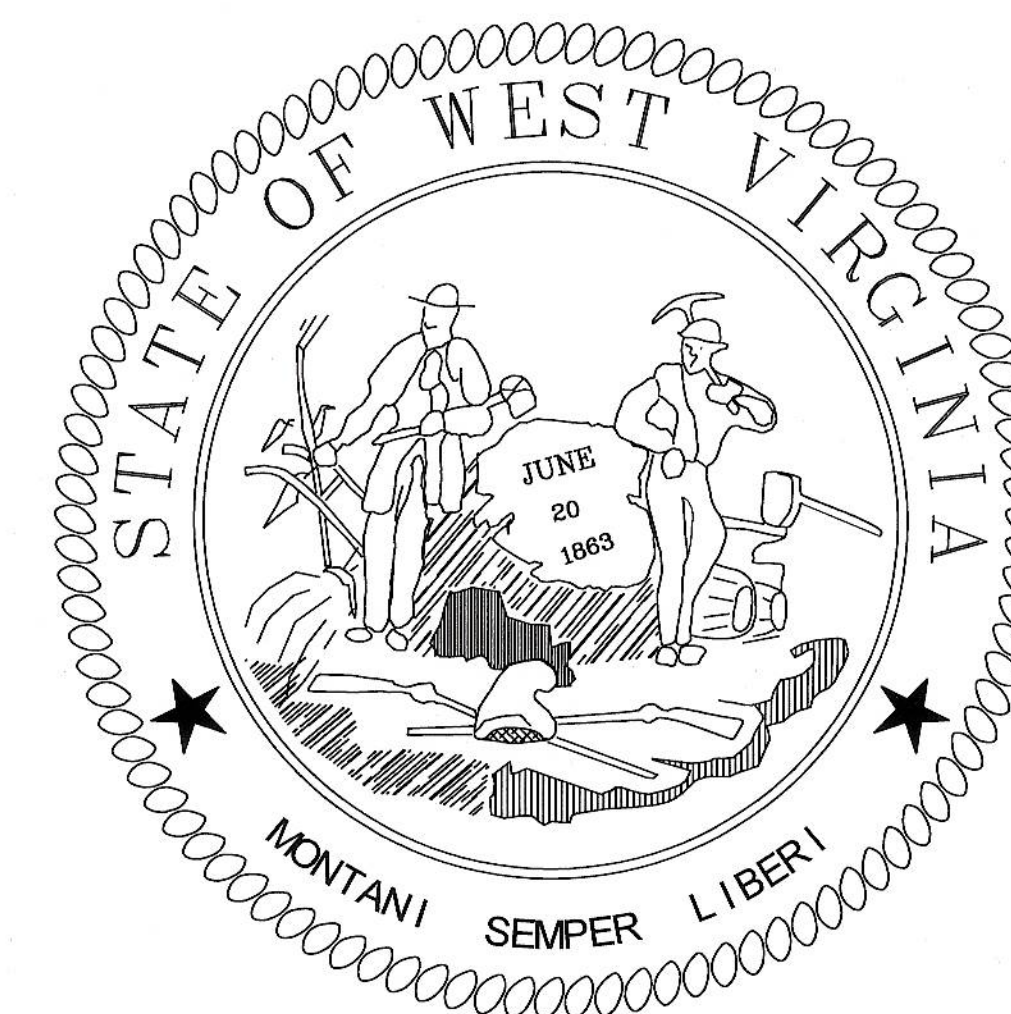
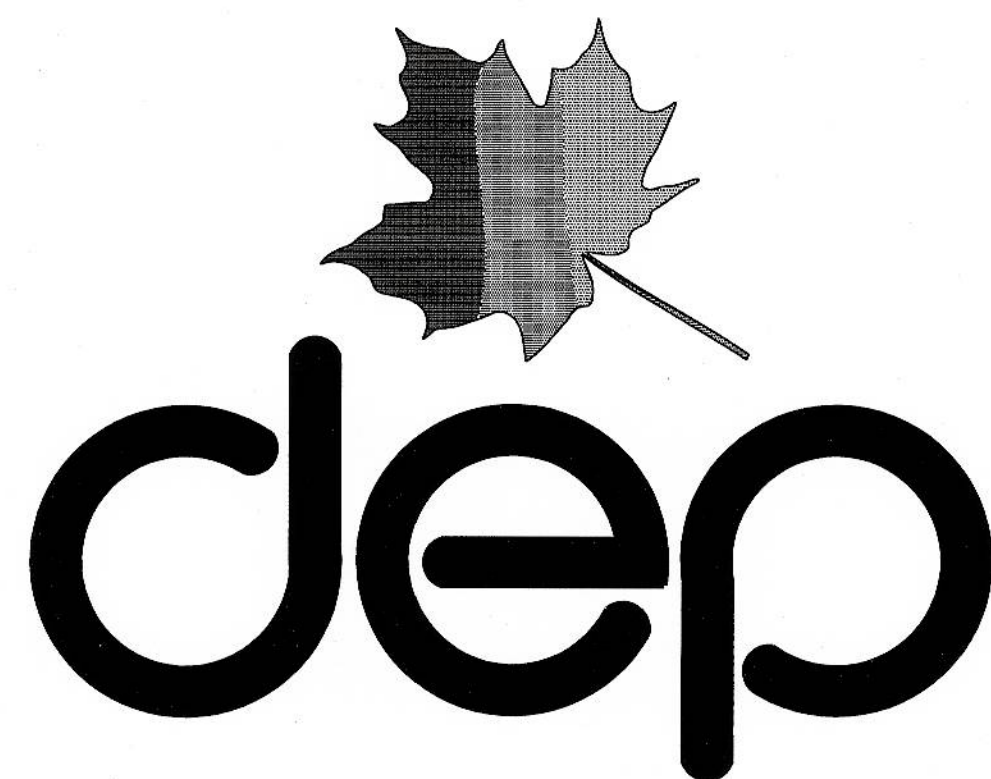
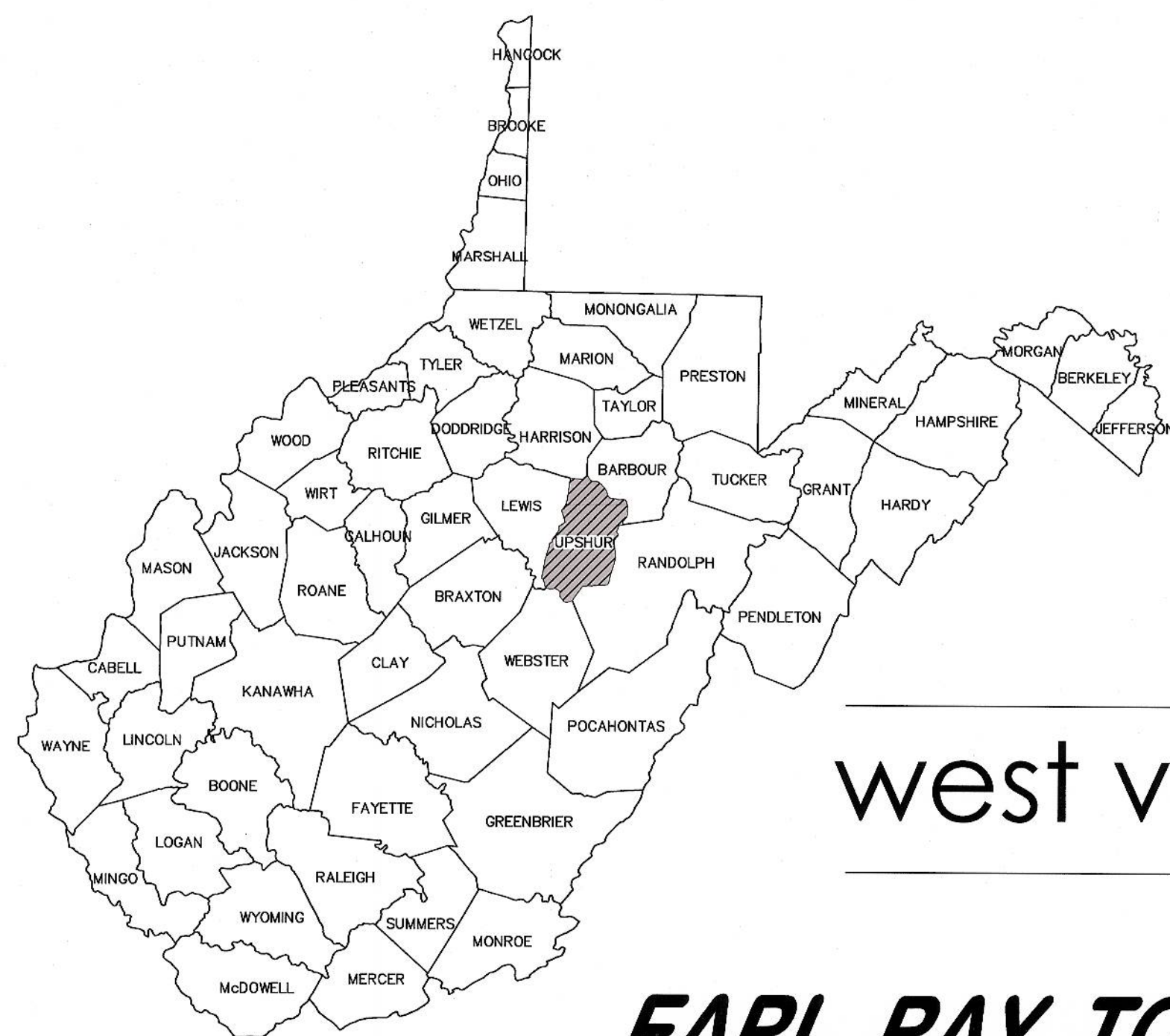




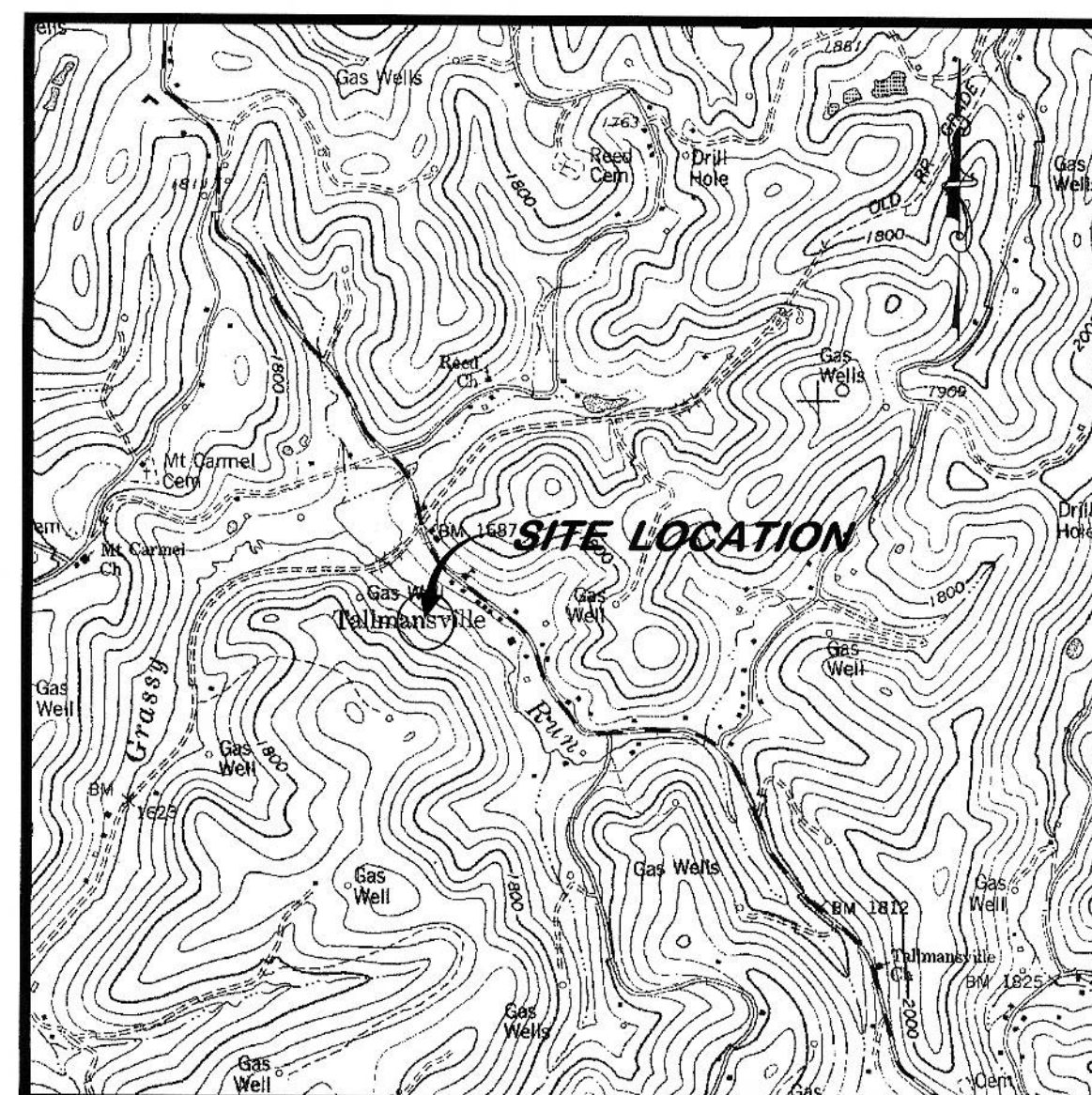
west virginia department of environmental protection

EARL RAY TOMBLIN, GOVERNOR RANDY C. HUFFMAN, CABINET SECRETARY

OFFICE OF ABANDONED MINE LANDS AND RECLAMATION
TALLMANSVILLE (ANDERSON) PORTALS

AT TALLMANSVILLE
UPSHUR COUNTY, WEST VIRGINIA

VICINITY MAP



USGS 7.5' QUAD (BUCKHANNON)

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
2	EXISTING CONDITIONS AND TAX MAP OVERLAY
3	RECLAMATION AND SEDIMENT/EROSION CONTROL PLAN
4	GROSS SECTIONS, PROFILES AND TYPICAL SECTION
5	TYPICAL DETAILS (1)
6	TYPICAL DETAILS (2)
7	SEDIMENT AND EROSION CONTROL DETAILS

BID SCHEDULE

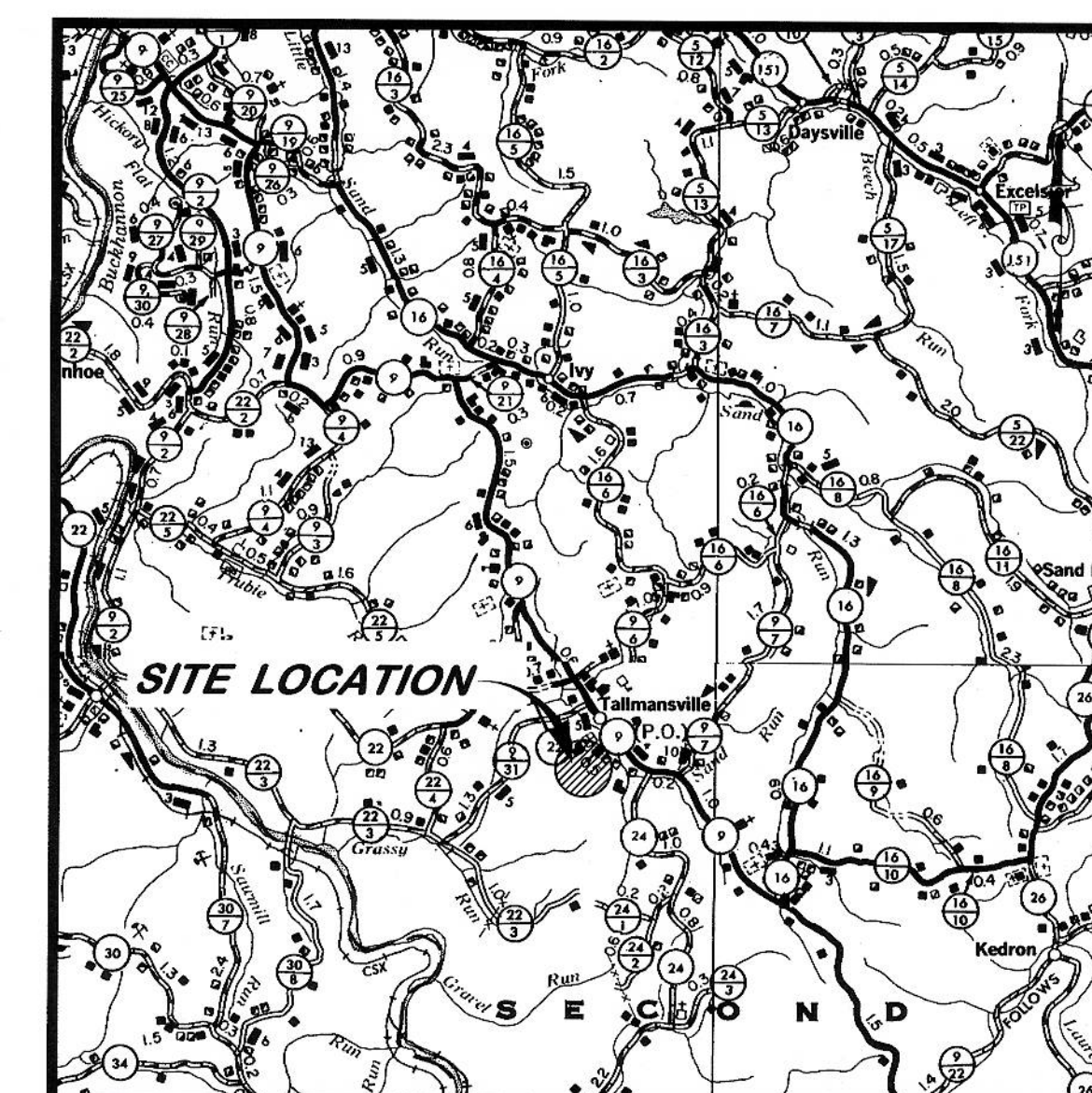
ITEM NO.	DESCRIPTION	QUANTITY
1.0	MOBILIZATION AND DEMOBILIZATION (LIMITED TO 10% OF TOTAL BID)	LS
2.0	CONSTRUCTION LAYOUT (LIMITED TO 5% OF TOTAL BID)	LS
3.0	QUALITY CONTROL (LIMITED TO 3% OF TOTAL BID)	LS
4.1	SITE PREPARATION (LIMITED TO 10% OF TOTAL BID)	LS
4.2	PERMANENT ACCESS ROAD STONE	150 TON
4.3	GRAVEL ROAD REHABILITATION	85 TON
5.1	SILT FENCE	545 LF
5.2	12" STRAW WATTLES	175 LF
5.3	STONE CONSTRUCTION ENTRANCE	25 TON
6.0	REVEGETATION	1 AC.
7.1	6" WIDE GRASS LINED "VEE" CHANNEL	90 LF
7.2	6" WIDE RIPRAP "VEE" CHANNEL	50 LF
7.3	15" HDPE PIPE	45 LF
7.4	SPLASH PAD	1 EA.
7.5	4 X 4 UNDERDRAIN	100 LF
7.6	UNDERDRAIN CONVEYANCE PIPE	100 LF
9.1	SUBSIDENCE SOCKS	2 EA.
9.2	WET MINE SEAL	1 EA.
9.3	BULKHEAD STONE	35 TON
9.4	SODA ASH BRIQUETTES (50 LB BAG)	3 EA.



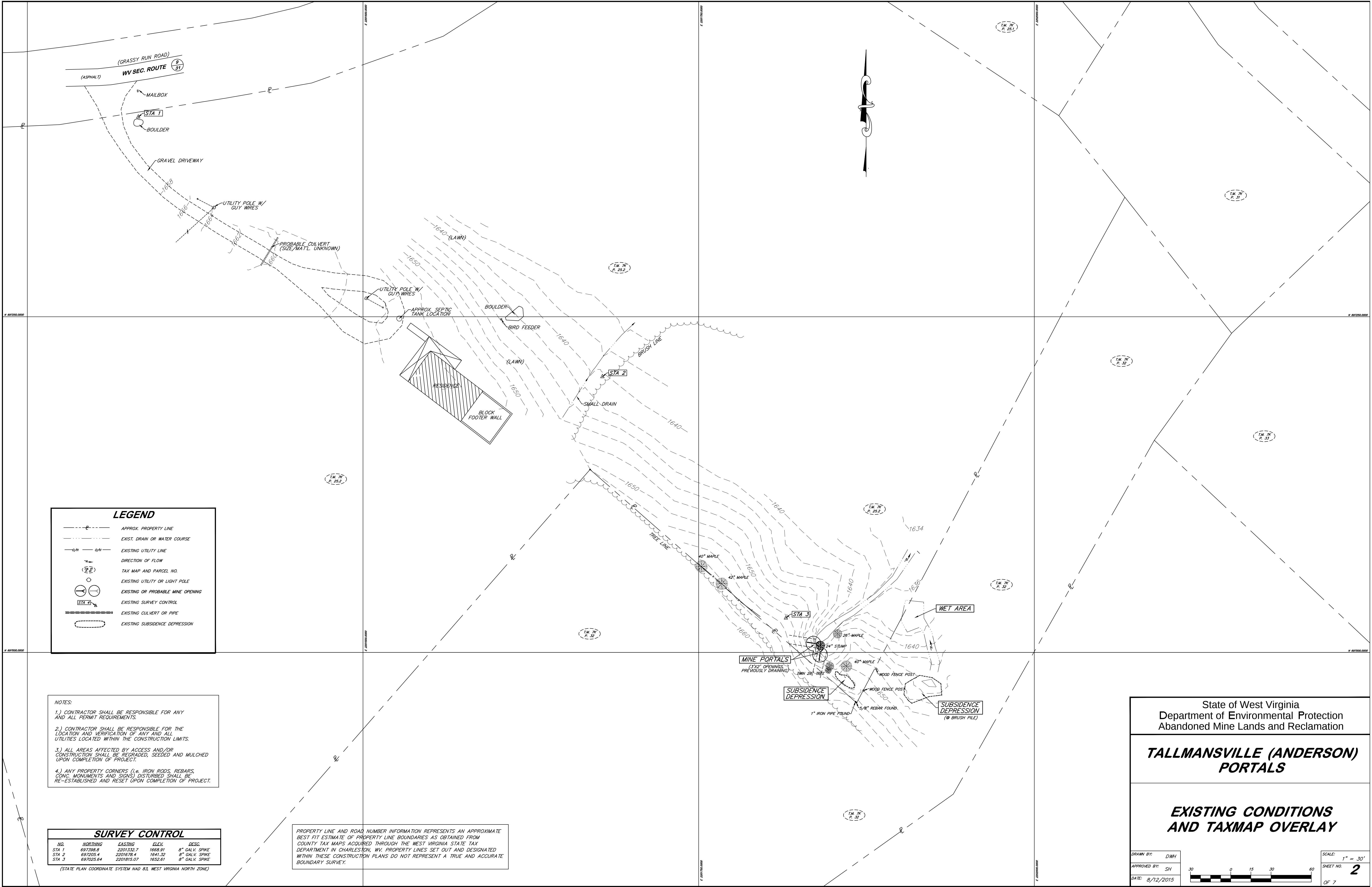
APPROVED

12-29-2015
DATE

LOCATION MAP



COUNTY HIGHWAY MAP, 1" = 1 MI.



LEGEND

- P --- APPROX. PROPERTY LINE
- - - - - EXIST. DRAIN OR WATER COURSE
- O/H --- EXISTING UTILITY LINE
- >--- DIRECTION OF FLOW
- (T.M. 7K P. 25.1) TAX MAP AND PARCEL NO.
- O --- EXISTING UTILITY OR LIGHT POLE
- (T.M. 7K P. 25.1) EXISTING OR PROBABLE MINE OPENING
- STA. 1 --- EXISTING SURVEY CONTROL
- EXISTING CULVERT OR PIPE
- EXISTING SUBSIDENCE DEPRESSION

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.

SURVEY CONTROL				
NO.	NORTHING	EASTING	ELEV.	DESC.
STA 1	697398.8	2201332.7	1668.91	8" GALV. SPIKE
STA 2	697205.4	2201678.4	1641.32	8" GALV. SPIKE
STA 3	697028.64	2201615.07	1652.01	8" GALV. SPIKE

(STATE PLANE COORDINATE SYSTEM NAD 83, WEST VIRGINIA NORTH ZONE)

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.

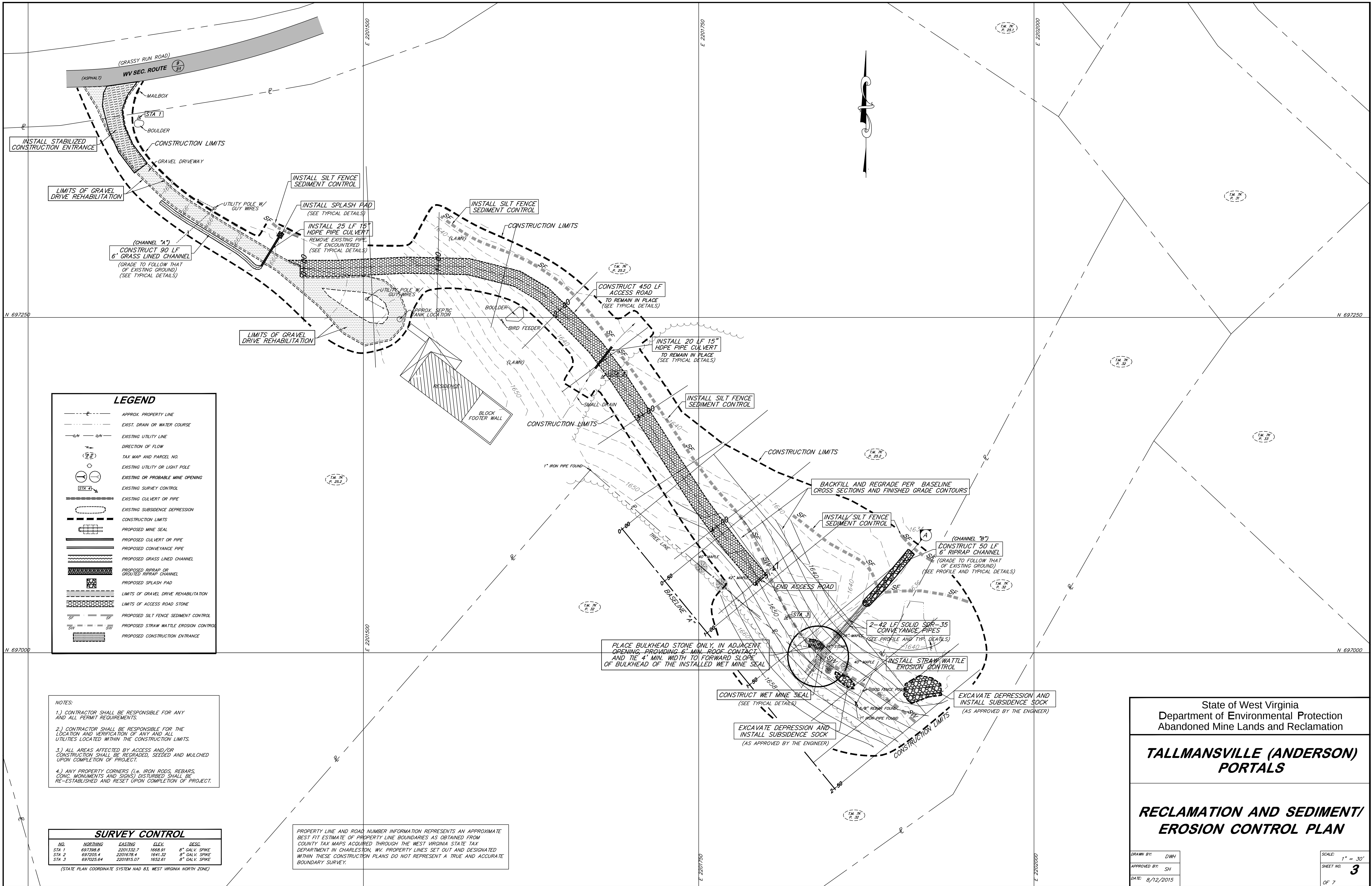
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

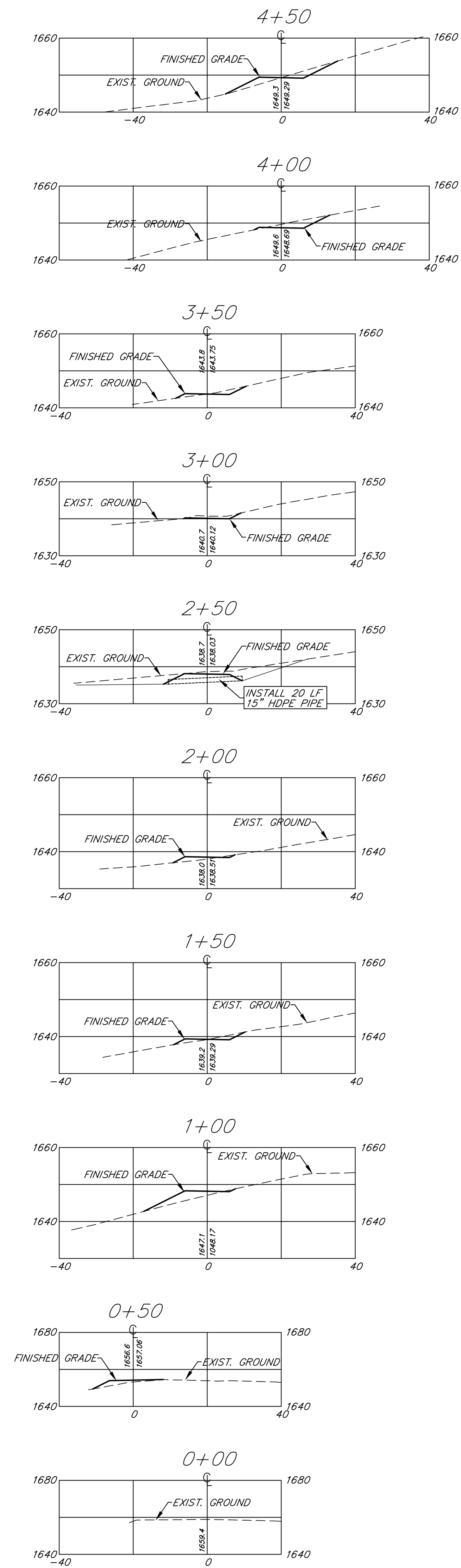
**TALLMANSVILLE (ANDERSON)
PORTALS**

**EXISTING CONDITIONS
AND TAXMAP OVERLAY**

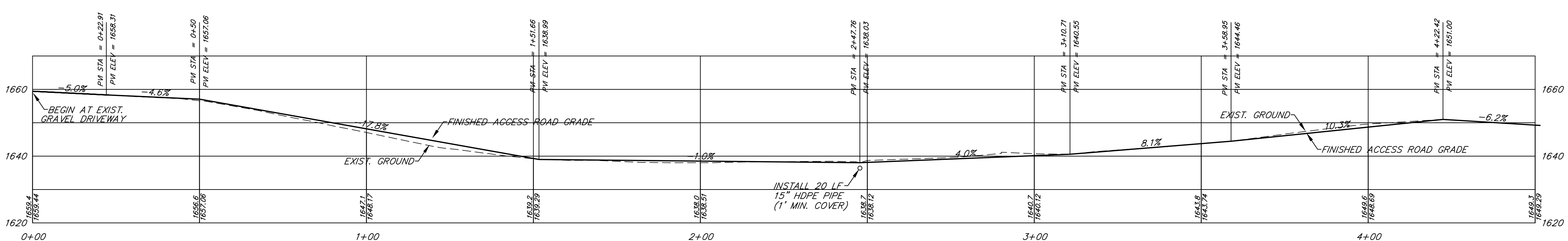
DRAWN BY: DWH
APPROVED BY: SH
DATE: 8/12/2015

SCALE: 1" = 30'
SHEET NO. **2**
OF 7

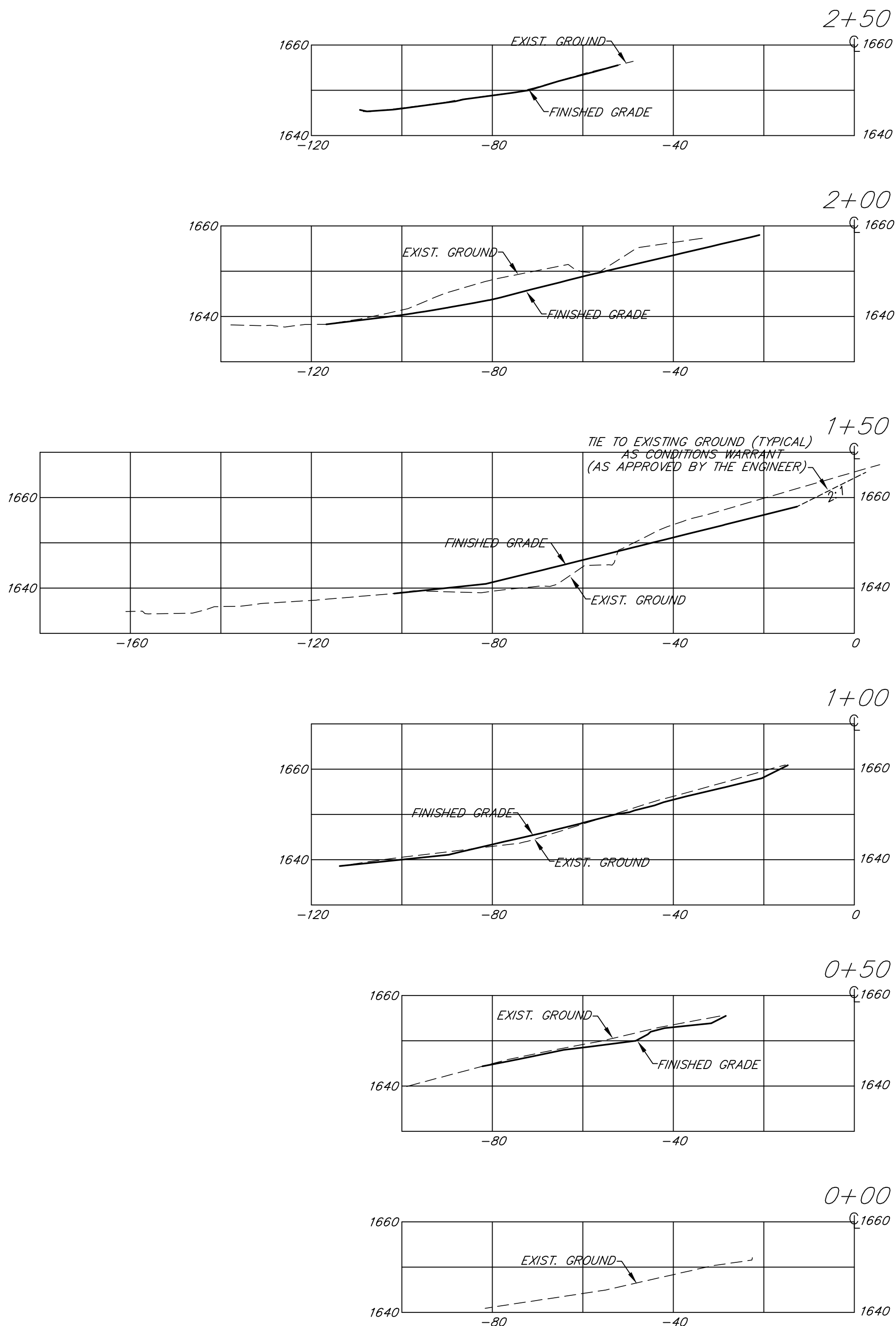




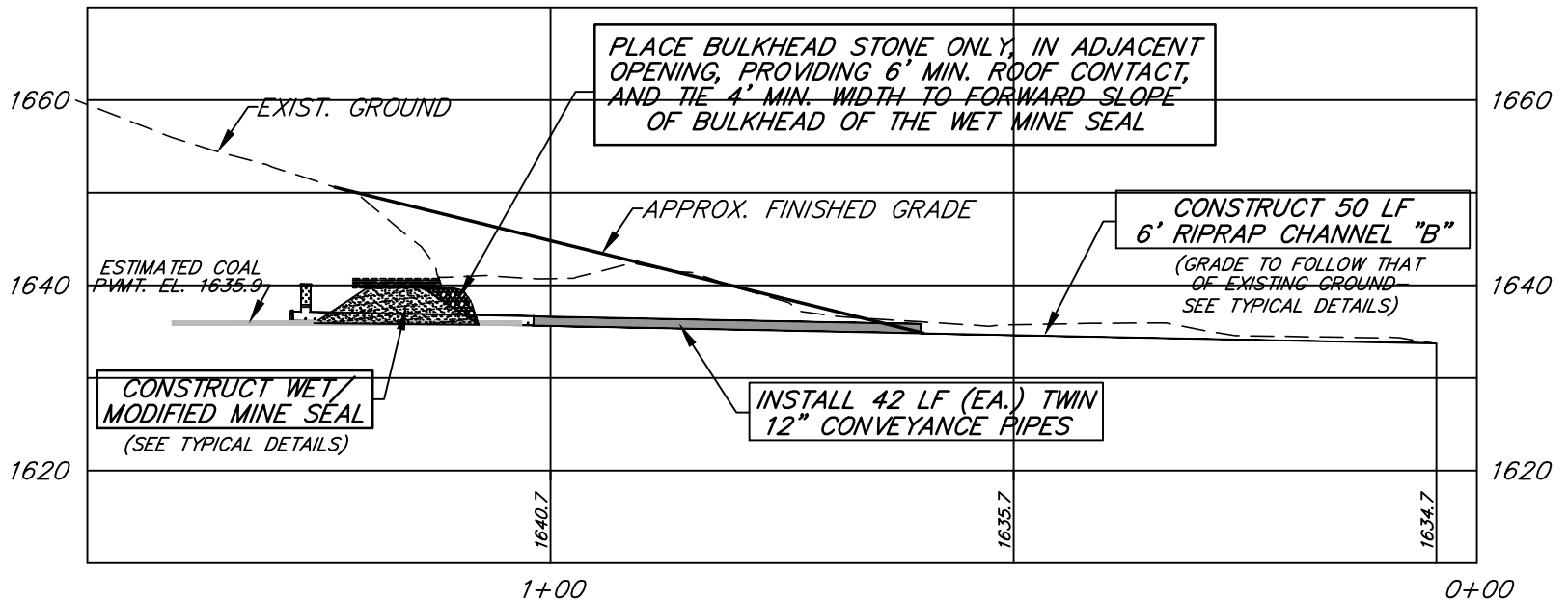
ACCESS ROAD CROSS SECTIONS



PERMANENT ACCESS ROAD PROFILE



BASELINE "A" CROSS SECTIONS



TYPICAL SECTION "A-A"

(NOTE: NO GEOTECHNICAL INVESTIGATIONS WERE PERFORMED WHICH MAY WARRANT FIELD ADJUSTMENTS TO ELEV.'S AND GRADES, AS APPROVED BY THE ENGINEER.)

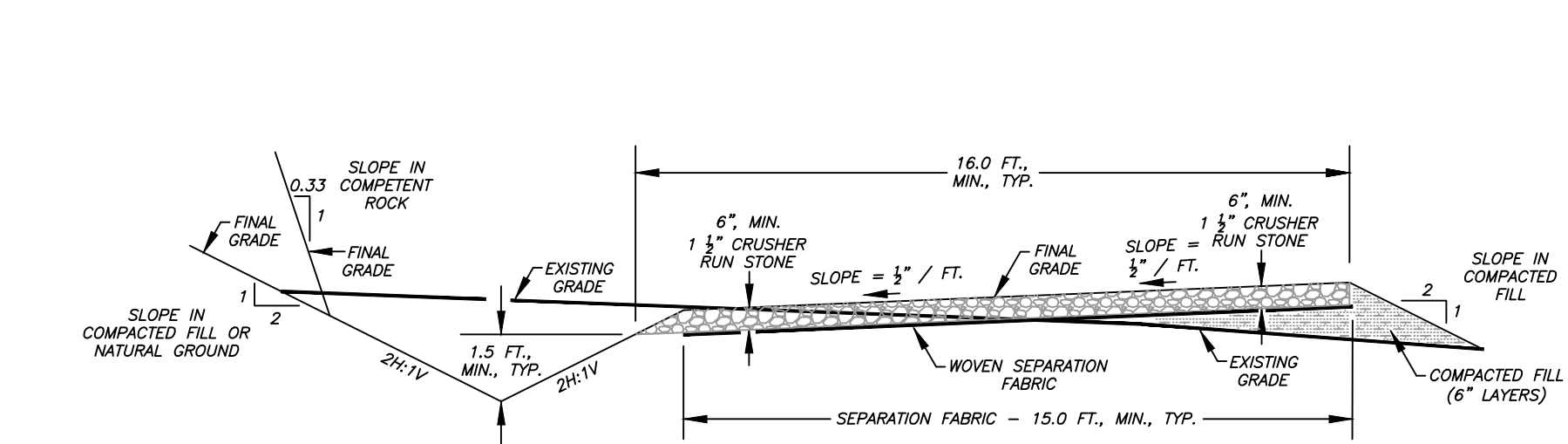
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**TALLMANSVILLE (ANDERSON)
PORTALS**

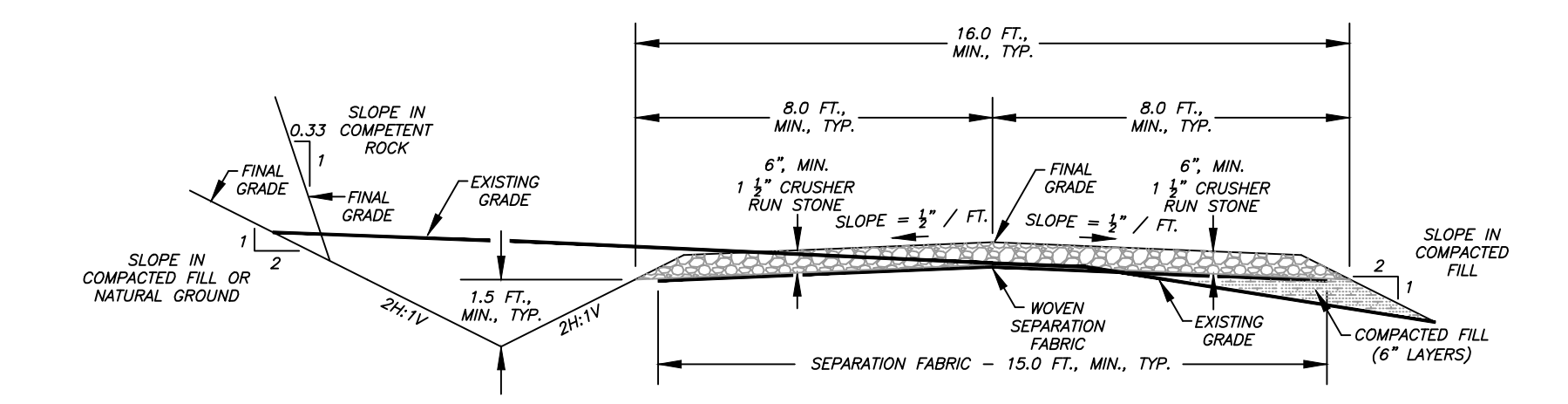
**CROSS SECTIONS, PROFILES
AND TYPICAL SECTION**

DRAWN BY: DWH
APPROVED BY: SH
DATE: 8/12/2015

SCALE: 1" = 20'
SHEET NO. **4**
OF 7



- NOTES:
- ROADWAY SURFACE MAY BE SLOPED TO EITHER SIDE AS TOPOGRAPHY AND CONDITIONS WARRANT.
 - 1 1/2" CRUSHER RUN STONE SHALL BE COMPACTED AS APPROVED BY THE ENGINEER.



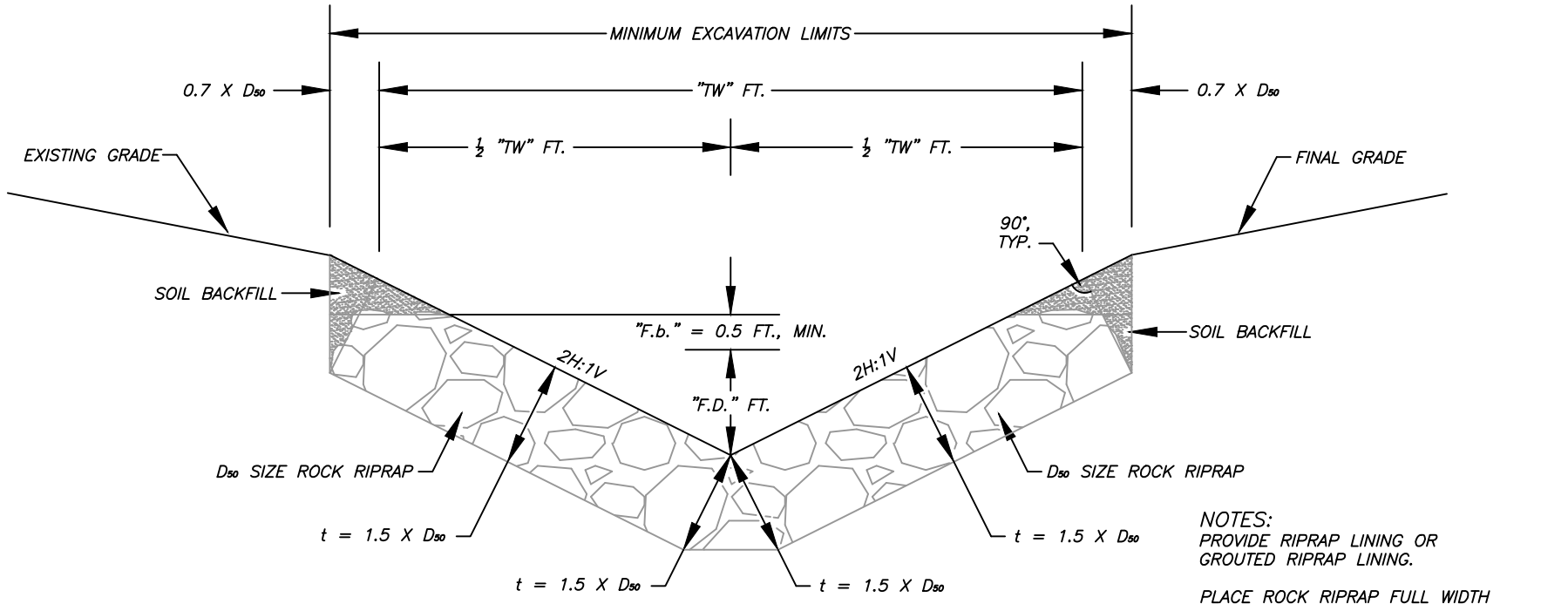
- NOTES:
- IN CUT THROUGH SECTIONS, CONSTRUCT DITCHES ON BOTH SIDES OF ROAD OR SLOPE THE ROADWAY TOWARD THE SOLITARY CONSTRUCTED DITCH.
 - 1 1/2" CRUSHER RUN STONE SHALL BE COMPACTED AS APPROVED BY THE ENGINEER.

SLOPED SECTION

CROWNED SECTION

**DETAIL 4.2.1
ACCESS ROAD CONSTRUCTION**

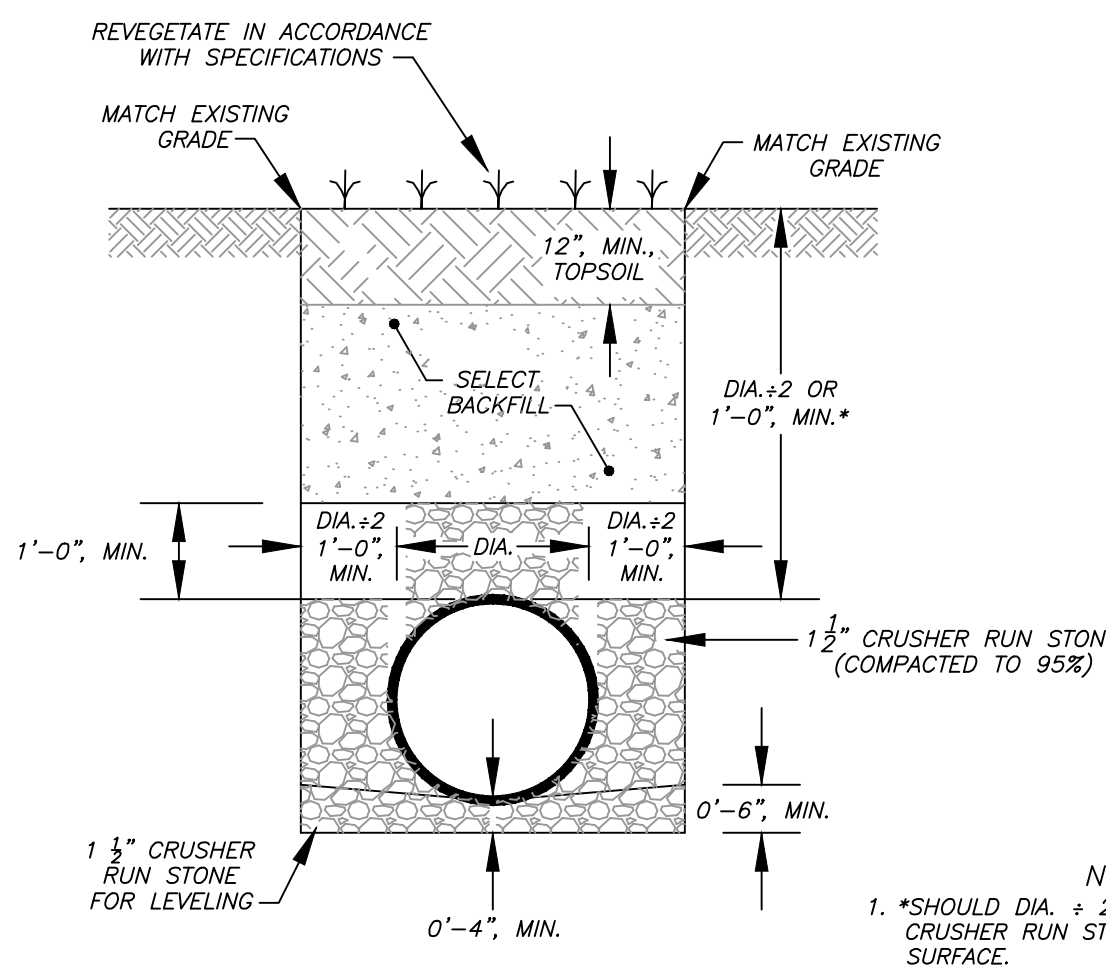
GRADATION	ROCK RIPRAP SIZING			
	D ₅₀ = 6"	D ₅₀ = 12"	D ₅₀ = 18"	D ₅₀ = 24"
50%	6" - 9"	12" - 18"	18" - 27"	24" - 36"
35%	3" - 6"	6" - 12"	9" - 18"	12" - 24"
15%	< 3"	3" - 6"	4.5" - 9"	6" - 12"



**DETAIL 7.2.1
RIPRAP 2H:1V "VEE" CHANNEL**

- NOTES:
- PROVIDE RIPRAP LINING OR GROUTED RIPRAP LINING.
 - PLACE ROCK RIPRAP FULL WIDTH OF EXCAVATION LIMITS TO THE DESIGNED FLOW DEPTH (FD).
 - "TW" = TOP WIDTH
 - "FD" = FREEBOARD DEPTH
 - "F.D." = FLOW DEPTH
 - "t" = THICKNESS

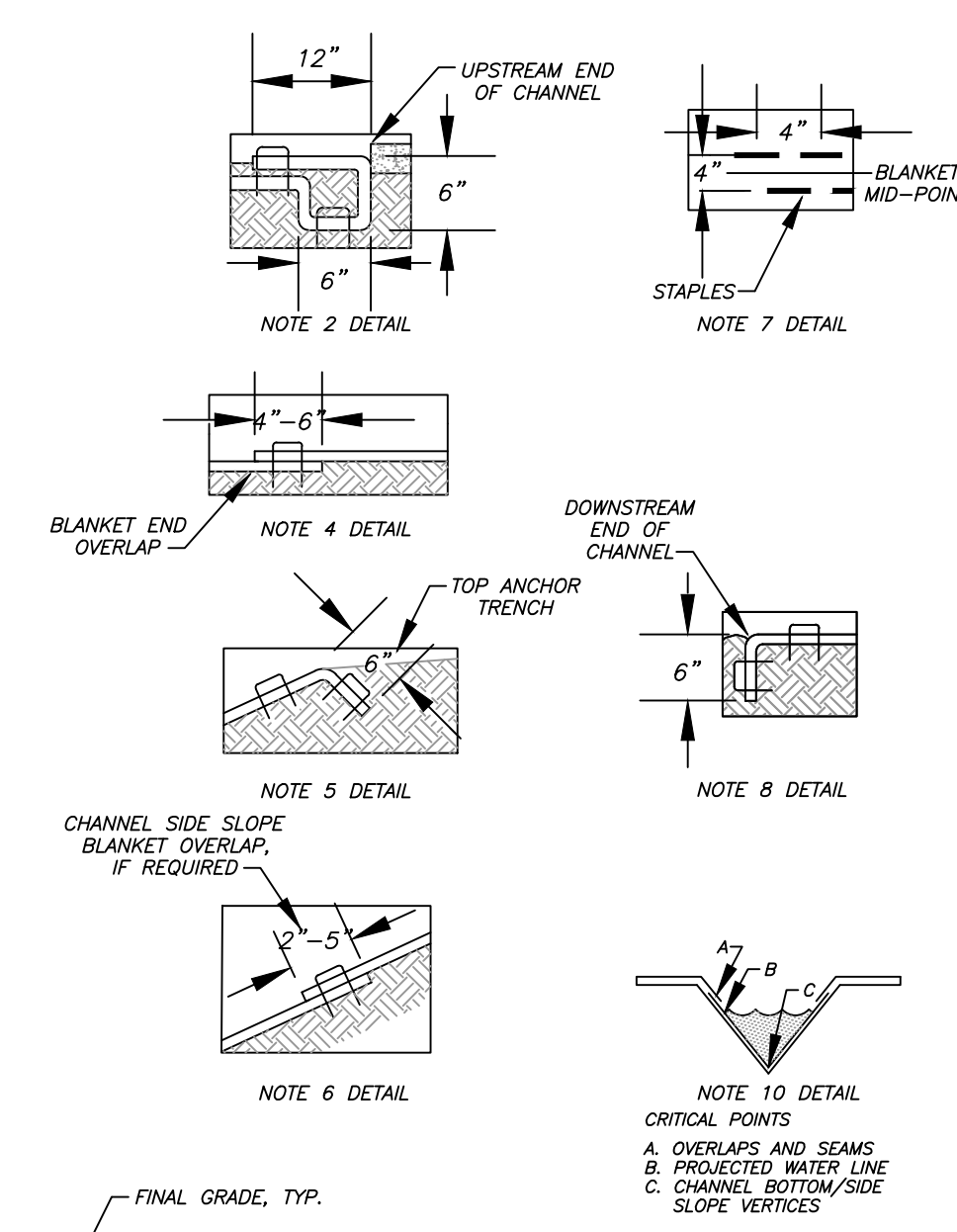
**DETAIL 7.6.3E
PIPE TRENCH - VEGETATED SURFACE**



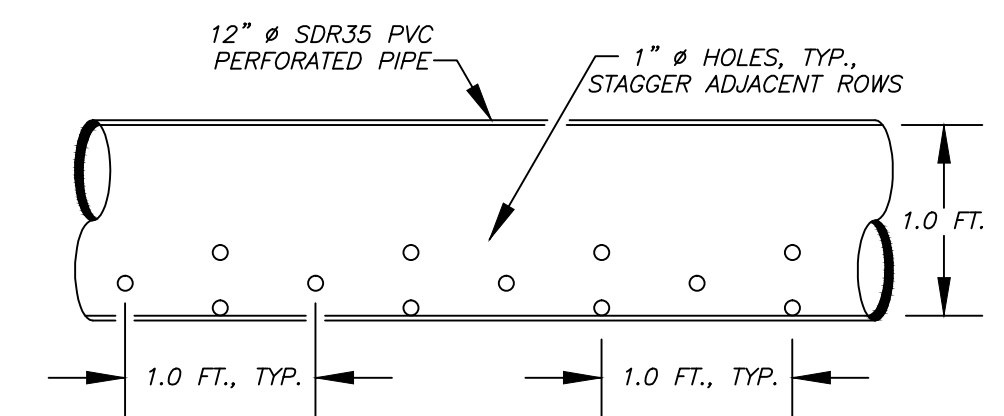
- NOTE:
- *SHOULD DIA. x 2 BE EQUAL TO 1'-0", THEN CRUSHER RUN STONE GOES ALL THE WAY TO SURFACE.

NOTES:

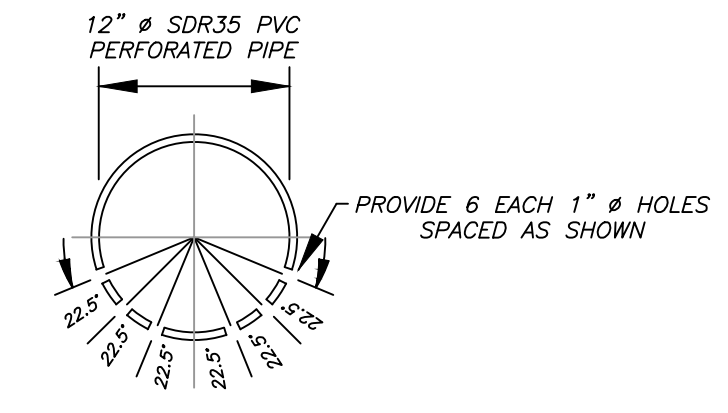
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- BEGIN AT THE UPSTREAM END OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE BLANKET.
- ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
- PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4" - 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
- FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (DEPENDENT ON BLANKET TYPE) AND STAPLED.
- IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
- THE DOWNSTREAM END OF THE CHANNEL BLANKET MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- IN LOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE REQUIRED TO PROPERLY ANCHOR THE BLANKET.
- HORIZONTAL STAPLE SPACING SHOULD BE ALTERED, IF NECESSARY, TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
- PERMANENT SEED MIXTURE, IN ACCORDANCE WITH THE SPECIFICATIONS, SHALL BE USED FOR VEGETATED CHANNELS EXCEPT CROWNTECH (CORONILLA VARIA) AT 20 LBS./AC. SHALL BE SUBSTITUTED FOR BIRDSFOOT TREFOIL.
- THE EXCAVATED CHANNEL SHALL BE FREE OF LARGE ROCKS OR ORGANIC DEBRIS PRIOR TO PLACEMENT OF EROSION CONTROL BLANKETS. EROSION CONTROL BLANKETS SHALL ALSO BE FREE OF WRINKLES OR FOLDS.
- "TW" = TOP WIDTH
"D" = DEPTH



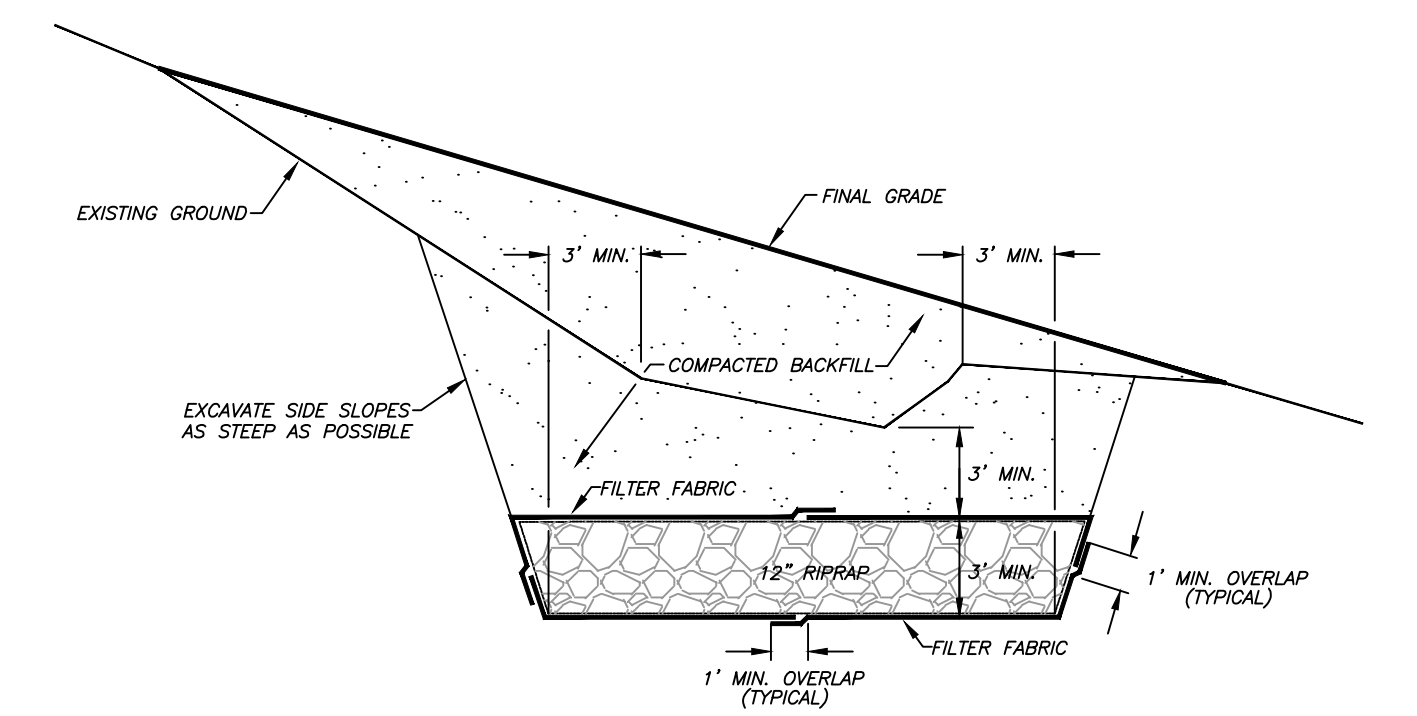
**DETAIL 7.5.1
GRASS LINED "VEE" CHANNEL**



**UNDERDRAIN PIPE LONGITUDINAL
VIEW, TYP.**

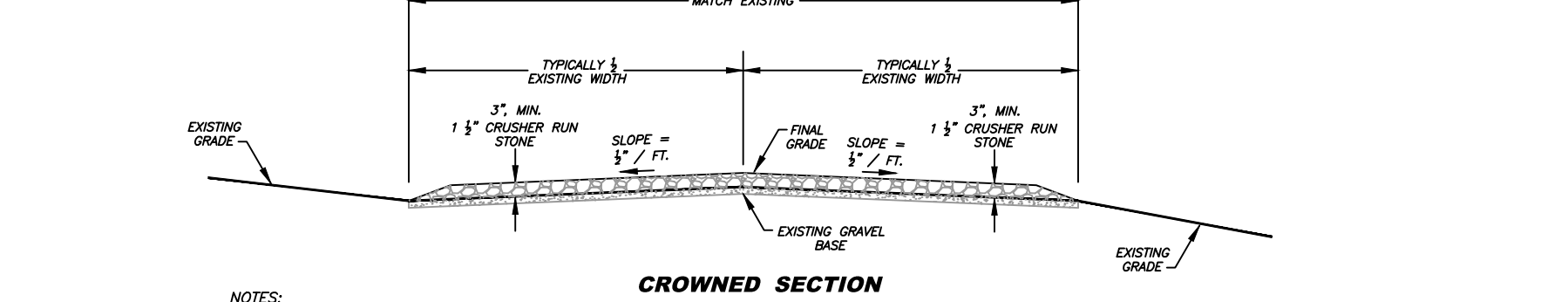
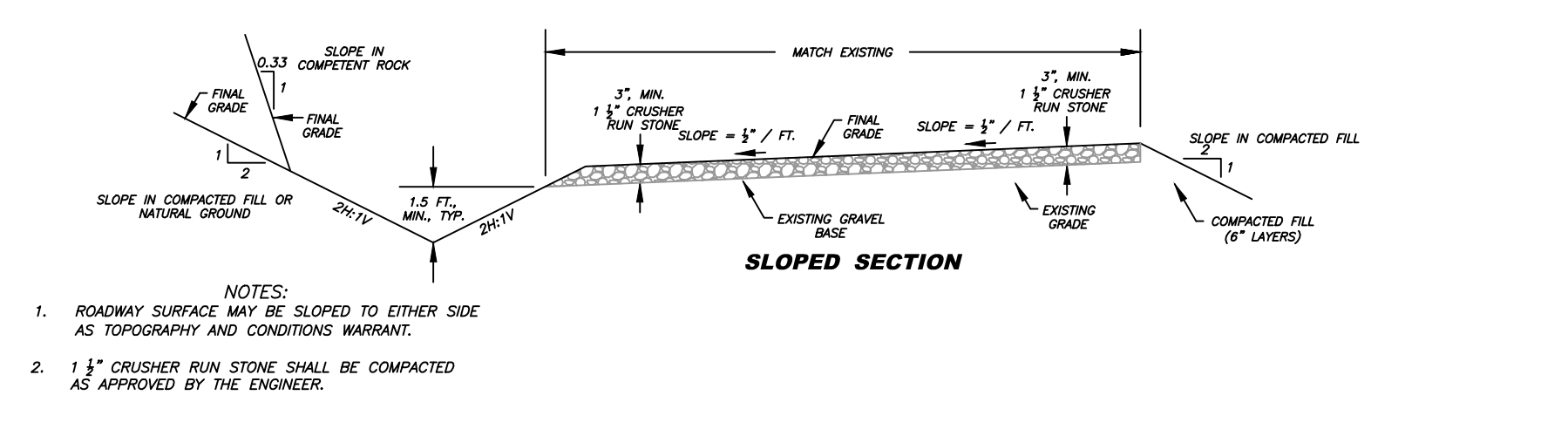


**UNDERDRAIN PIPE CROSS
SECTION, TYP.**



- NOTES:
- FILL THE VOID WITH 12" RIPRAP TO WITHIN 5.0' MIN. OF EXISTING DOWNHILL GRADES.
 - EXCAVATE THE SUBSIDENCE HOLE 3.0' MIN., (OR AS APPROVED BY THE ENGINEER) IN ALL DIRECTIONS AT THE ELEVATION OF THE TOP OF THE FILLED RIPRAP TO PROVIDE SOLID FOOTING FOR THE SUBSIDENCE SOCK INSTALLATION.
 - LINE THE ENTIRE EXCAVATION WITH FILTER FABRIC PRIOR TO SUBSIDENCE SOCK PLACEMENT. OVERLAP FILTER FABRIC 12" MIN. AT ALL JOINTS.
 - CAREFULLY PLACE A 3' MIN. LAYER OF 12" RIPRAP ON TOP OF THE FILTER FABRIC WITHOUT DISPLACING THE UNDERLYING FABRIC.
 - AFTER RIPRAP PLACEMENT, WRAP FILTER FABRIC COMPLETELY AROUND THE RIPRAP SUPPORT LAYER. OVERLAP FABRIC 12" MIN. AT ALL JOINTS.
 - PLACE COMPACTED FILL MATERIAL ON TOP OF THE RIPRAP SOCK TO ELEVATIONS AND GRADES SHOWN ON THE PLANS, OR AS APPROVED BY THE ENGINEER.

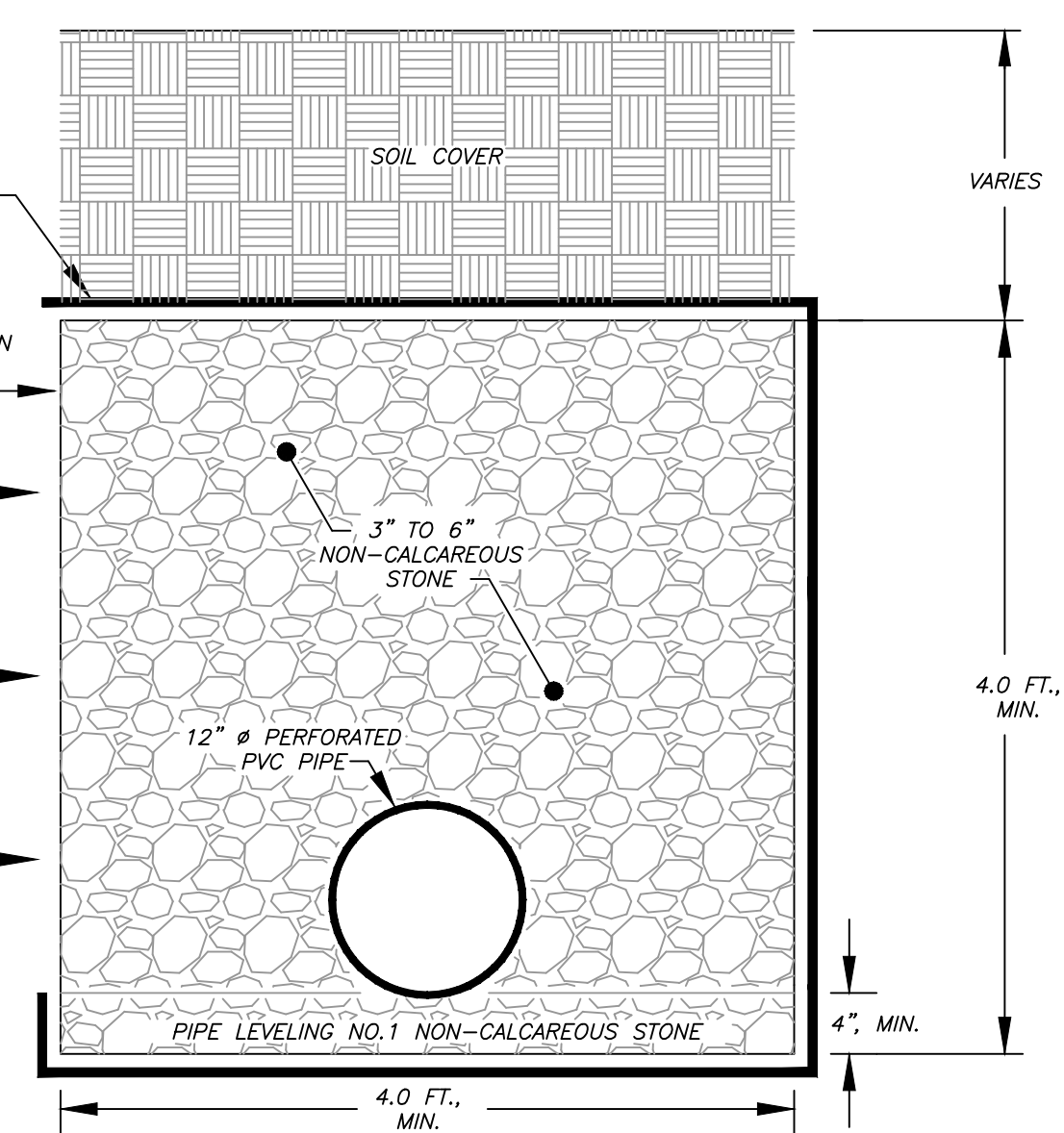
SUBSIDENCE SOCK DETAIL



- NOTES:
- PRIOR TO STONE PLACEMENT, REGRADE EXISTING ROADWAY INTO "CROWNED" OR "SLOPE TO DITCH" CONFIGURATION AS DIRECTED BY THE ENGINEER. REMOVAL, INSTALL, AND COMPACT SOFT SPOTS AS DIRECTED BY THE ENGINEER. ALL CUT/FILL SLOPES SHALL BE 2H:1V.
 - 1 1/2" CRUSHER RUN STONE.
 - GRADE AND COMPACT BASE JUST PRIOR TO PLACEMENT OF REHABILITATION LAYER.
 - GRADE APPROVED MATERIAL AND ROLLER COMPACT 1 1/2" CRUSHER RUN ONCE PLACED.

**DETAIL 4.3
GRAVEL DRIVE REHABILITATION**

- NOTES:
- THE FILTER FABRIC SHALL BE OVERLAPPED 1.0 FOOT, MINIMUM, AT ALL JOINTS.



**DETAIL 7.10.1
UNDERDRAIN DETAIL**

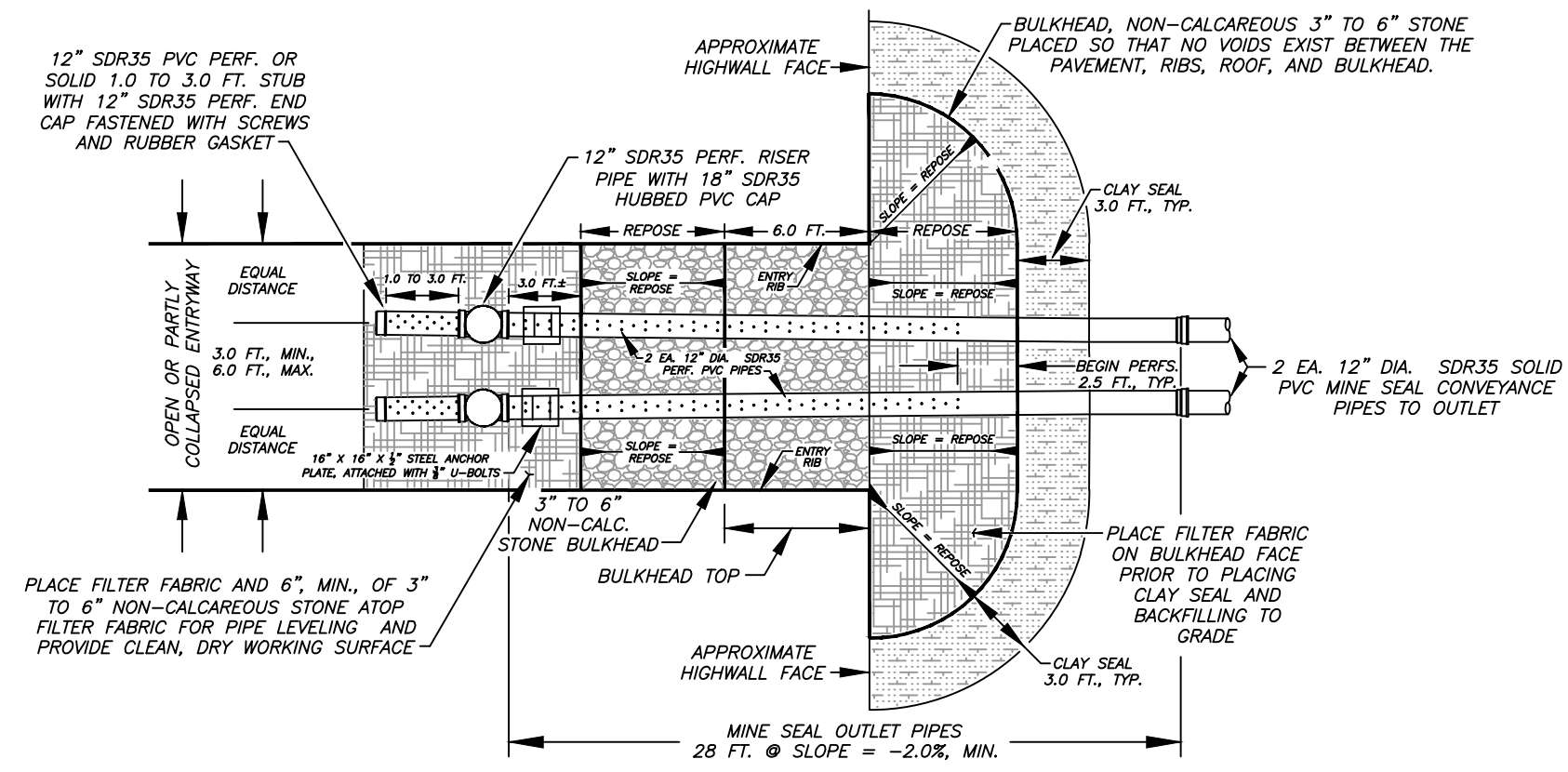
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**TALLMANSVILLE (ANDERSON)
PORTALS**

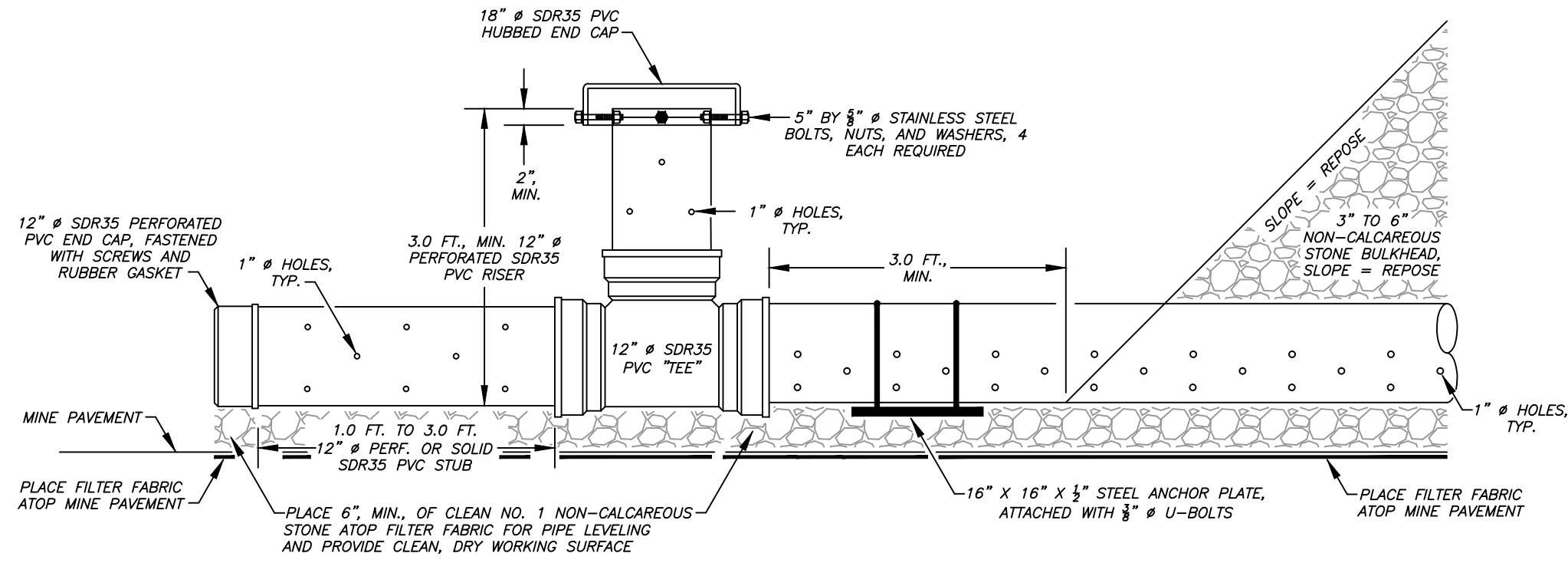
TYPICAL DETAILS (1)

DRAWN BY: DWH
APPROVED BY: SH
DATE: 8/12/2015

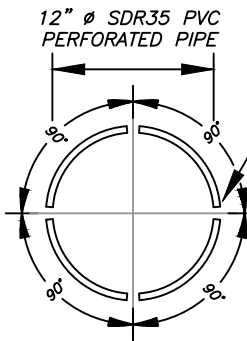
SCALE: NOT TO SCALE
SHEET NO. 5
OF 7



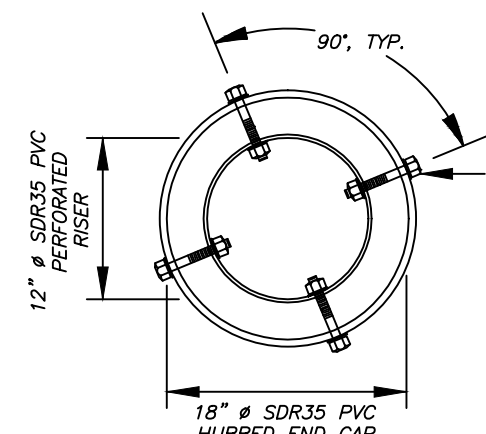
PLAN VIEW TOP OF BULKHEAD ELEVATION



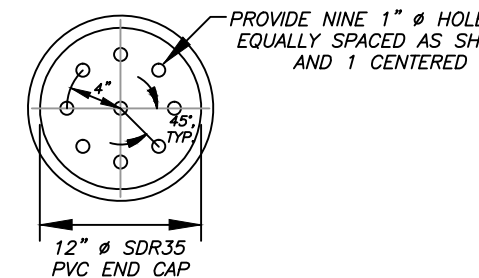
"TEE" RISER DETAIL



WET MINE SEAL RISER PIPES AND STUBS CROSS SECTION, TYP.



RISER CAP DETAIL



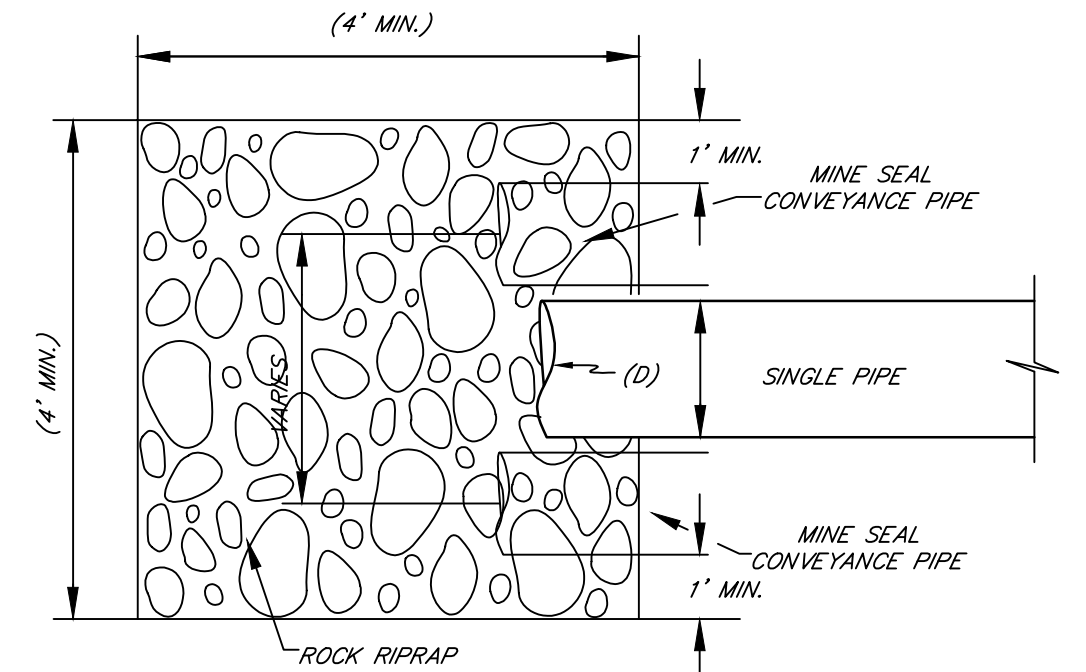
PERFORATED END CAP

DETAIL 9.1.2C
WET MINE SEAL

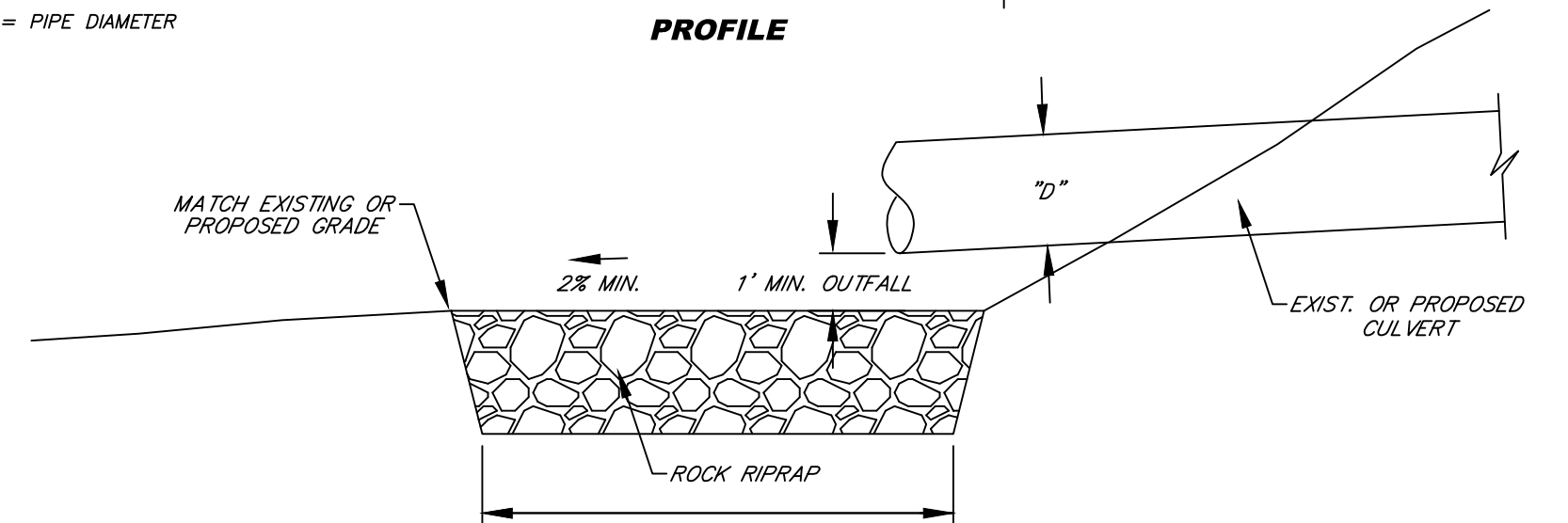
NOTE: WHEN INSTALLING FOR USE WITH BAT GATE PIPE ONLY, MIN. SIZE SHALL BE 1" MIN. BEYOND SIDEWALLS OF PIPE AND A MIN. OF 4" IN LENGTH

ROCK RIPRAP SIZING	
GRADATION	D ₅₀ = 12"
50%	12" - 18"
35%	6" - 12"
15%	3" - 6"

NOTES:
"D" = PIPE DIAMETER



PROFILE

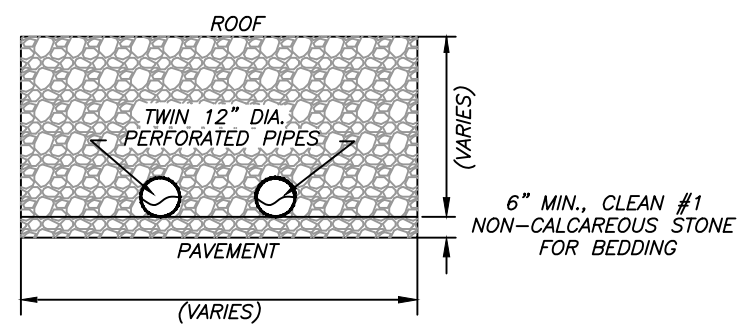


PLAN VIEW

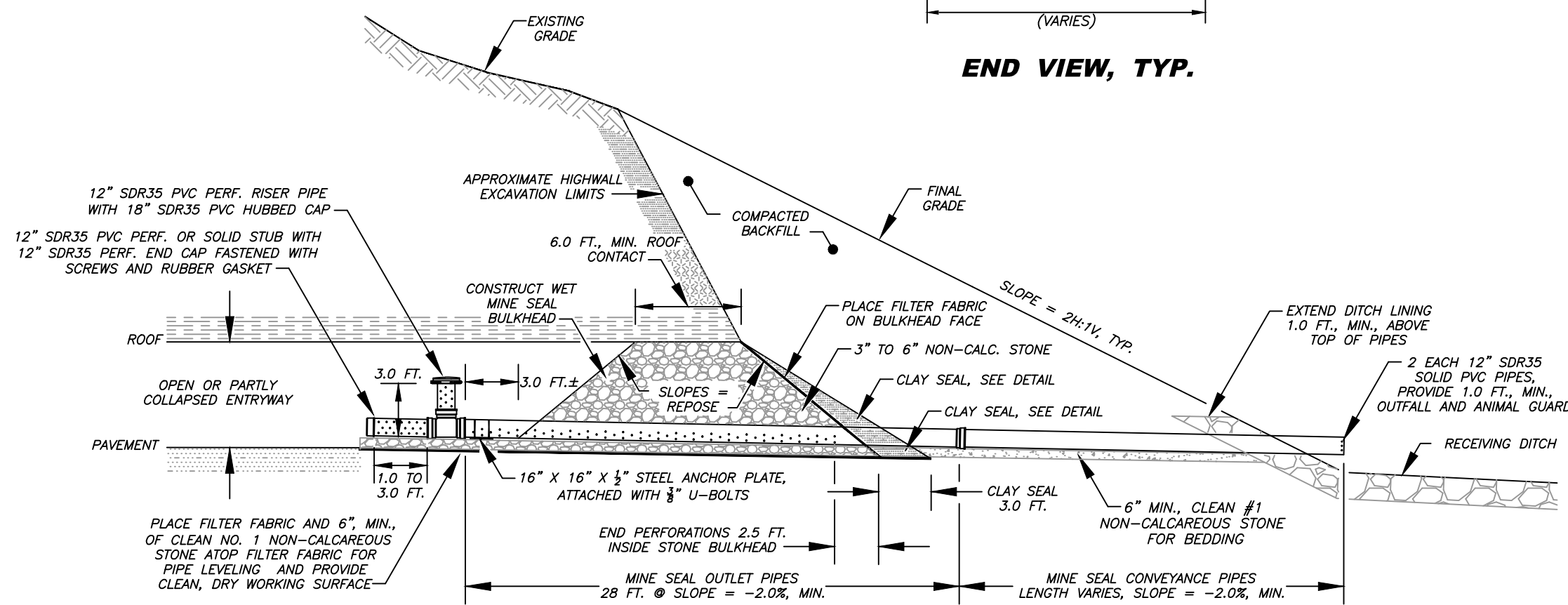
DETAIL 7.8.1
SPLASH PAD

DETAIL 9.1.2A
WET MINE SEAL

- NOTES:
- THE TWO (2) JOINTS (28.0 FEET) OF MINE SEAL OUTLET PIPES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "WET MINE SEALS" REGARDLESS OF WHERE THESE PIPES END IN THE INSTALLATION.
 - THE MINE SEAL CONVEYANCE PIPE LENGTHS VARY AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "MINE SEAL CONVEYANCE PIPES". MINE SEAL CONVEYANCE PIPES BEGIN AT THE END OF THE MINE SEAL OUTLET PIPES AND EXTEND TO THE PLANNED OUTFALL.
 - THE PERFORATED END CAP LOCATED INSIDE THE MINE AT THE END OF THE ONE TO THREE FOOT (1.0' TO 3.0') STUB SHALL HAVE A RUBBER GASKET, PLACED ON THE UPSTREAM END OF THE STUB AND SCREWED IN PLACE.
 - THE STONE BULKHEAD SHALL BE IN CONTACT WITH COAL ROOF FOR A DISTANCE EQUAL TO THE OPENING HEIGHT OR A MINIMUM OF 6.0 FEET. THE INSIDE AND OUTSIDE STONE BULKHEAD FACES SHALL BE CONSTRUCTED AT THE ANGLE OF REPOSE OF THE 3" TO 6" NON-CALCAREOUS STONE PLACED.

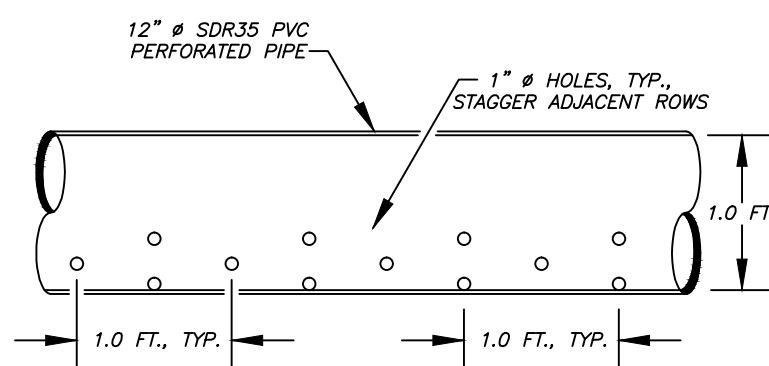


END VIEW, TYP.

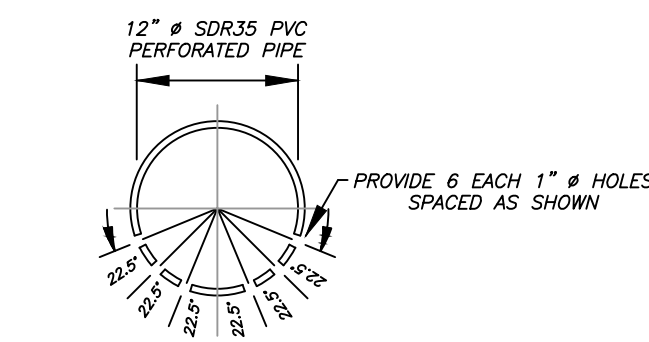


PROFILE VIEW, TYP.

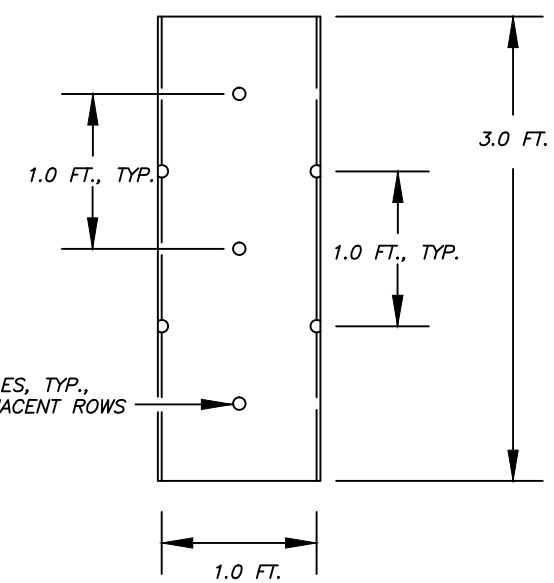
DETAIL 9.1.2B
WET MINE SEAL



WET MINE SEAL OUTLET PIPES LONGITUDINAL VIEW, TYP.



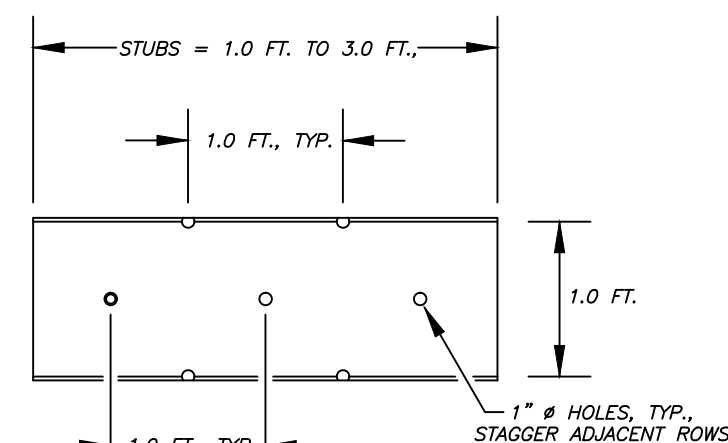
WET MINE SEAL OUTLET PIPES CROSS SECTION, TYP.



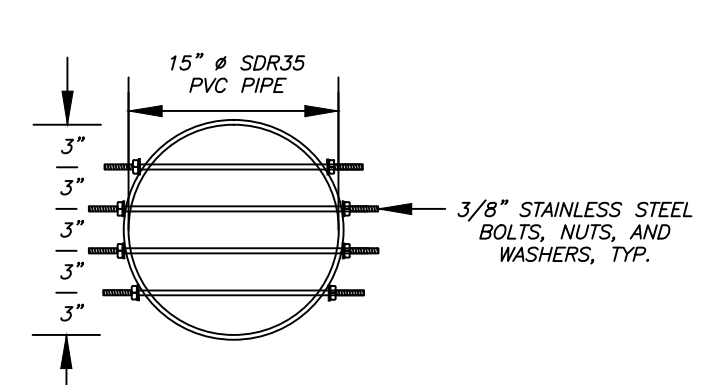
WET MINE SEAL RISER PIPES ELEVATION VIEW, TYP.

WET MINE SEAL PIPE DETAILS, TYP.

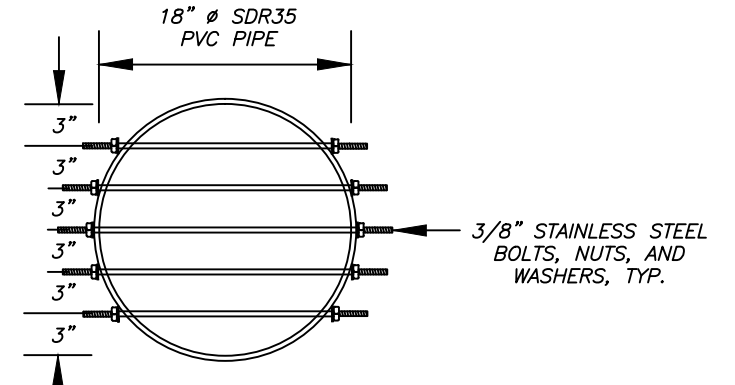
DETAIL 9.1.2D
WET MINE SEAL



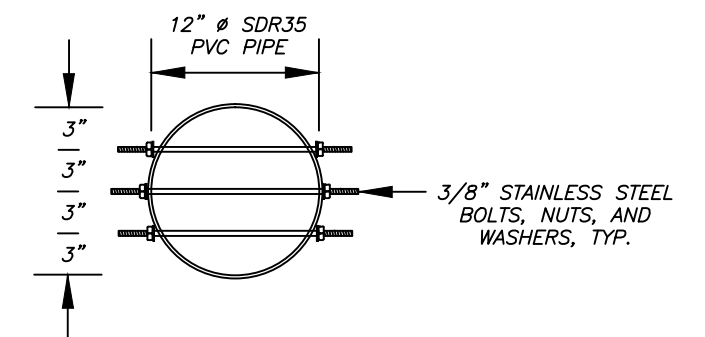
WET MINE SEAL STUBS LONGITUDINAL VIEW, TYP.



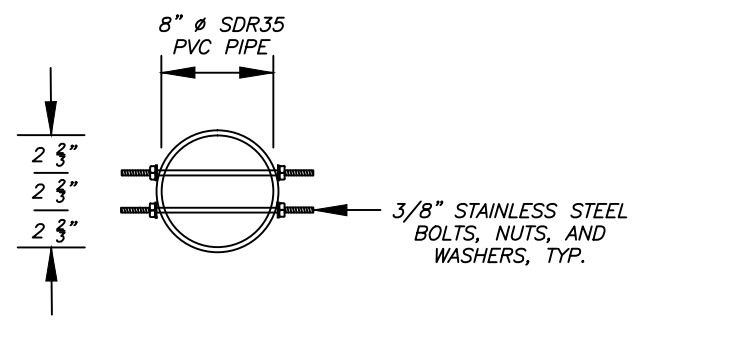
15" Ø PVC PIPE ANIMAL GUARD CROSS SECTION, TYP.
SCALE: 1" = 1 FT.



18" Ø PVC PIPE ANIMAL GUARD CROSS SECTION, TYP.
SCALE: 1" = 1 FT.



12" Ø PVC PIPE ANIMAL GUARD CROSS SECTION, TYP.
SCALE: 1" = 1 FT.



8" Ø PVC PIPE ANIMAL GUARD CROSS SECTION, TYP.
SCALE: 1" = 1 FT.

- NOTE:
1. ANIMAL GUARDS SHALL BE INSTALLED THE SAME DAY AS THE PIPE IS INSTALLED.

DETAIL 9.1.3
ANIMAL GUARD DETAIL

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

**TALLMANSVILLE (ANDERSON)
PORTALS**

TYPICAL DETAILS (2)

DRAWN BY: DWH
APPROVED BY: SH
DATE: 8/12/2015

SCALE: NOT TO SCALE
SHEET NO. 6
OF 7

