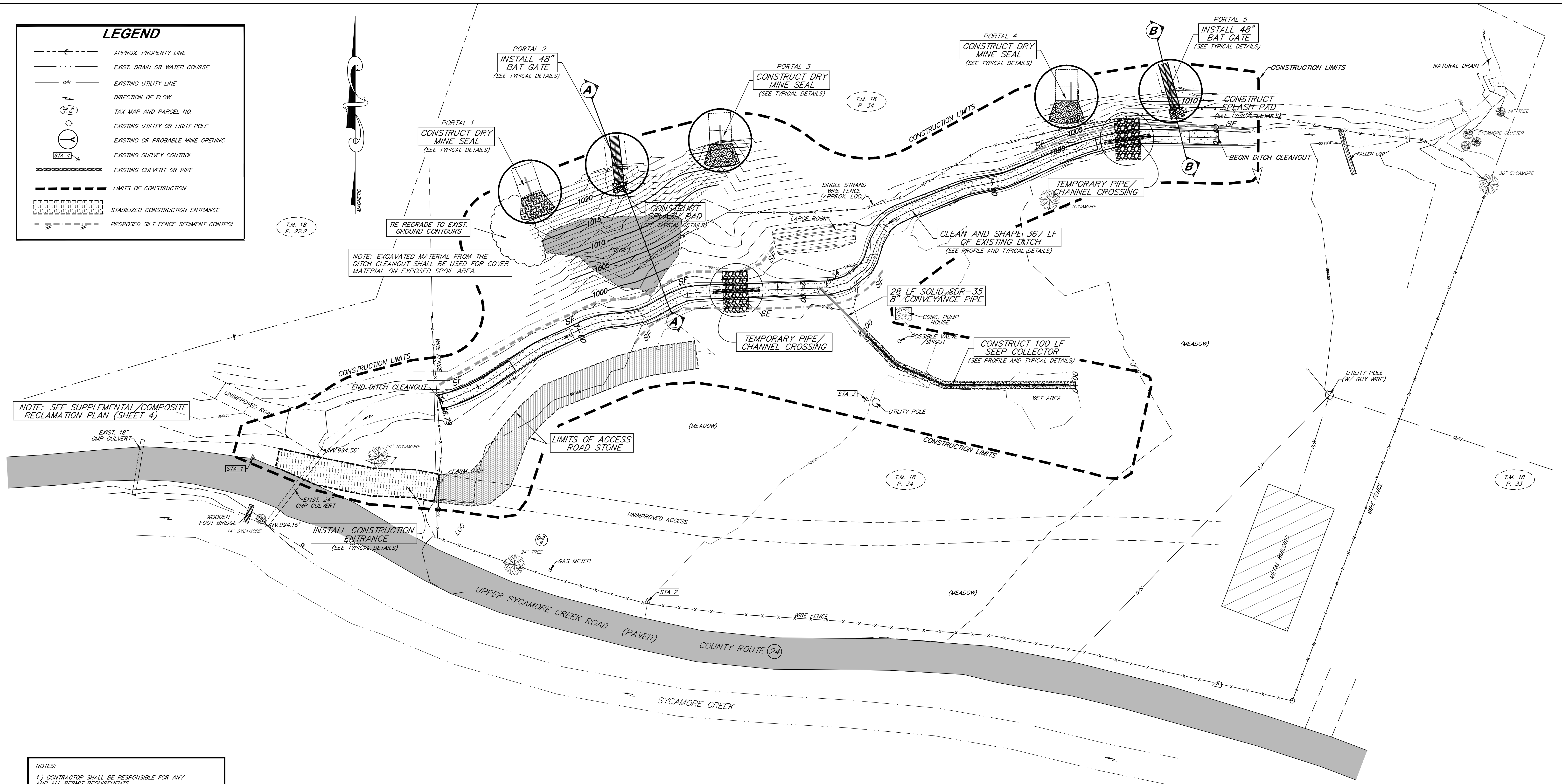
INDORE (OSBORNE) PORTALS

**EXISTING CONDITIONS AND
TAX MAP OVERLAY**

DRAWN BY: DWH	SCALE: 1" = 20'
APPROVED BY: AW	SHEET NO. 2
DATE: 2/6/2015	OF 8

LEGEND

- - - - - APPROX. PROPERTY LINE
- - - - - EXIST. DRAIN OR WATER COURSE
- - - - - EXISTING UTILITY LINE
- DIRECTION OF FLOW
- T.M. 18 P. 34 TAX MAP AND PARCEL NO.
- EXISTING UTILITY OR LIGHT POLE
- EXISTING OR PROBABLE MINE OPENING
- ▲ STA. 4 EXISTING SURVEY CONTROL
- - - - - EXISTING CULVERT OR PIPE
- - - - - LIMITS OF CONSTRUCTION
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- - - - - PROPOSED SILT FENCE SEDIMENT CONTROL



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(HORIZONTAL AND VERTICAL SURVEY DATUM IS BASED ON AN ASSUMED GRID SYSTEM)

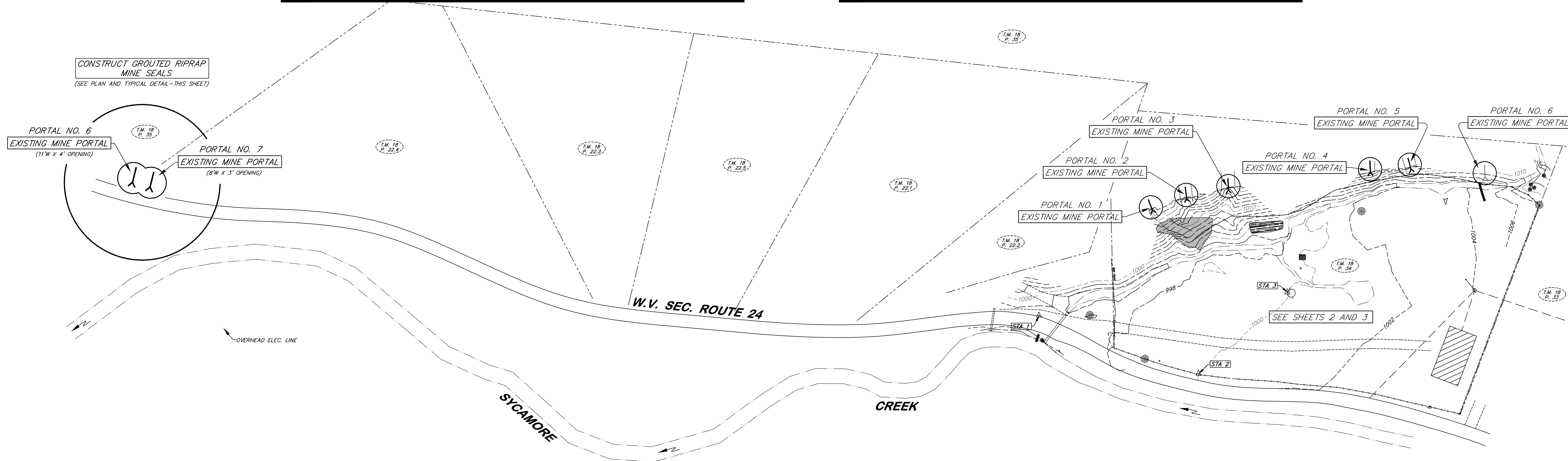
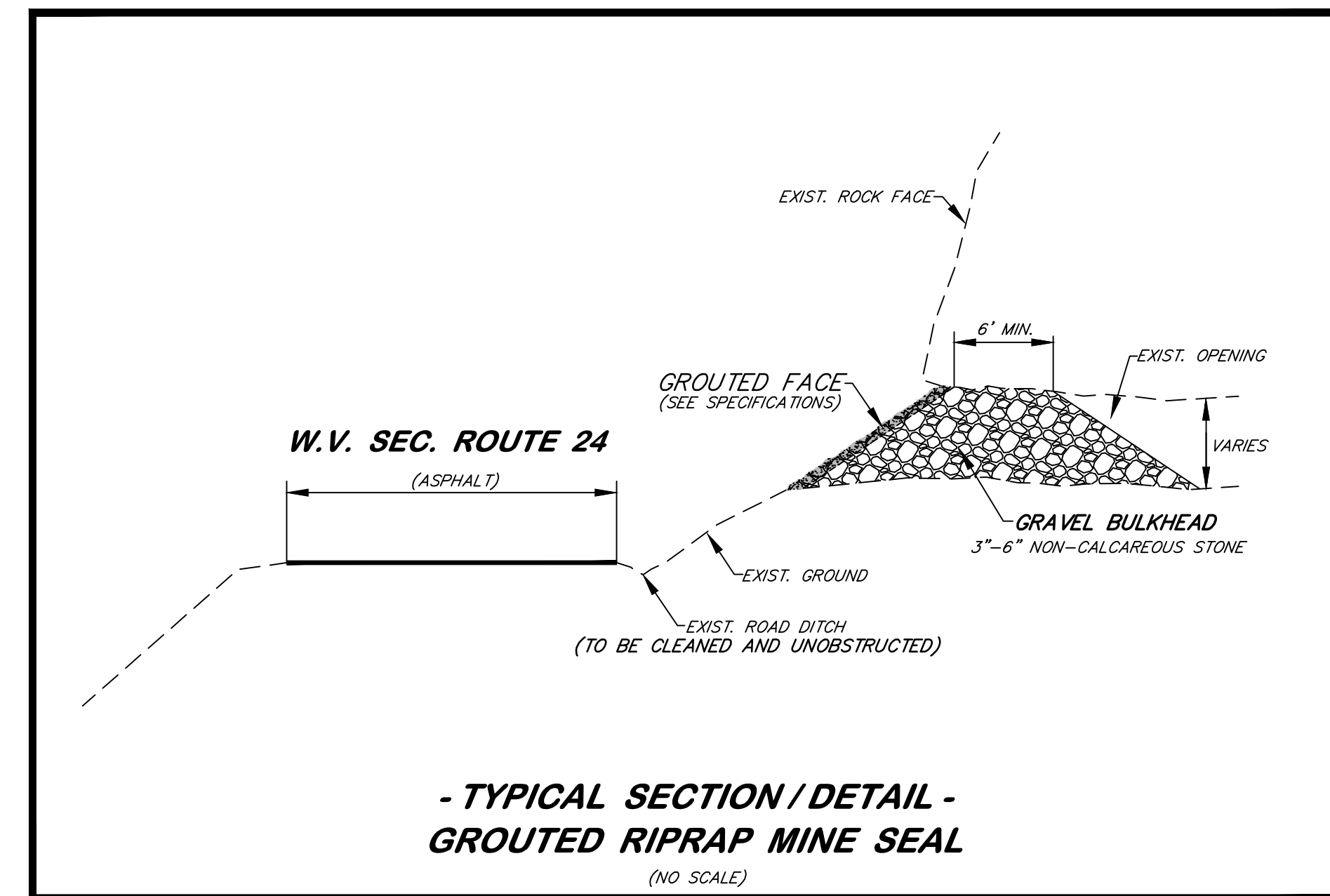
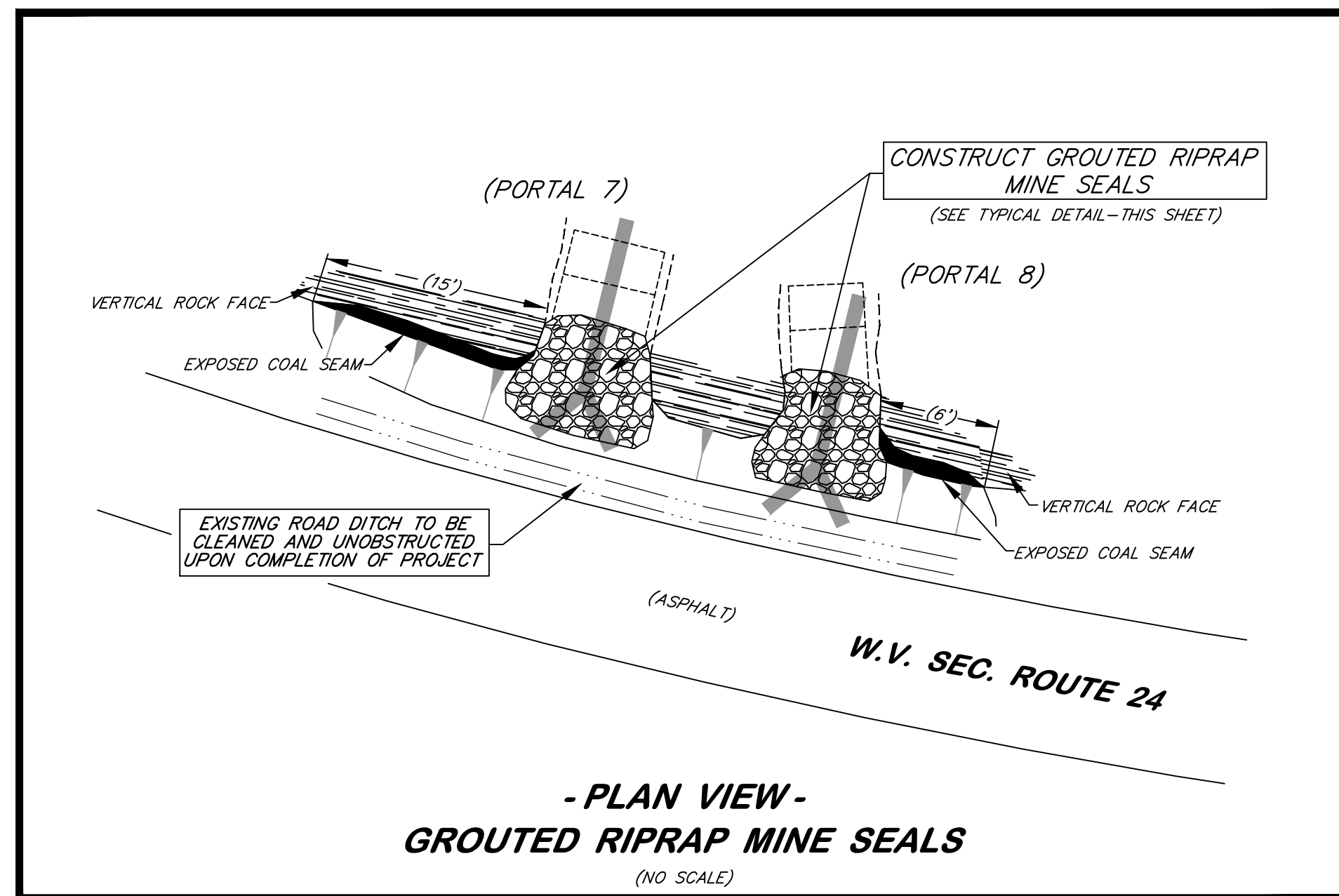
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

INDORE (OSBORNE) PORTALS

**RECLAMATION AND
SEDIMENT AND EROSION
CONTROL PLANS**

DRAWN BY: DWH
APPROVED BY: AW
DATE: 2/6/2015

SCALE: 1" = 20'
SHEET NO. **3**
OF 8



LEGEND	
	APPROX. PROPERTY LINE
	EXIST. DRAIN OR WATER COURSE
	EXISTING UTILITY LINE
	DIRECTION OF FLOW
	TAX MAP AND PARCEL NO.
	EXISTING UTILITY OR LIGHT POLE
	EXISTING OR PROBABLE MINE OPENING
	EXISTING SURVEY CONTROL
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NOTES:

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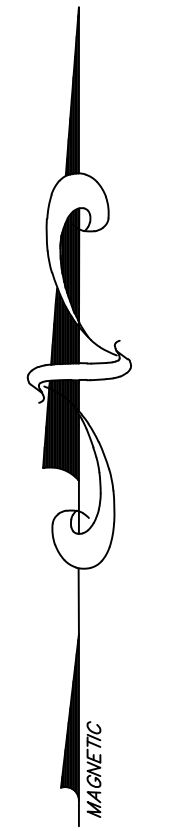
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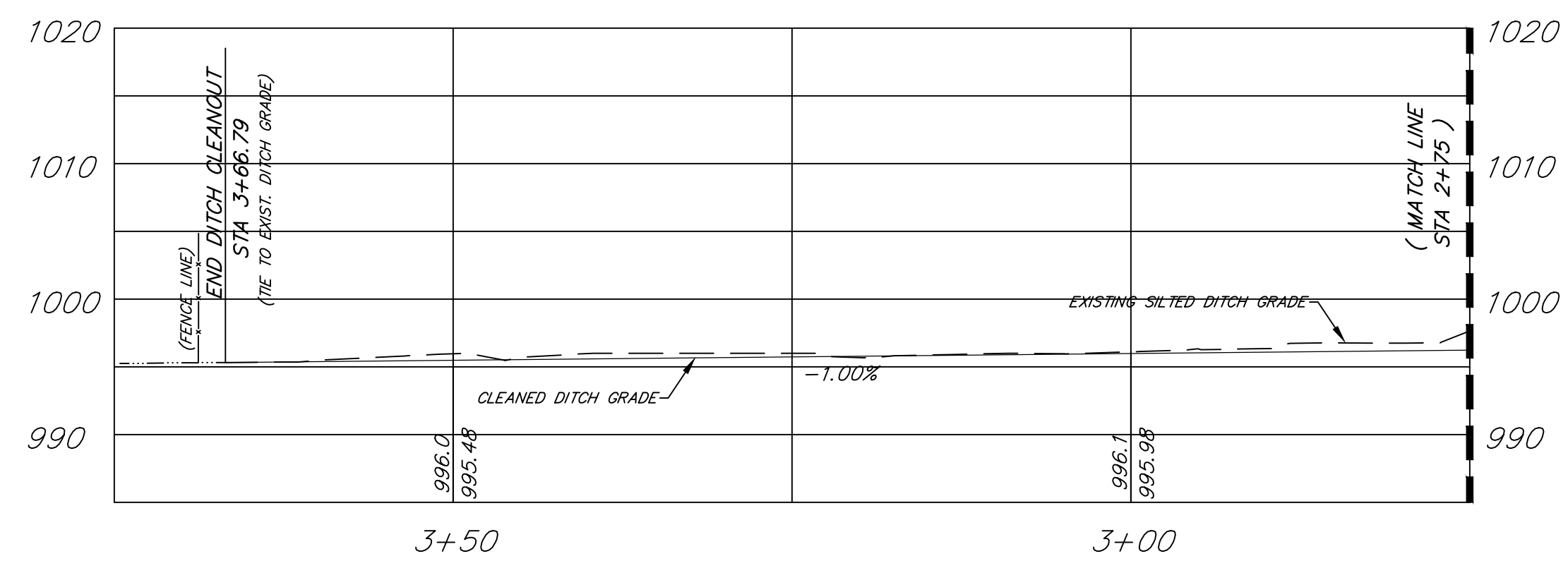
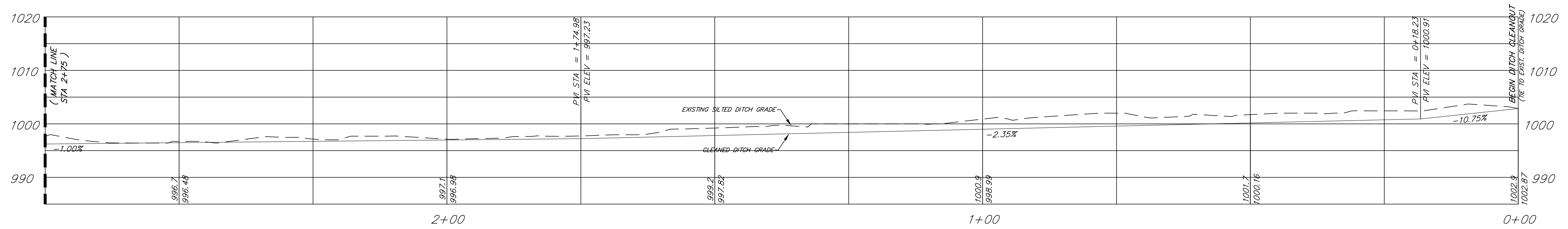
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

INDORE (OSBORNE) PORTALS

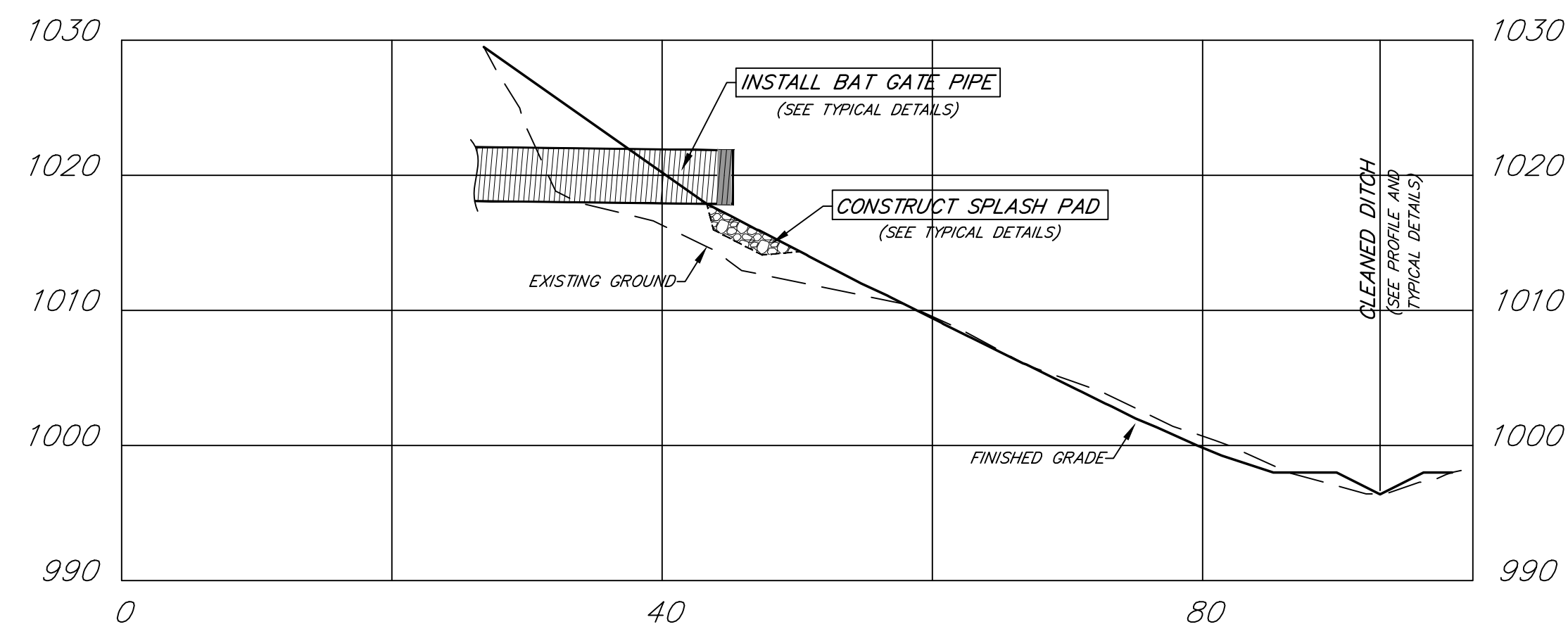
**SUPPLEMENTAL / COMPOSITE
RECLAMATION PLAN
(PORTALS NO. 6 AND 7)**

DRAWN BY: DWH	SCALE: AS SHOWN
APPROVED BY: AW	SHEET NO. 4
DATE: 2/6/2015	OF 8

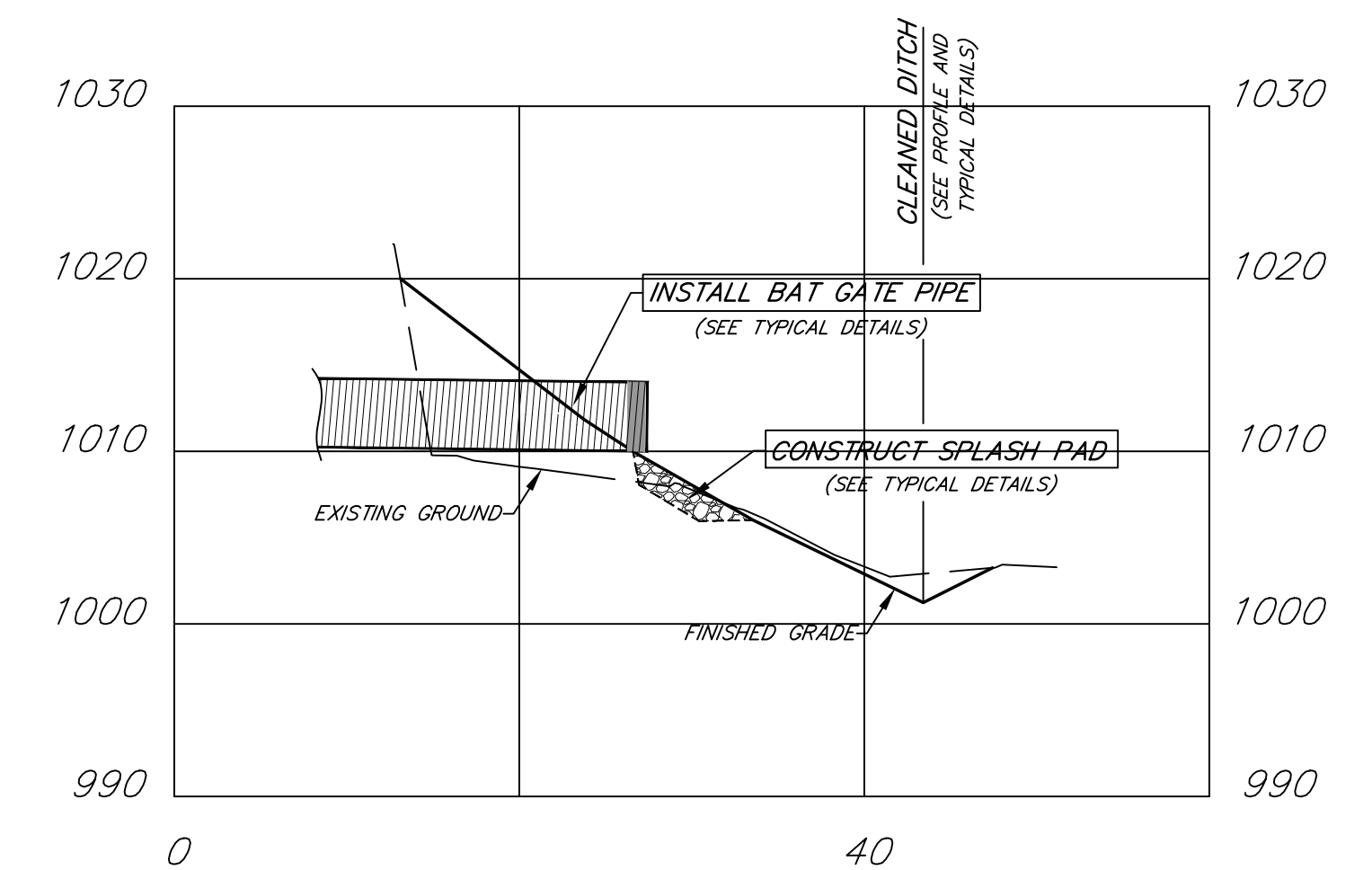




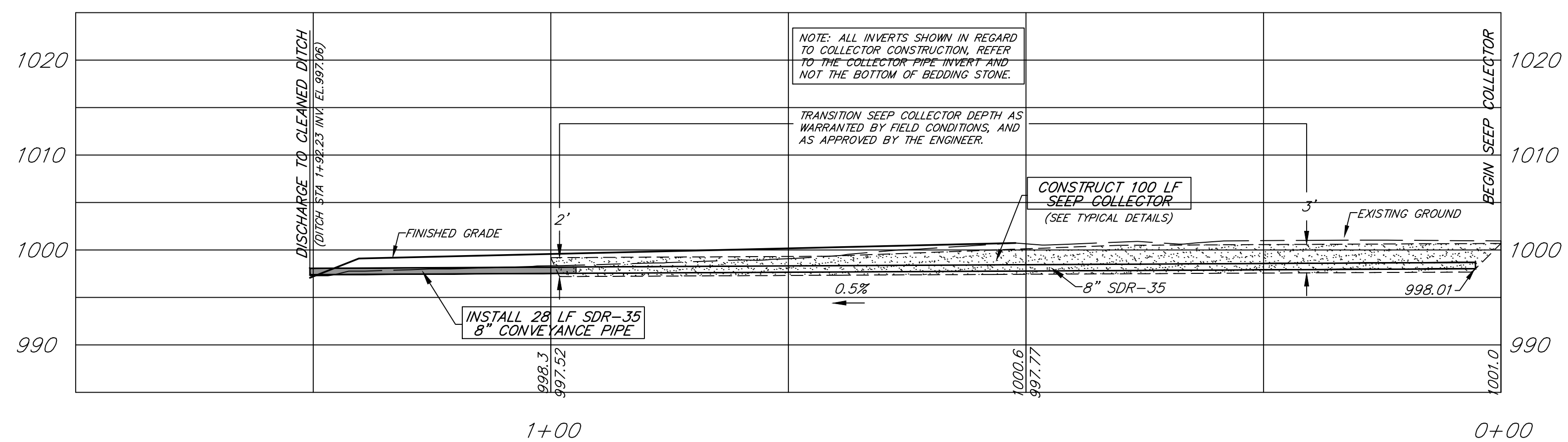
DITCH CLEANING PROFILE



SECTION "A-A"



SECTION "B-B"



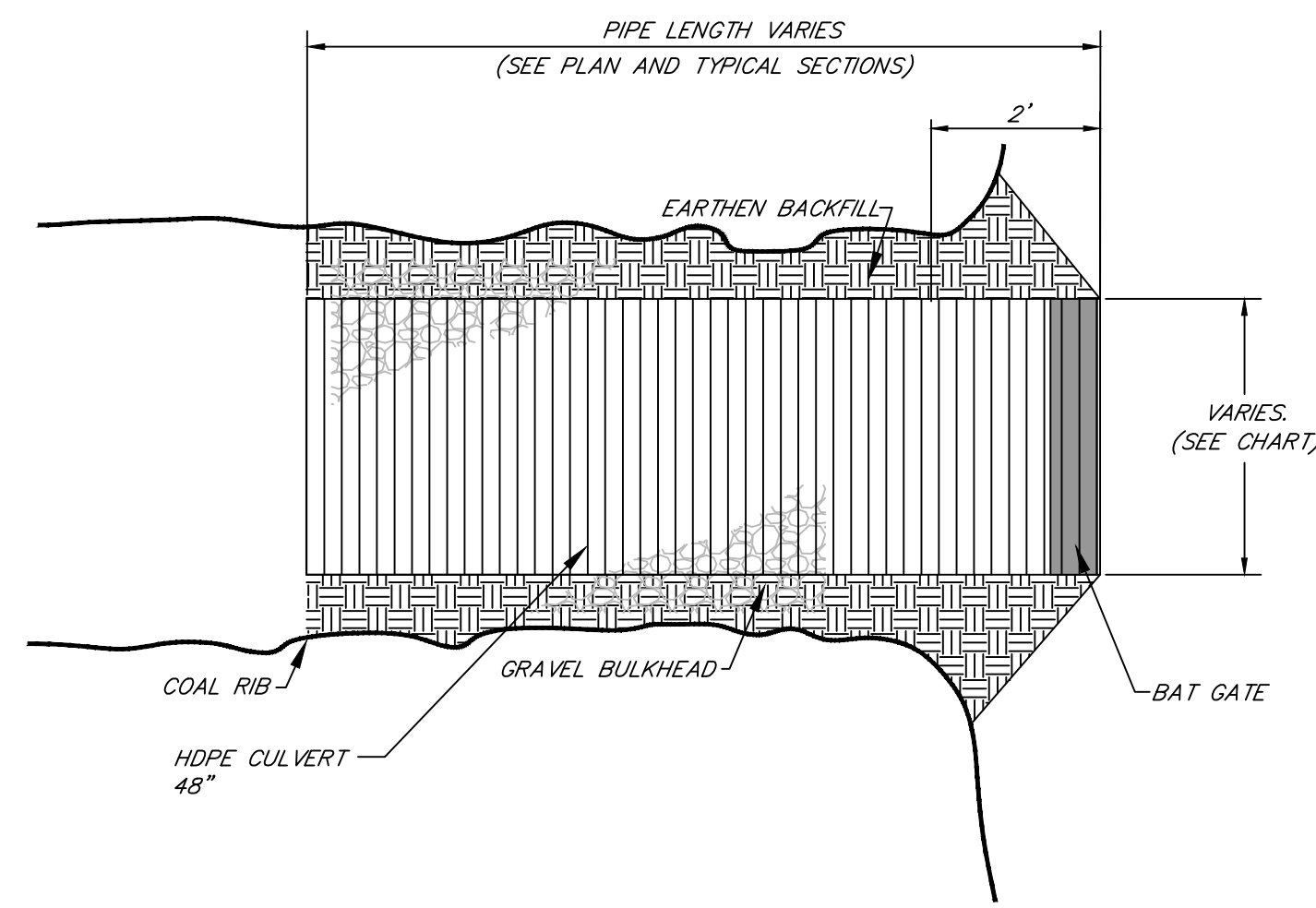
SEEP COLLECTOR PROFILE

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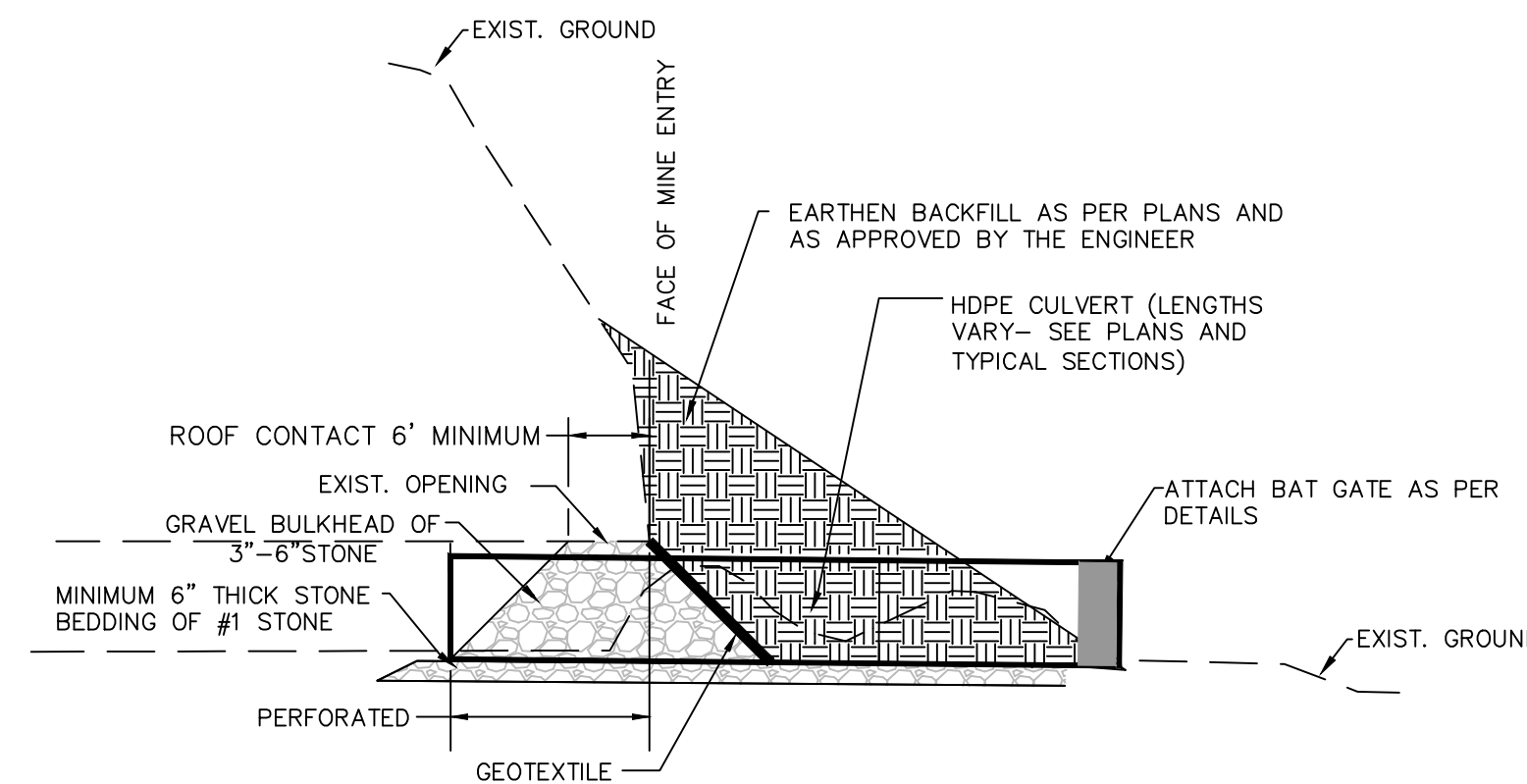
INDORE (OSBORNE) PORTALS

**DITCH CLEANING AND
SEEP COLLECTOR PROFILES,
AND TYPICAL SECTIONS**

DRAWN BY: DWH	SCALE: 1" = 10'
APPROVED BY: AW	SHEET NO. 5
DATE: 2/6/2015	OF 8



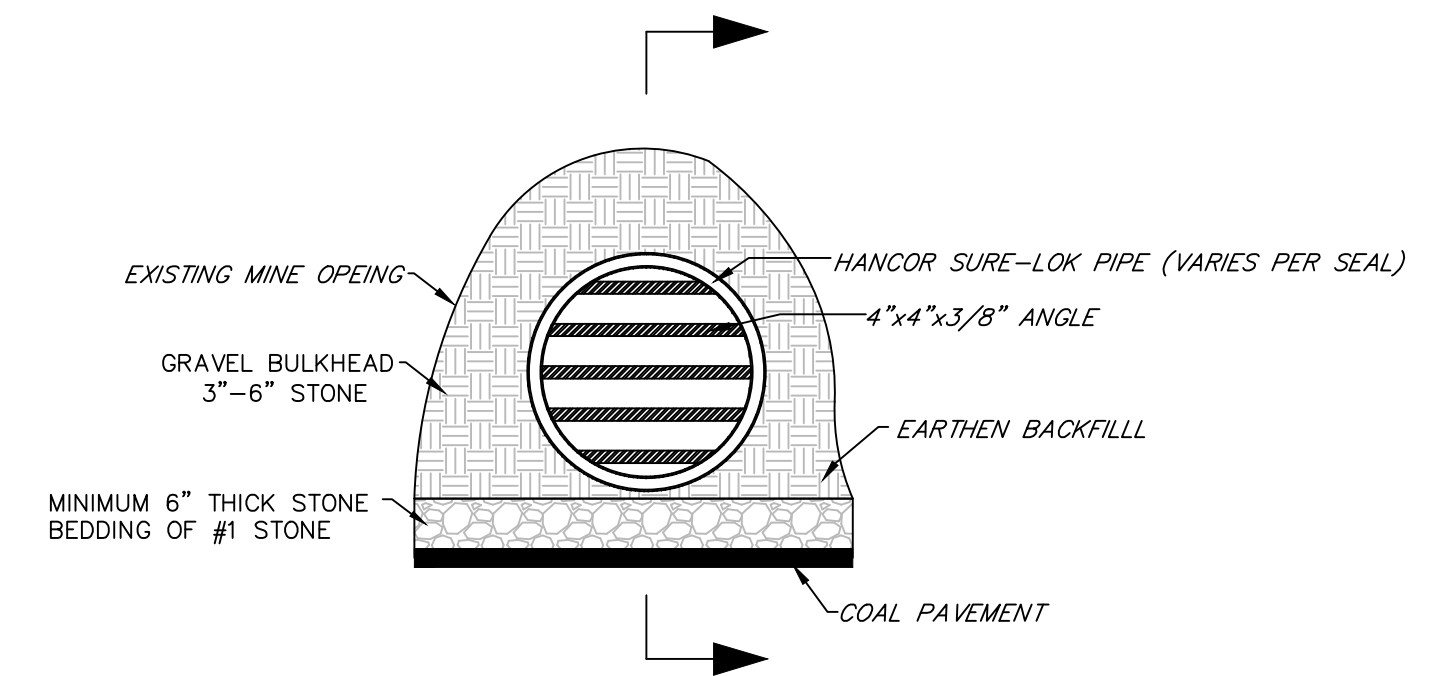
PLAN



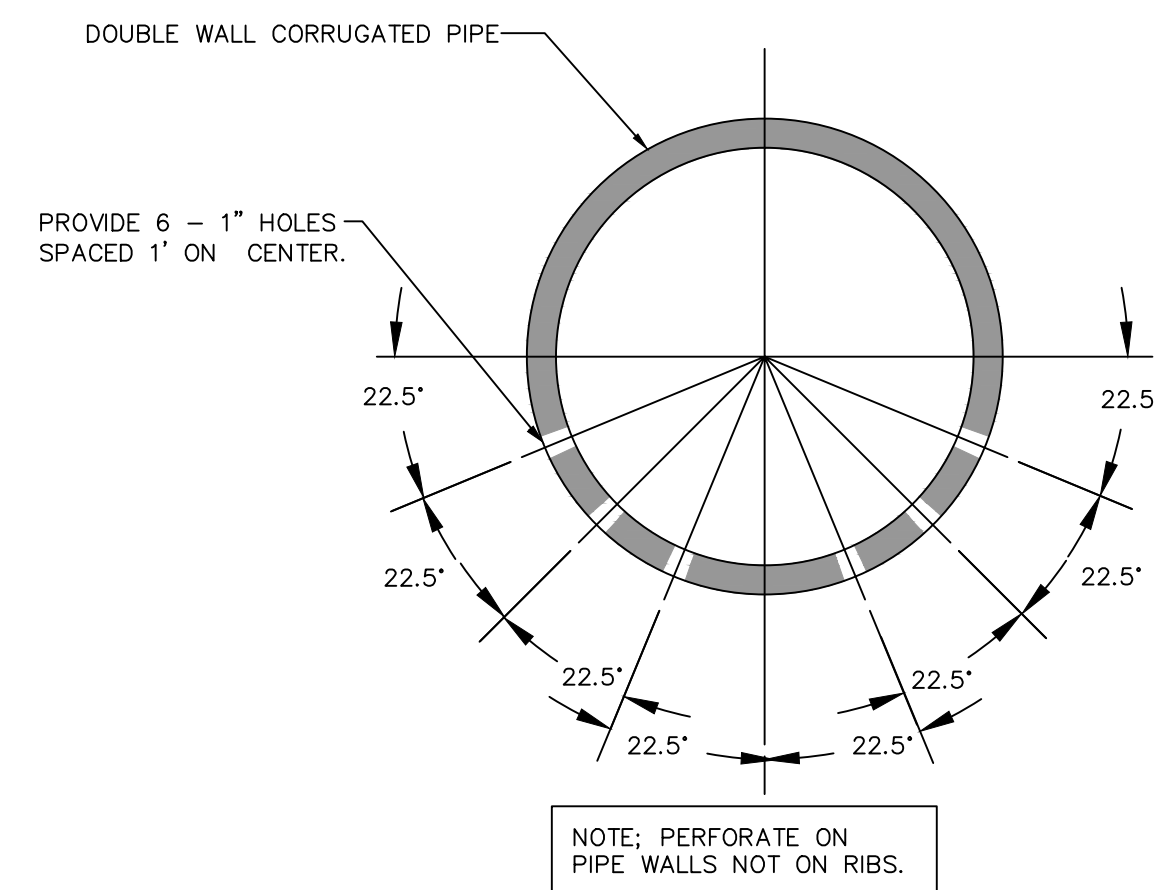
THE HDPE CULVERT, SHALL BE INSTALLED AT A 2% MINIMUM GRADE, TYPICAL OF ALL.

TYPICAL CONSTRUCTION DETAILS

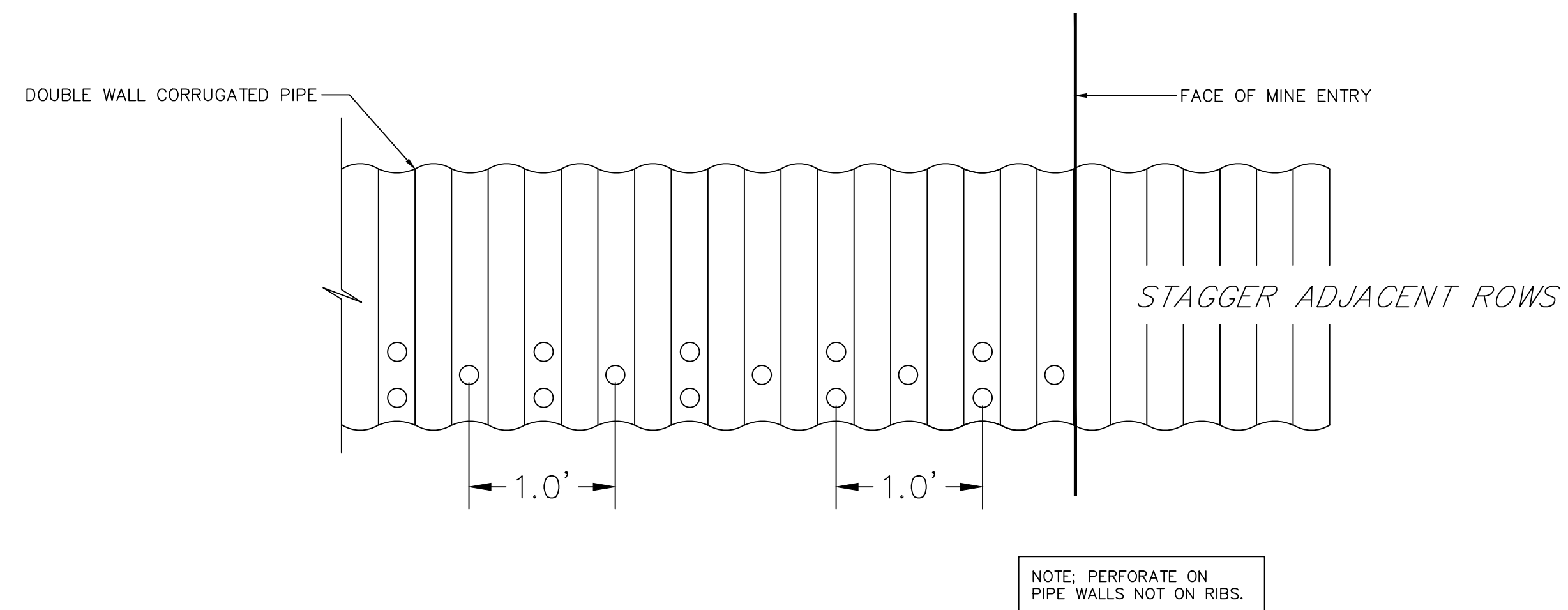
(APPLICABLE TO ALL BAT GATES)



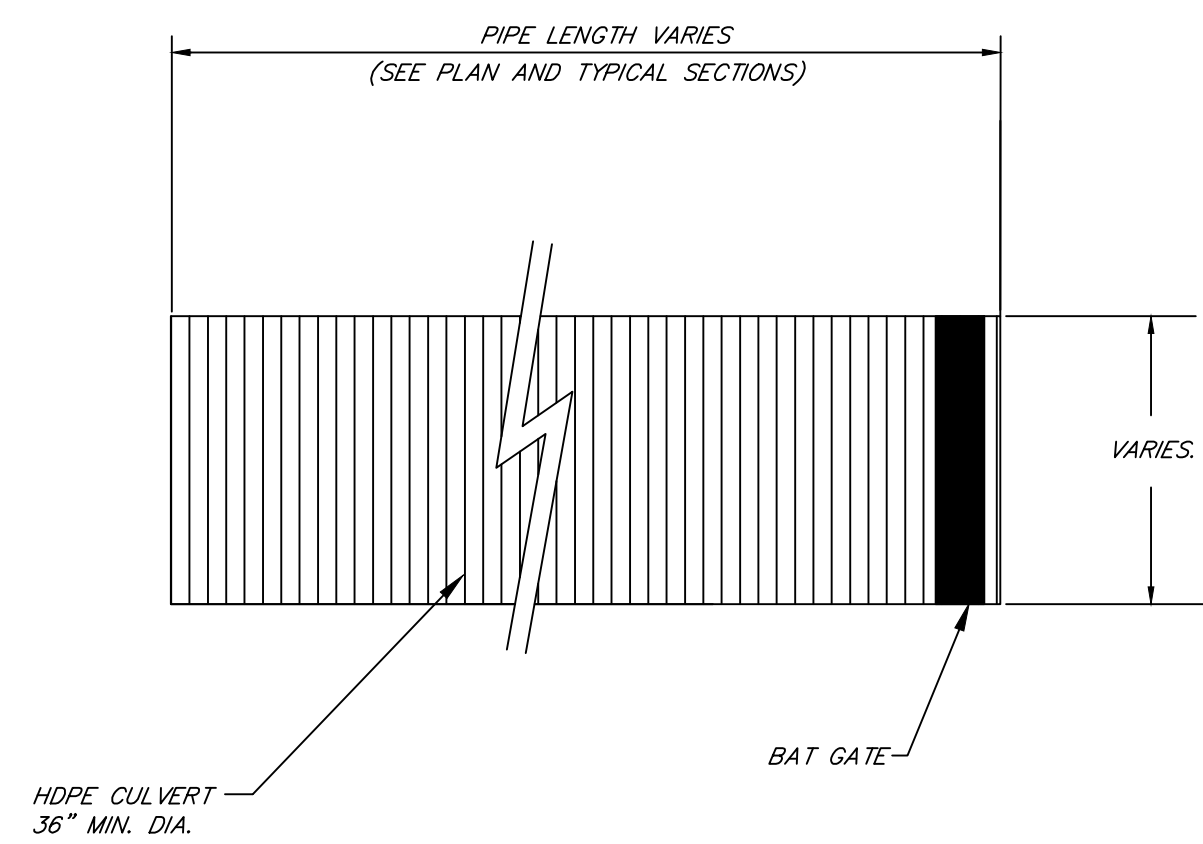
END VIEW



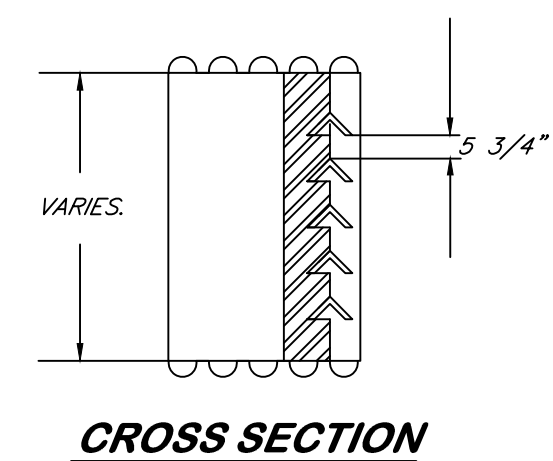
PERFORATION DETAIL



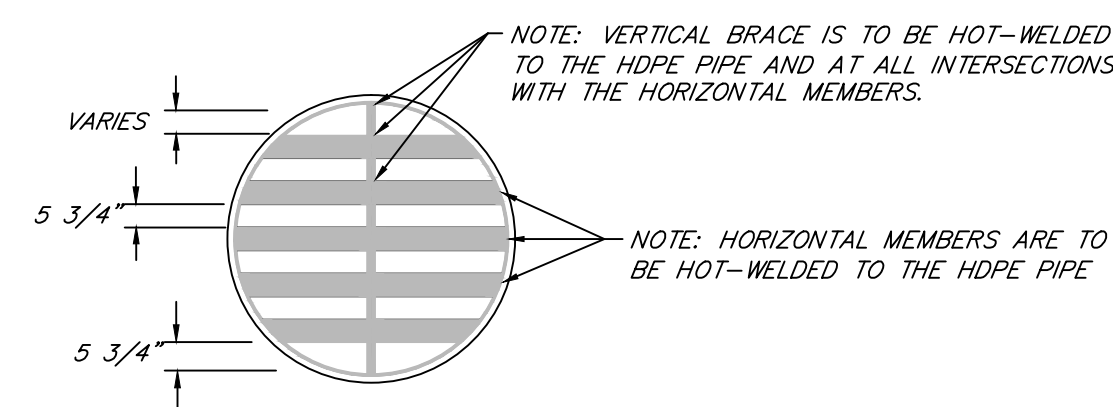
NOTE: PERFORATE ON PIPE WALLS NOT ON RIBS.



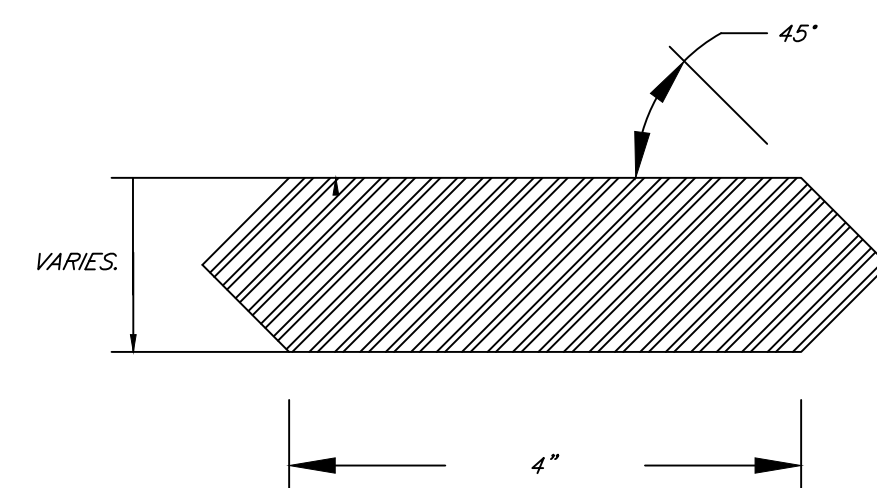
PLAN VIEW



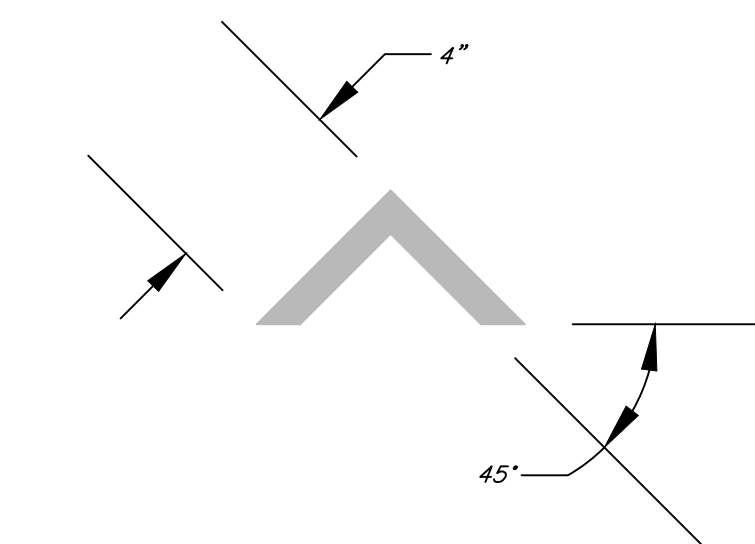
CROSS SECTION



CROSS SECTION



PROFILE VIEW OF VERTICAL BRACE



CROSS SECTION HORIZONTAL BAR

BAT GATE PIPE SIZE CHART	
PORTAL 2	48" PIPE CULVERT
PORTAL 5	48" PIPE CULVERT

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

INDORE (OSBORNE) PORTALS

TYPICAL DETAILS (1)

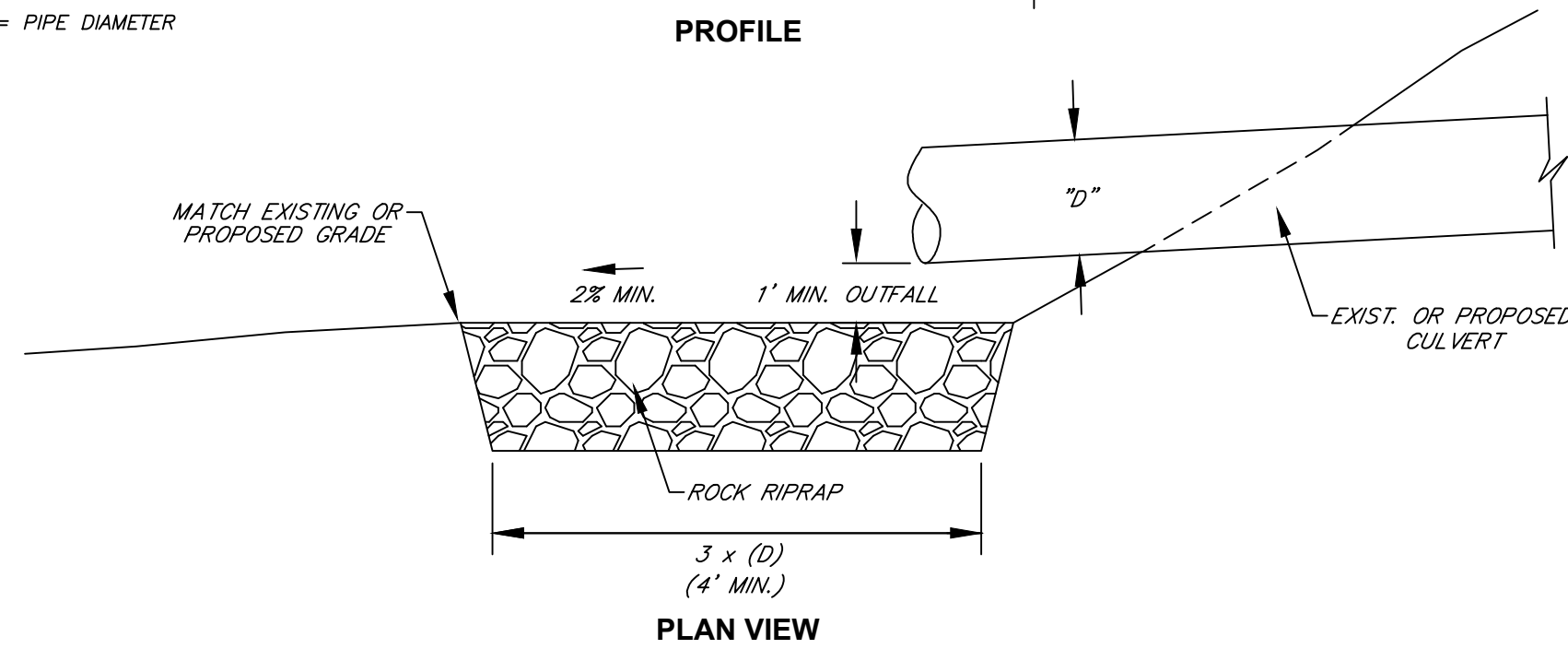
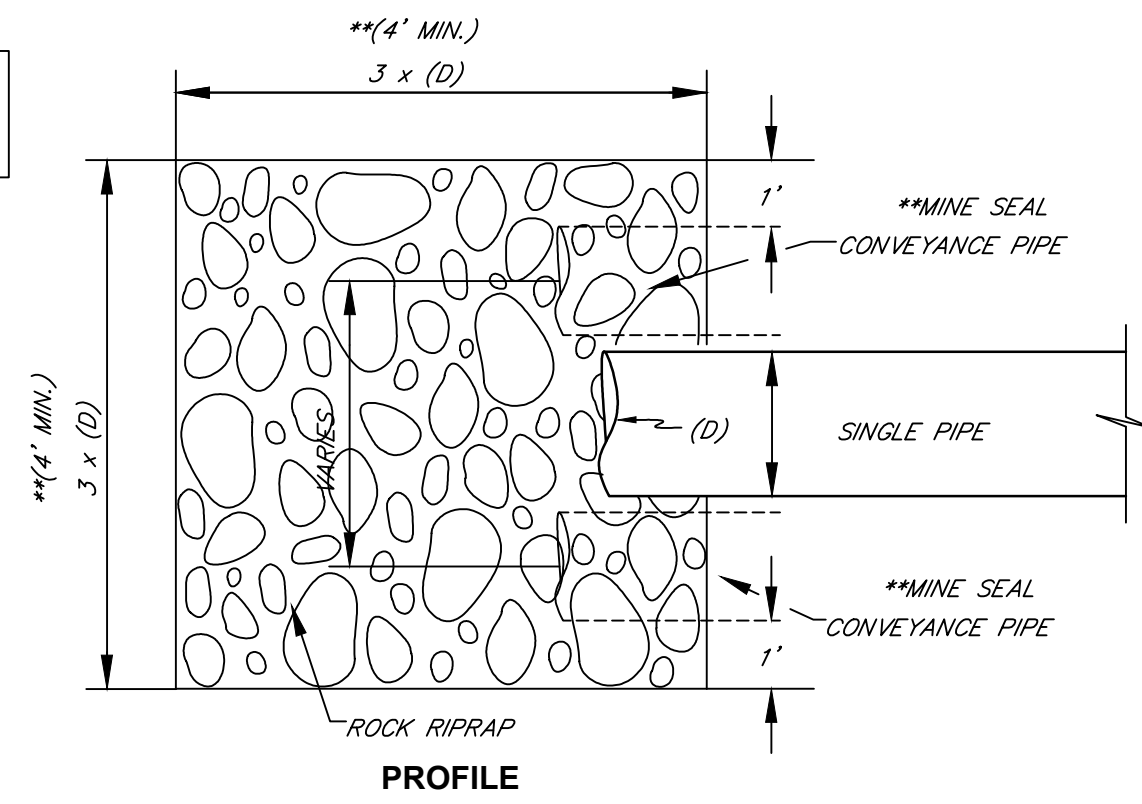
DRAWN BY: DWH
APPROVED BY: AW
DATE: 2/6/2015

SCALE: NTS
SHEET NO. 6
OF 8

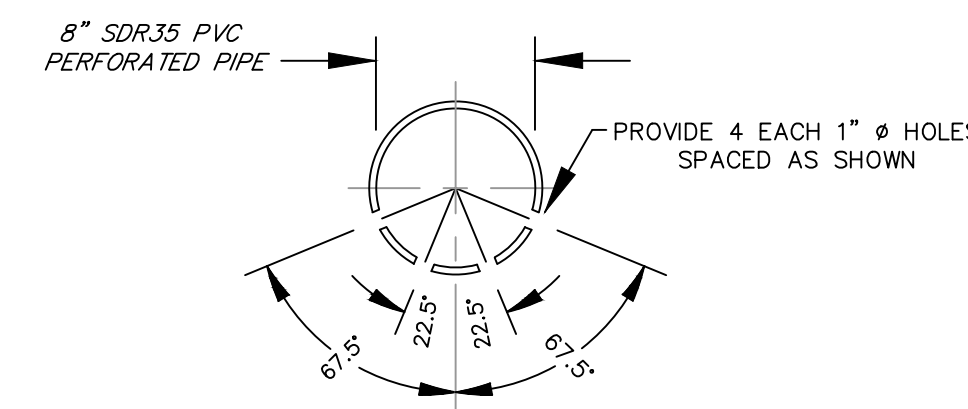
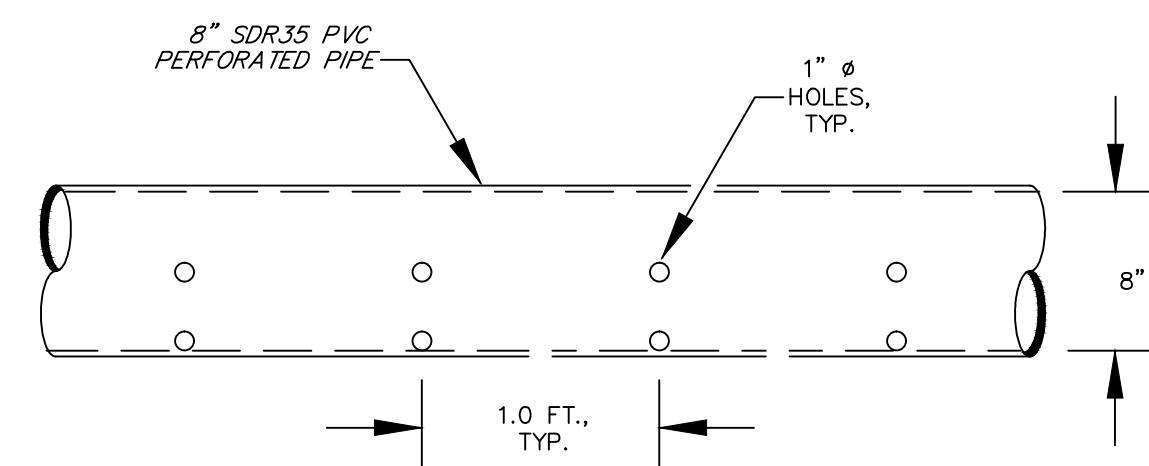
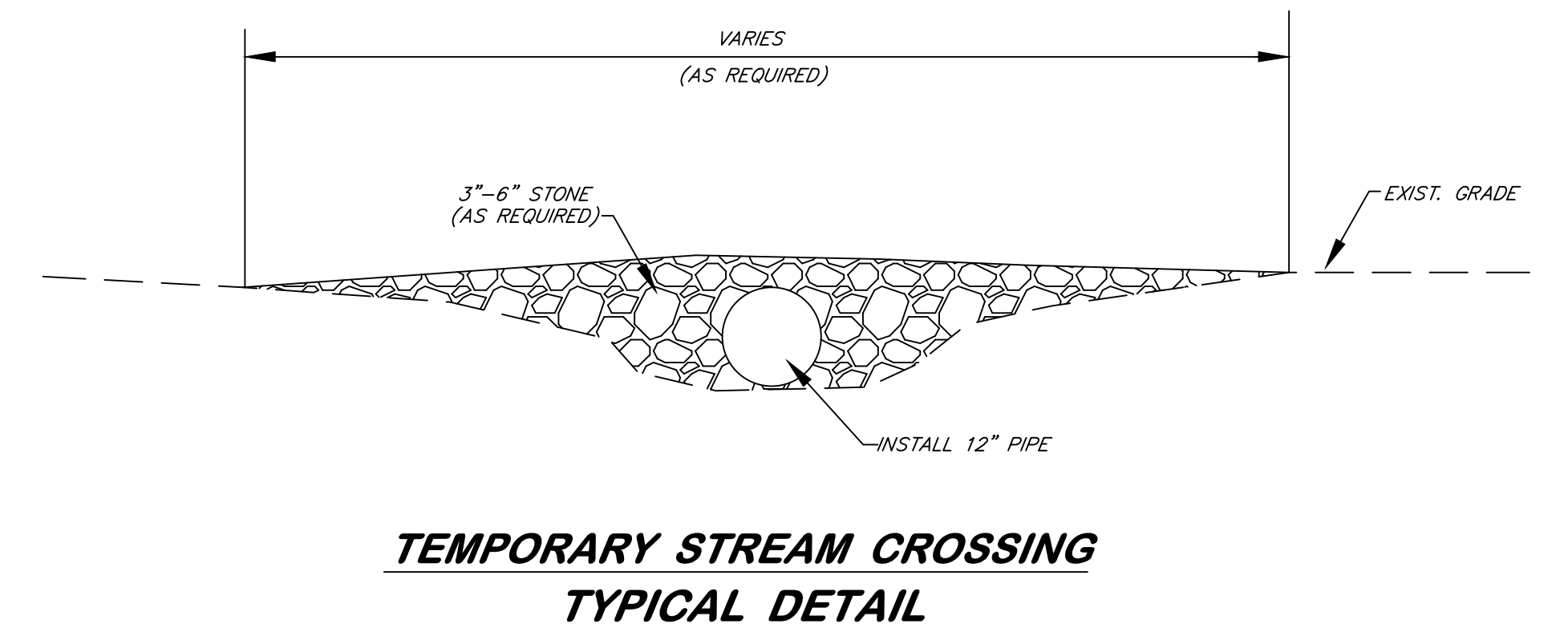
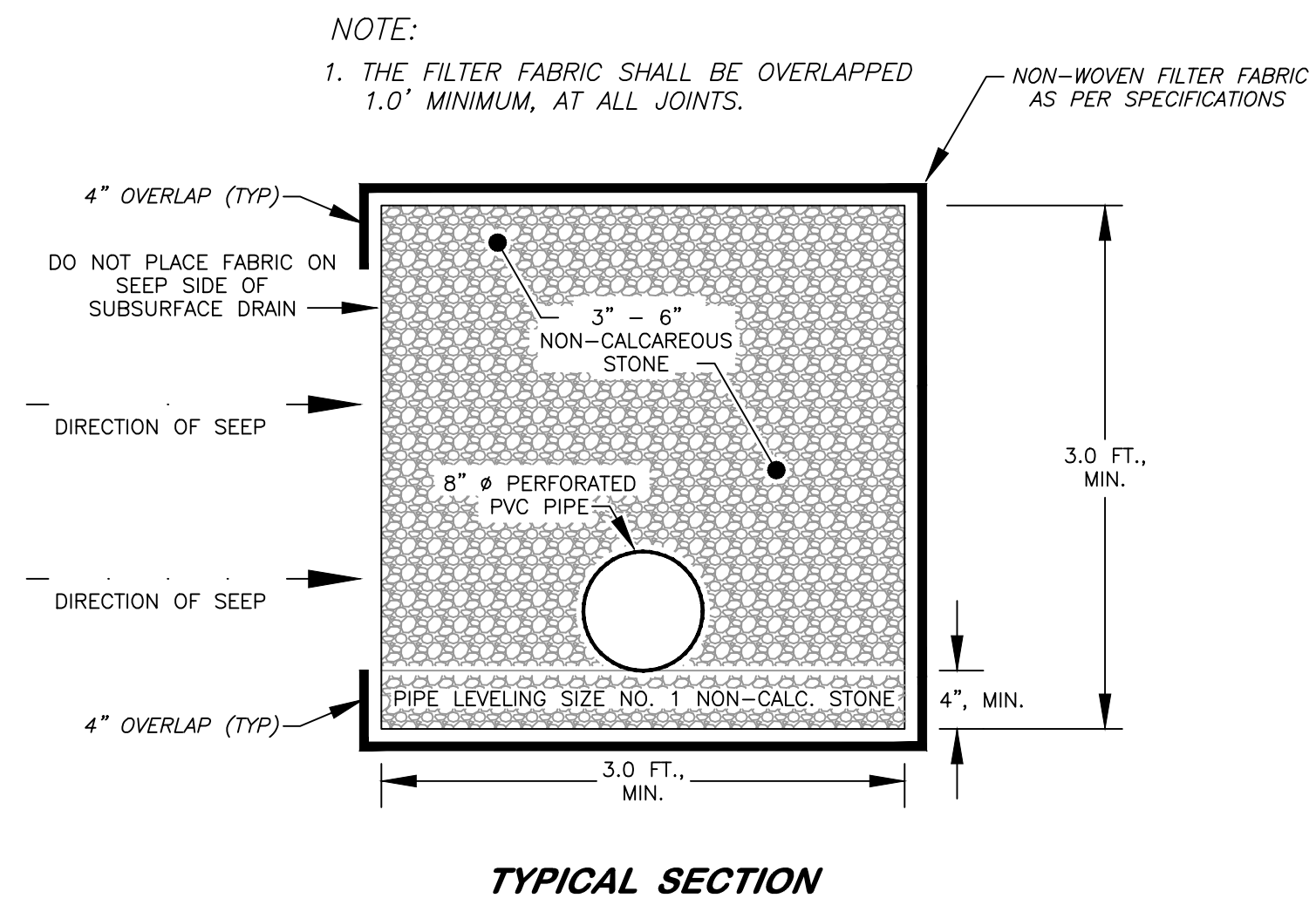
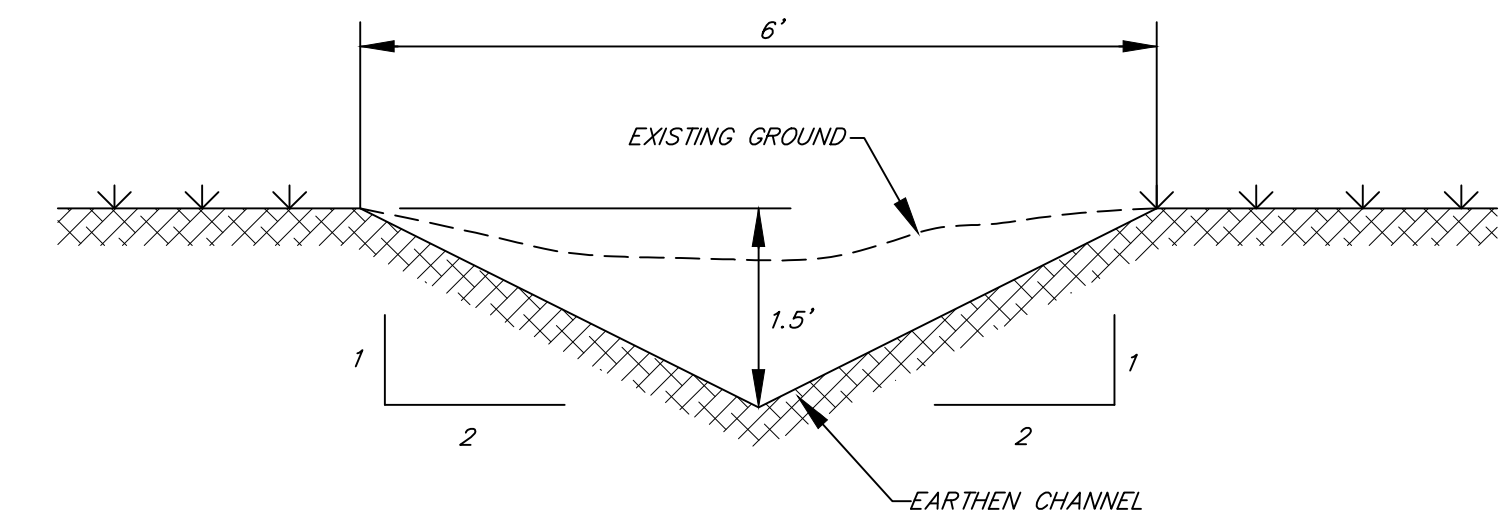
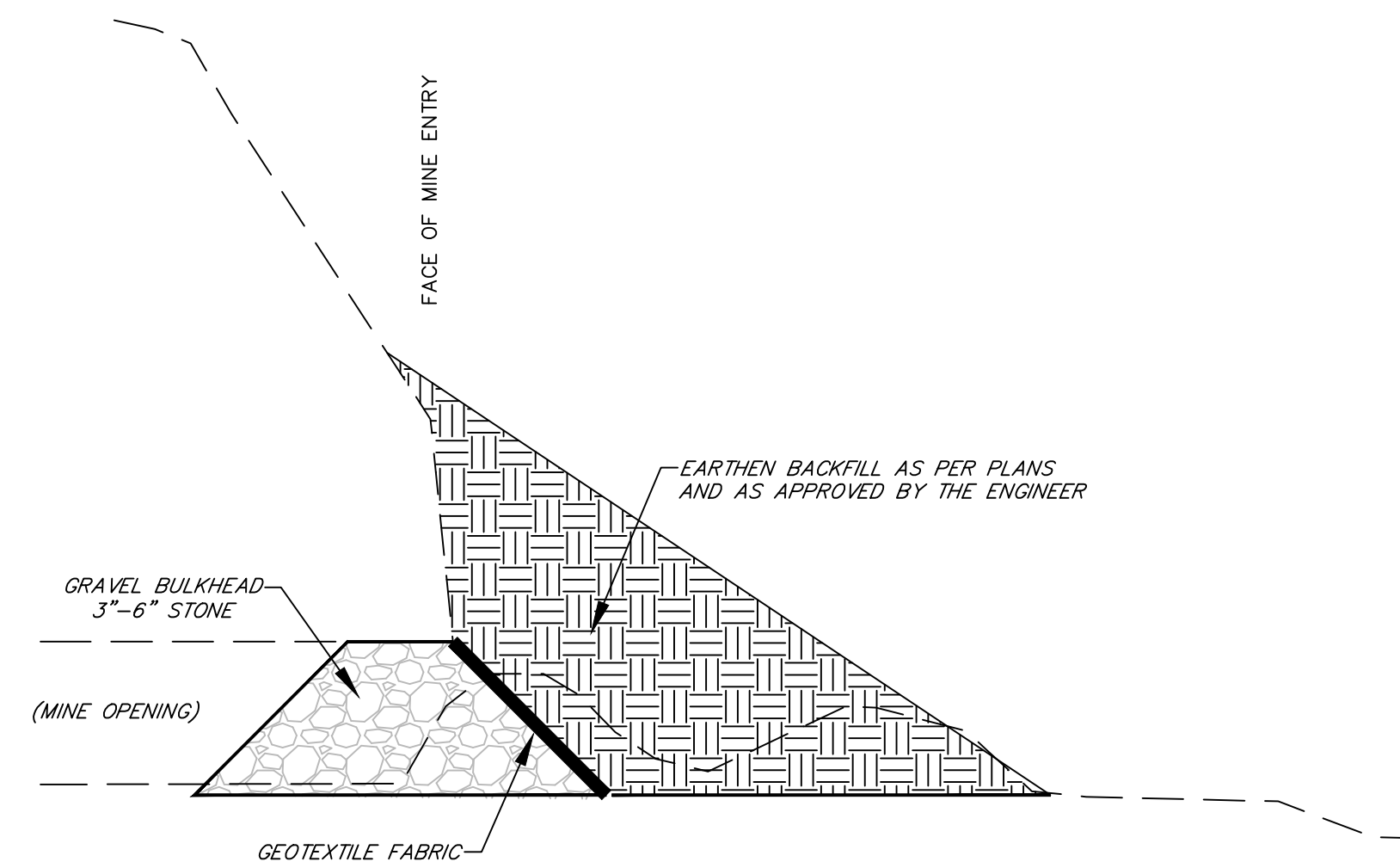
NOTE: WHEN INSTALLING FOR USE WITH BAY GATE PIPE ONLY, MIN. SIZE SHALL BE 1" MIN. BEYOND SIDEWALLS OF PIPE AND A MIN. OF 4' IN LENGTH

ROCK RIPRAP SIZING	
GRADATION	$D_{90} = 12"$
50%	12" - 18"
35%	6" - 12"
15%	3" - 6"

NOTES:
"D" = PIPE DIAMETER



**SPLASH PAD DETAIL
TYPICAL DETAIL**



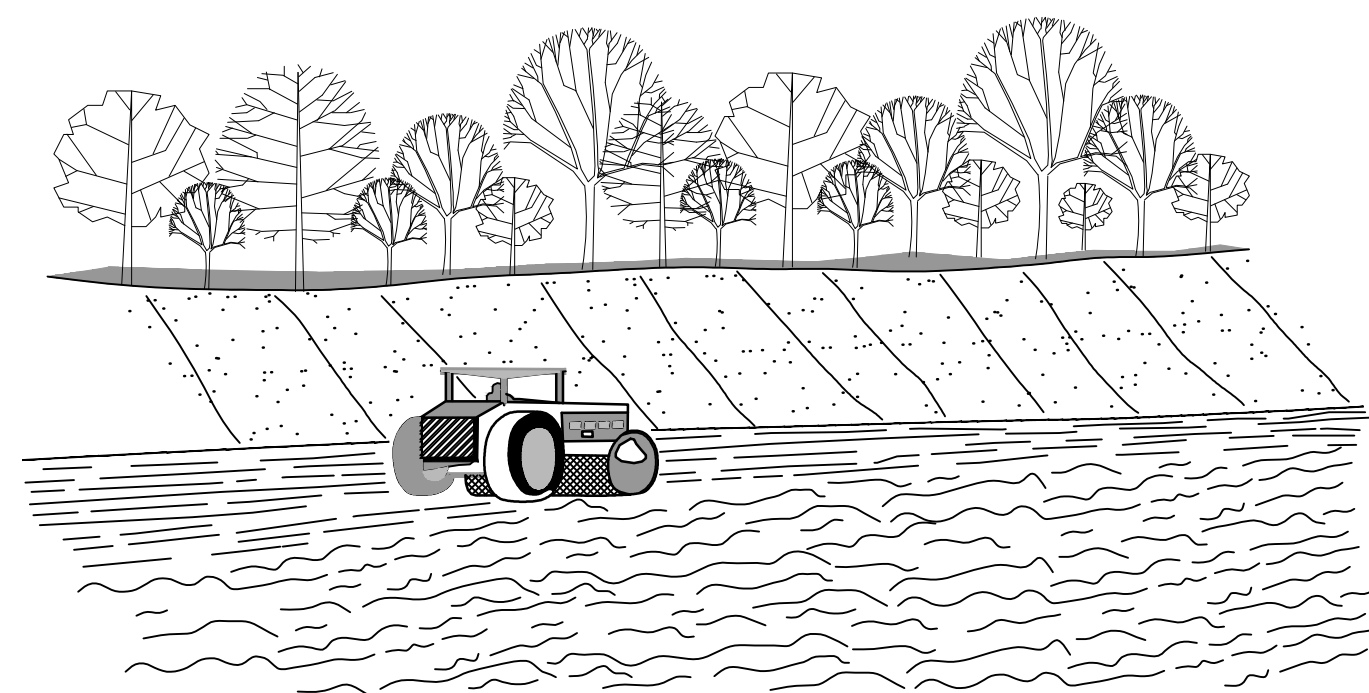
SEEP COLLECTOR DETAIL

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

INDORE (OSBORNE) PORTALS

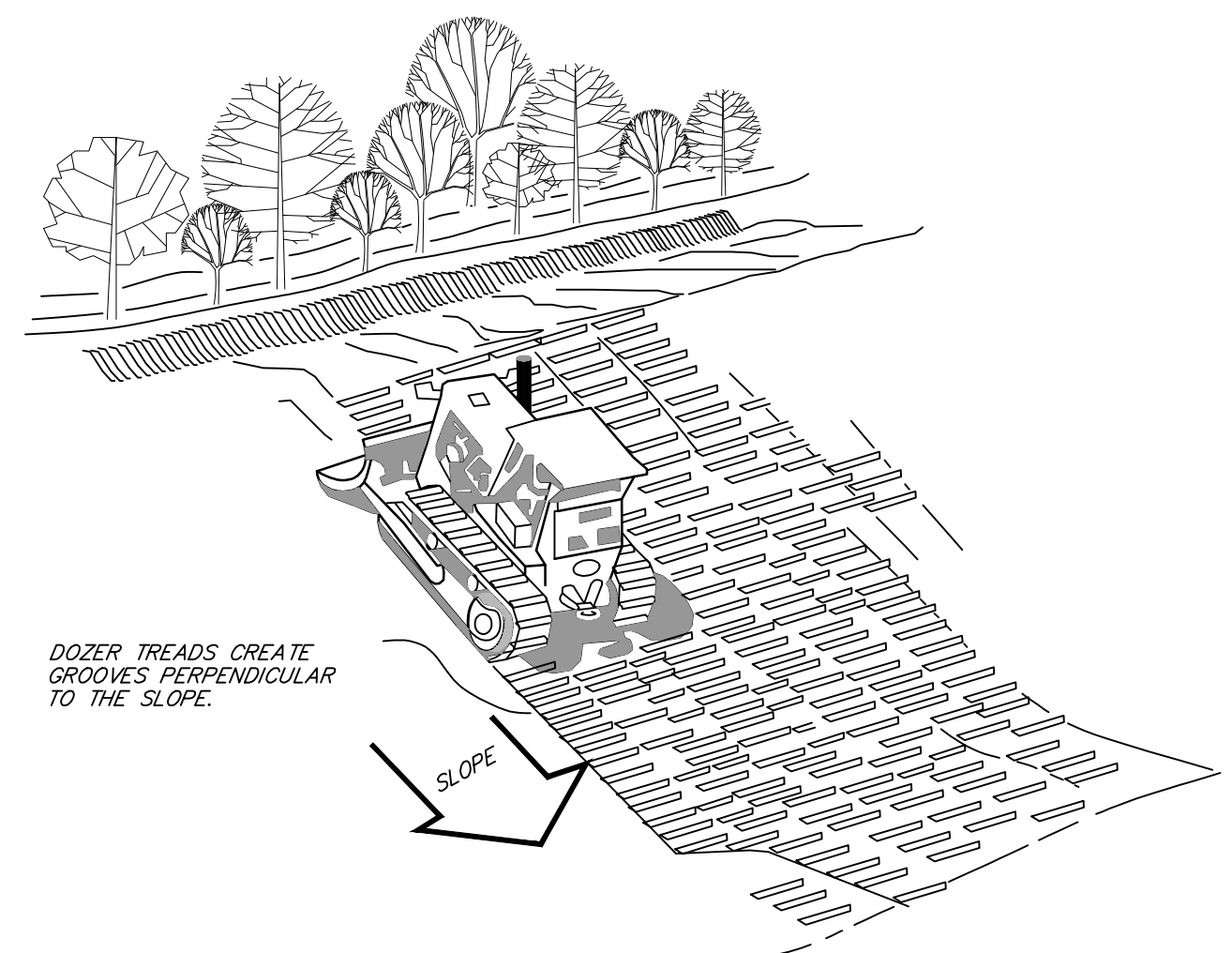
TYPICAL DETAILS (2)

DRAWN BY: DWH	SCALE: NTS
APPROVED BY: AW	SHEET NO. 7
DATE: 2/6/2015	OF 8



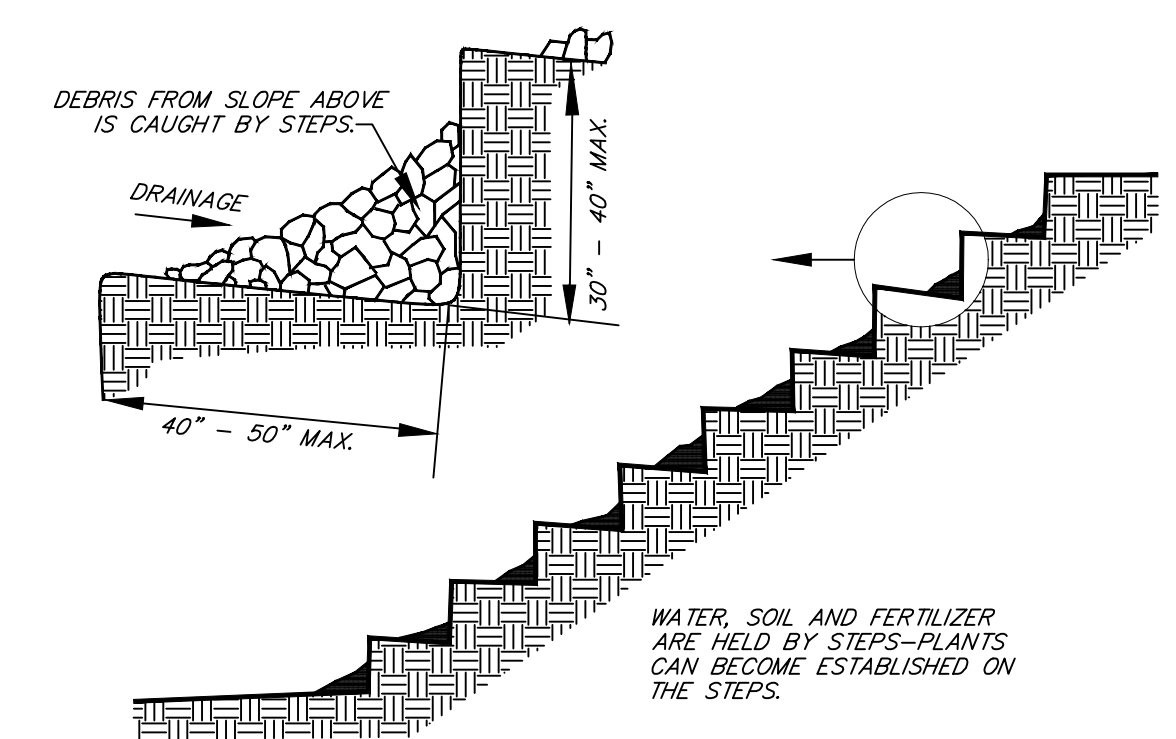
FILL SLOPE TREATMENT

EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE OF THE SLOPE IS ALLOWED TO REMAIN LOOSE SO THAT THE ROCKS, CLODS, ETC. REACH THE NATURAL ANGLE OF REPOSE.

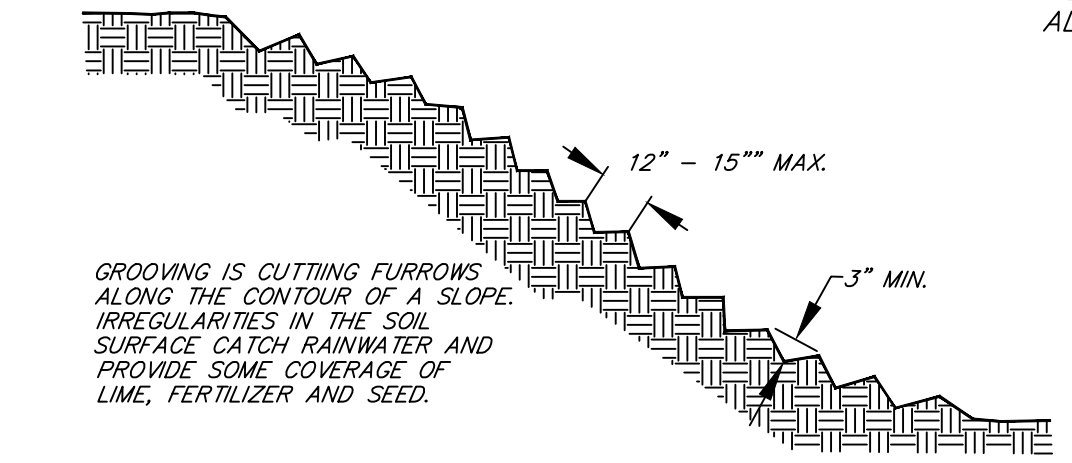


TRACKING

DOZER TREADS CREATE GROOVES PERPENDICULAR TO THE SLOPE.



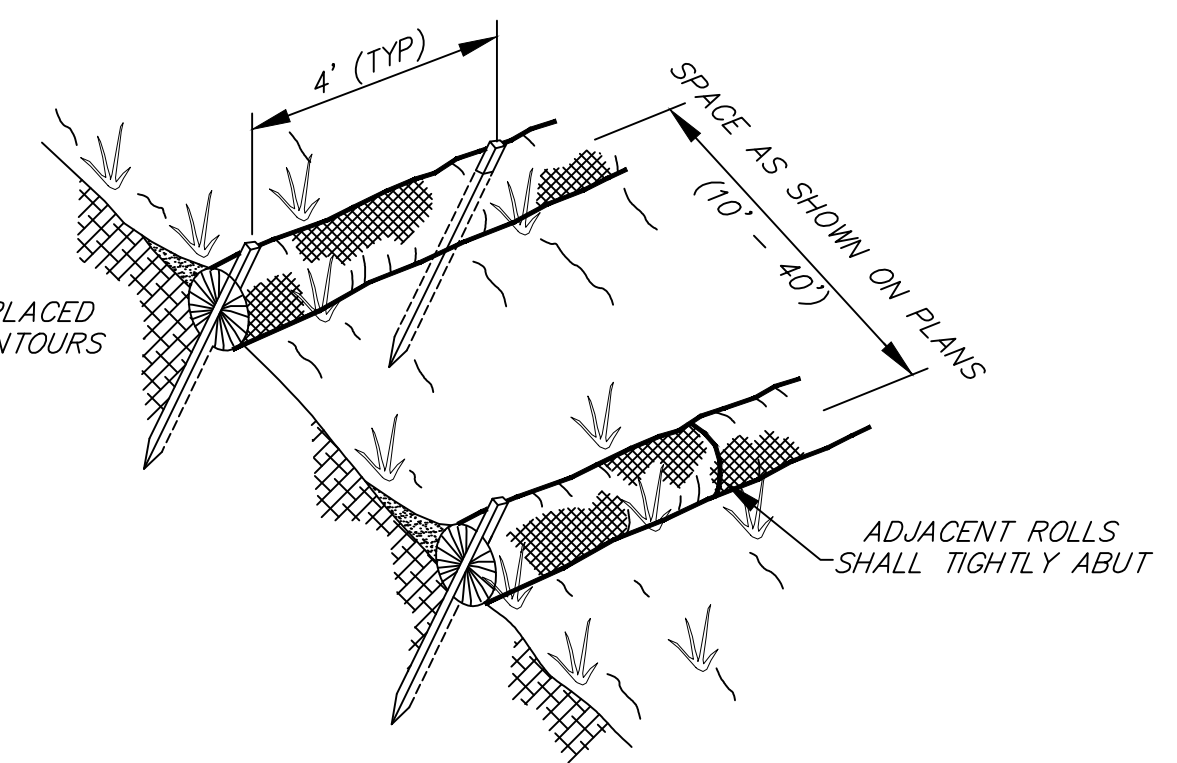
STAIR STEPPING CUT SLOPES



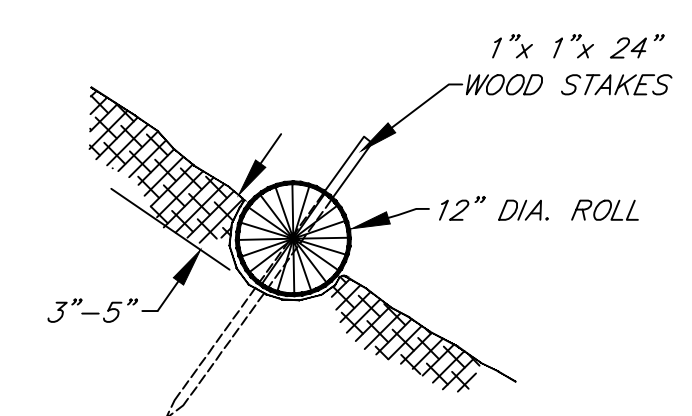
GROOVING SLOPES

GROOVING IS CUTTING FURROWS ALONG THE CONTOUR OF A SLOPE. IRREGULARITIES IN THE SOIL SURFACE CAUGHT RAINWATER AND PROVIDE SOME COVERAGE OF LIME, FERTILIZER AND SEED.

ROLLS MUST BE PLACED ALONG SLOPE CONTOURS

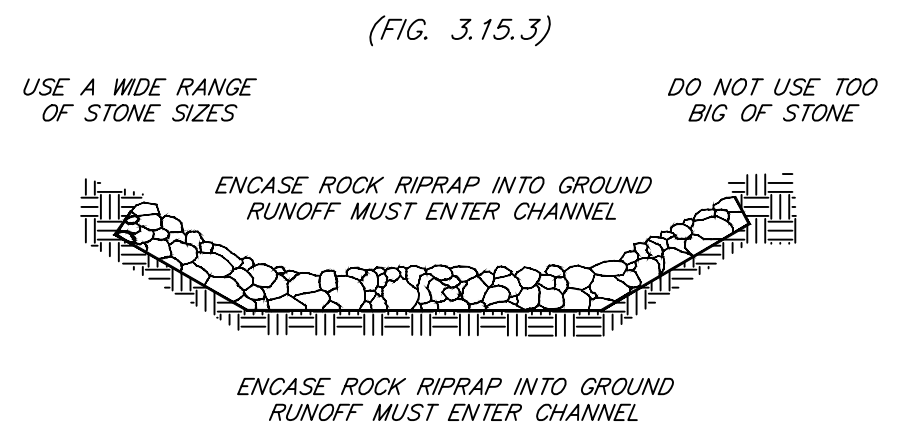


12" WATTLE EROSION CONTROL



NOTE: STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOURS. RUNOFF MUST NOT BE ALLOWED TO FLOW UNDER OR AROUND THE ROLLS.

RIPRAP DIVERSION

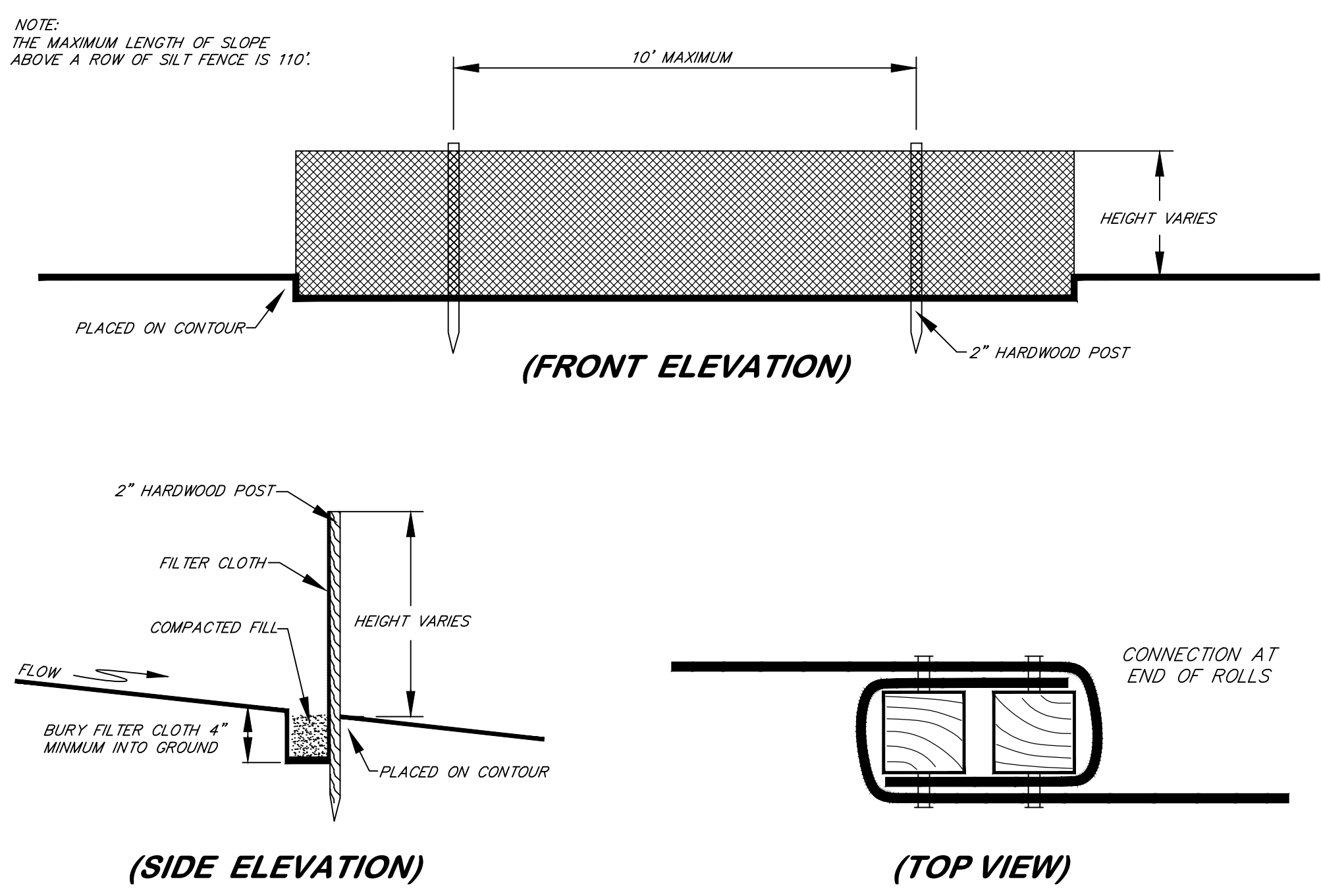


USE A WIDE RANGE OF STONE SIZES DO NOT USE TOO BIG OF STONE

ENCASE ROCK RIPRAP INTO GROUND RUNOFF MUST ENTER CHANNEL

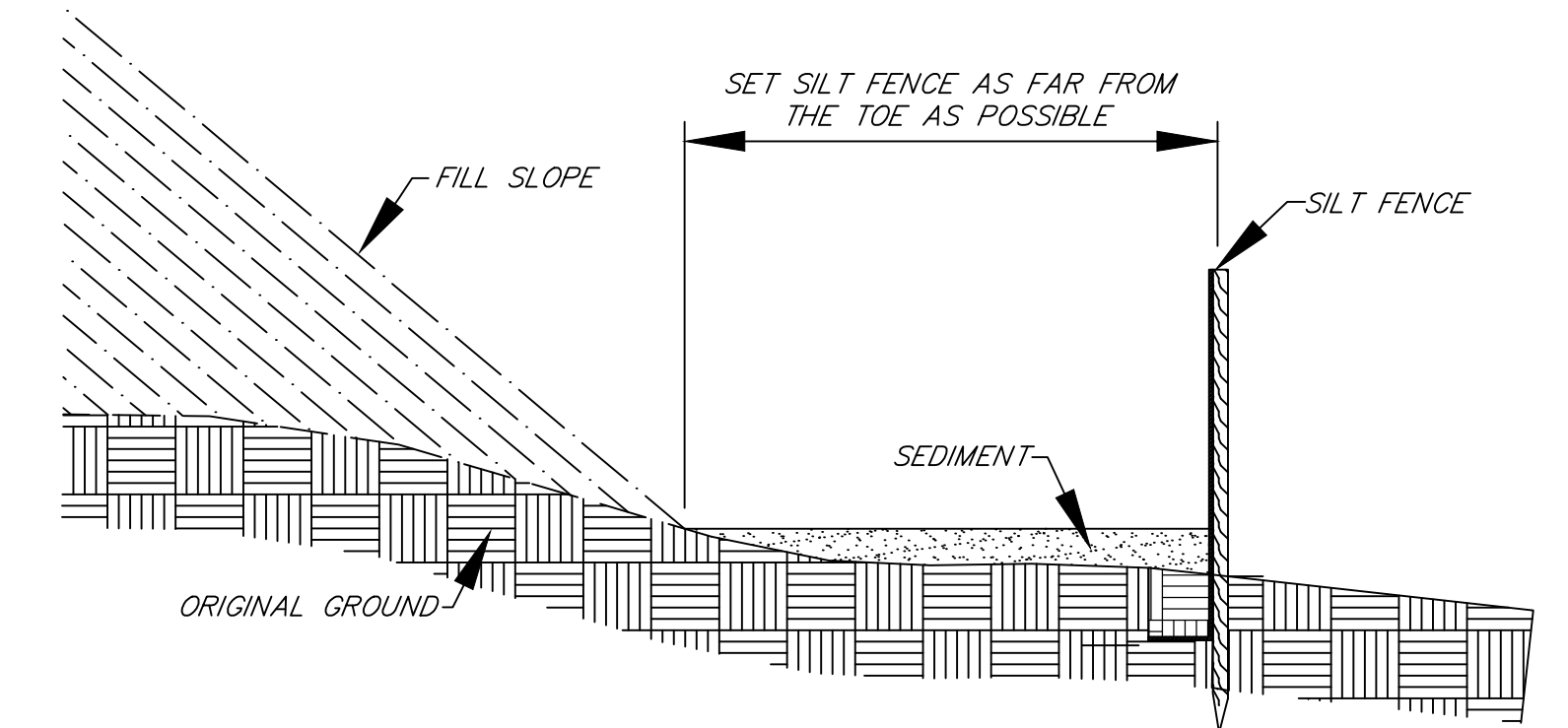
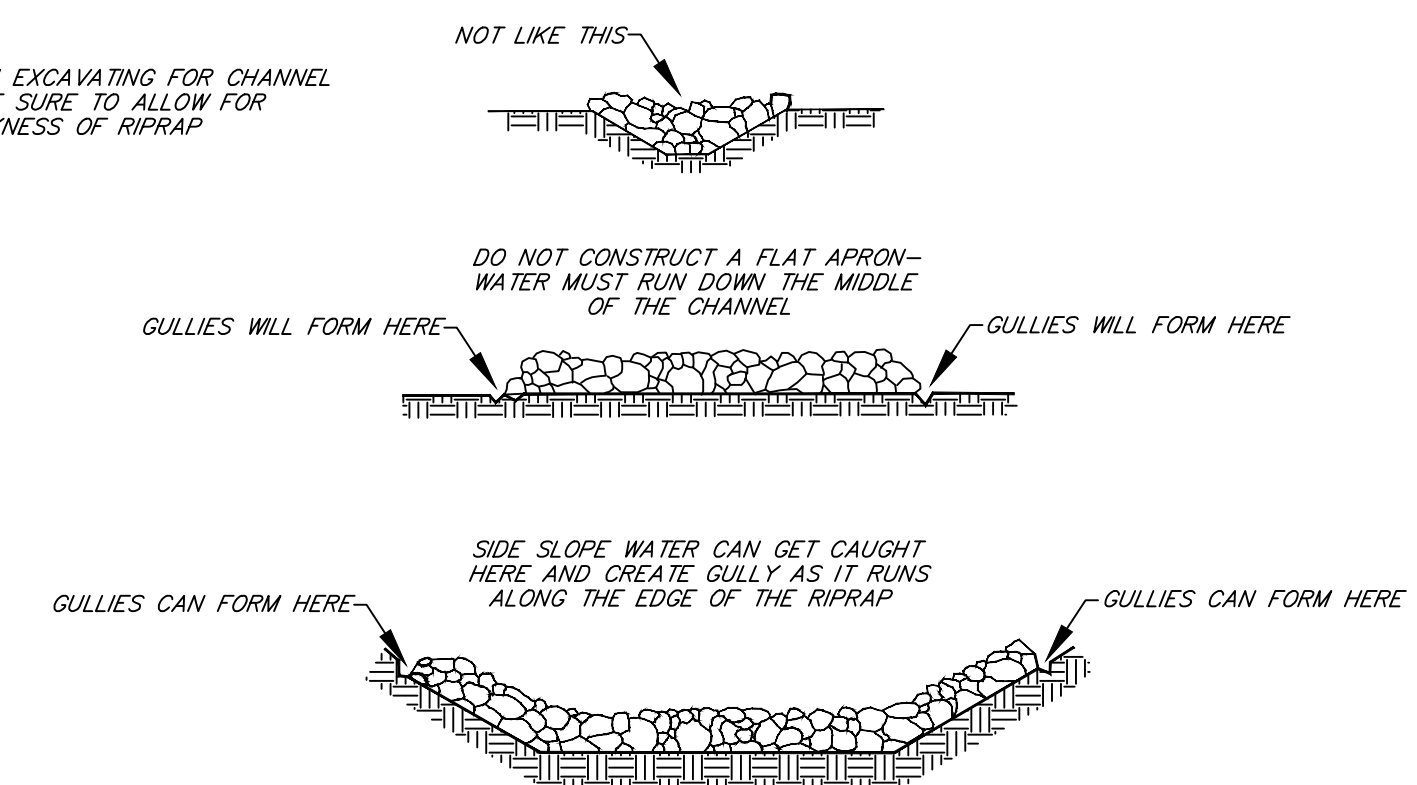
SILT FENCE

(FIG. 3.27.2)



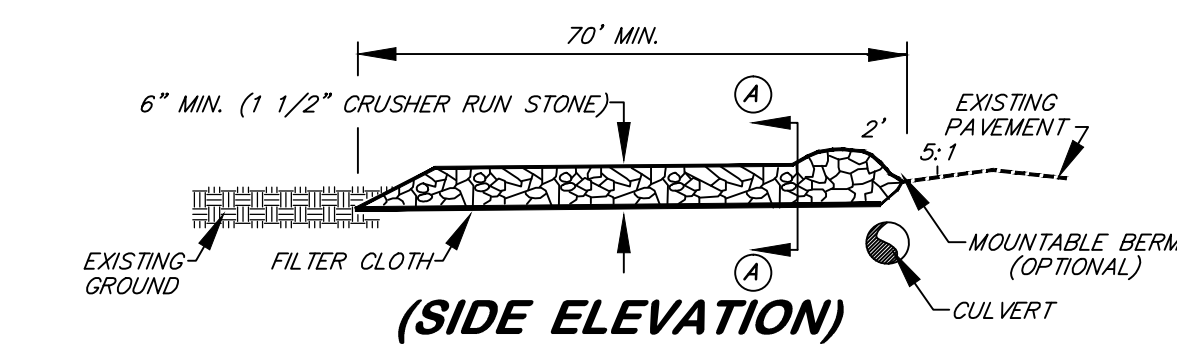
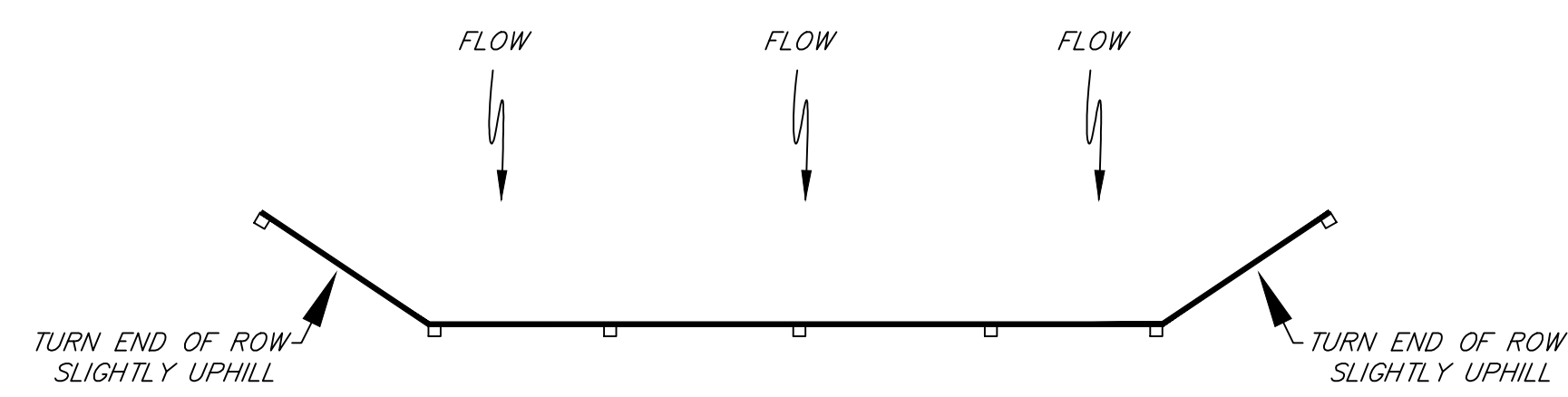
NOTE: THE MAXIMUM LENGTH OF SLOPE ABOVE A ROW OF SILT FENCE IS 110'.

COMMON PROBLEMS

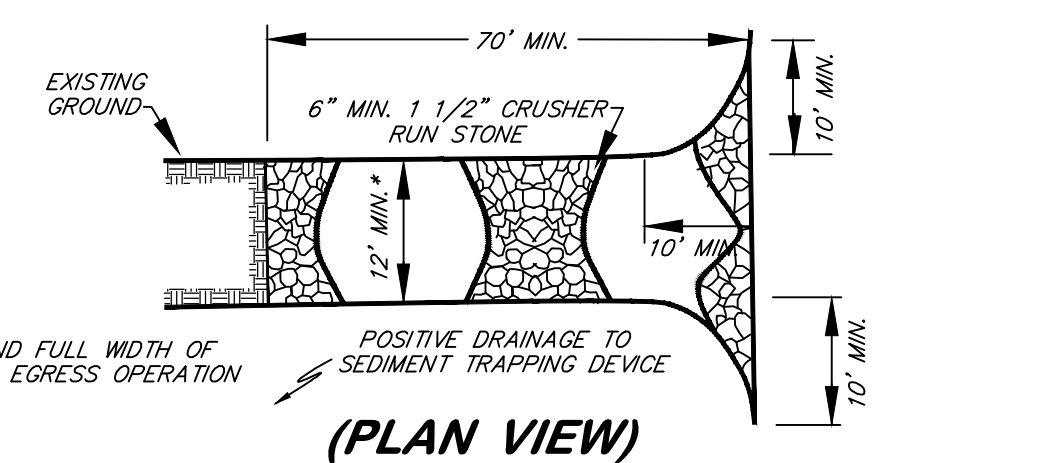


PLACEMENT OF SILT FENCE

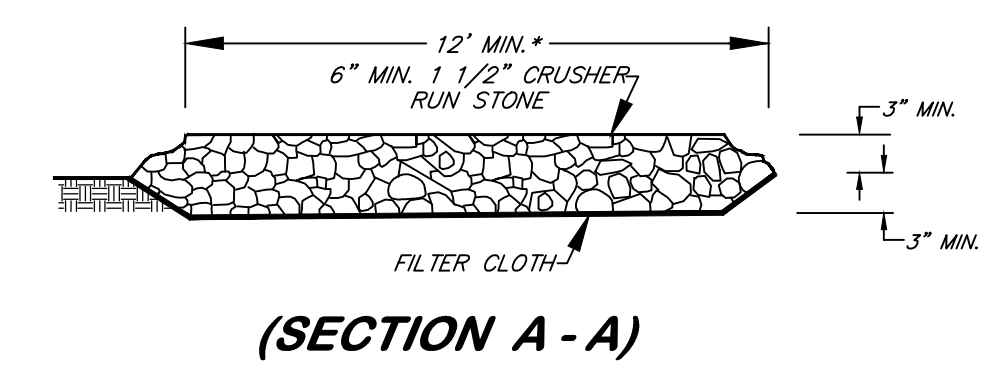
(FIG. 3.27.1)



(SIDE ELEVATION)



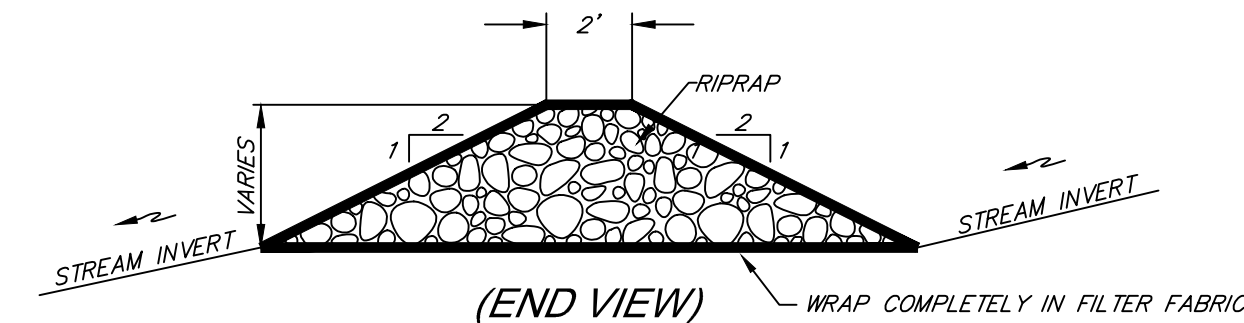
(PLAN VIEW)



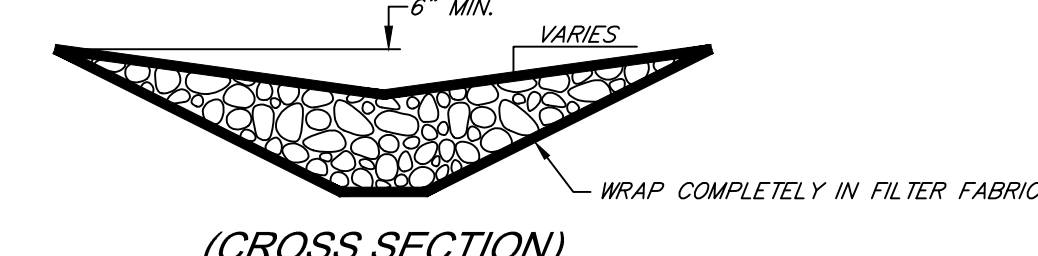
(SECTION A-A)

STONE CONSTRUCTION ENTRANCE

(FIG. 3.02.1)



(END VIEW)



(CROSS SECTION)

IN-STREAM ROCK CHECK DAM

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

INDORE (OSBORNE) PORTALS

**SEDIMENT CONTROL
DETAILS**

DRAWN BY: DWH	SCALE: NONE
APPROVED BY: AW	SHEET NO. 8
DATE: 2/6/2015	OF 8