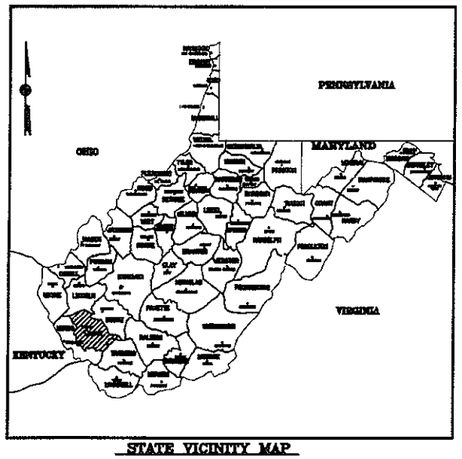
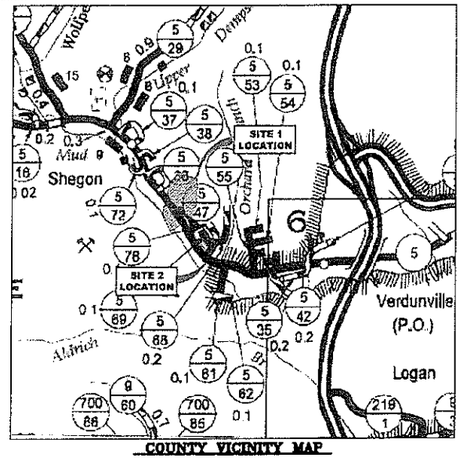
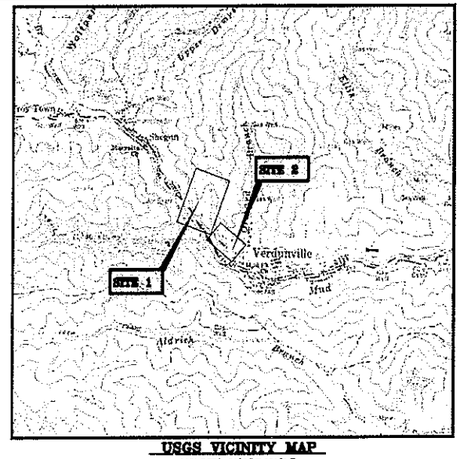
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
GOVERNOR-JOE MANCHIN III
WVDEP SECRETARY-RANDY C. HUFFMAN
OFFICE OF ABANDONED MINE LANDS AND RECLAMATION
CONSTRUCTION DRAWINGS FOR
ISLAND CREEK #18 MINE COMPLEX
LOGAN COUNTY, WEST VIRGINIA



STATE VICINITY MAP



COUNTY VICINITY MAP
LOGAN COUNTY



USGS VICINITY MAP
HOLDEN QUADRANGLE
SCALE: 1" = 2000'

PLANS PREPARED BY

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Charleston, West Virginia 25313
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TIMOTHY B. CART R.P.E. NO. 10023 DATE 5/28/10

TIMOTHY B. CART REGISTERED 10023 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

INDEX TO SHEETS

NO.	DESCRIPTION
	COVER
1	SITE INDEX PLAN SHEET
2	SITE 1 EXISTING PLAN SHEET
3	SITE 1 RECLAMATION PLAN SHEET
4	SITE 1 TAX MAP OVERLAY
5	SITE 2 EXISTING PLAN SHEET
6	SITE 2 RECLAMATION PLAN SHEET
7	SITE 2 TAX MAP OVERLAY
8-13	SITE 1 CROSS SECTIONS
14-15	SITE 1 DITCH PROFILES
16	SITE 2 UNDERDRAIN PROFILES
D-1	MINE SEAL DETAIL SHEET
D-2	BAT GATE MINE SEAL DETAIL SHEET
D-3	DETAIL SHEET
D-4	DETAIL SHEET
D-5	DETAIL SHEET
D-6	GABION WALL DETAIL

BID SCHEDULE

ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	CONTRACTED PRICE
1.1	MOBILIZATION & DEMOBILIZATION (LUMP SUM) (CANNOT EXCEED 10% OF TOTAL AMOUNT BID)	LS	LS		
2.1	CONSTRUCTION LAYOUT (LUMP SUM) (CANNOT EXCEED 5% OF TOTAL AMOUNT BID)	LS	LS		
3.1	QUALITY CONTROL (LUMP SUM) (CANNOT EXCEED 3% OF TOTAL AMOUNT BID)	LS	LS		
4.1	CLEARING & GRUBBING (LUMP SUM) (CANNOT EXCEED 5% OF TOTAL AMOUNT BID)	LS	LS		
5.1	UNCLASSIFIED EXCAVATION (PER CUBIC YARD)	5,200	CY		
6.1	TYPE I DITCH (PER LINEAR FOOT)	220	LF		
6.2	TYPE II DITCH (PER LINEAR FOOT)	246	LF		
6.3	TYPE III DITCH (PER LINEAR FOOT)	336	LF		
6.4	TYPE I UNDERDRAIN (PER LINEAR FOOT)	230	LF		
6.5	TYPE I CONVEYANCE PIPE (PER LINEAR FOOT)	20	LF		
6.6	TYPE II UNDERDRAIN (PER LINEAR FOOT)	129	LF		
6.7	TYPE III UNDERDRAIN (PER LINEAR FOOT)	141	LF		
6.8	MINE SEAL CONVEYANCE PIPE (PER LINEAR FOOT)	870	LF		
6.9	WET MINE SEALS (PER EACH)	5	EA		
6.10	BAT GATE MINE SEALS (PER EACH)	1	EA		
6.11	ACID MINE DRAINAGE TREATMENT (50LB PER BAG)	10	BAG		
6.12	RIPRAP TOE PROTECTION (PER LINEAR FOOT)	170	LF		
6.13	EROSION CONTROL MATTING (PER SQUARE YARD)	2000	SY		
6.14	PIPE CULVERT (PER LINEAR FOOT)	90	LF		
6.15	DROP INLET (PER EACH)	2	EA		
6.16	SPLASH PAD (PER EACH)	2	EA		
8.1	SOIL COVER (PER ACRE)	2	ACRE		
9.1	SILT FENCE (PER LINEAR FOOT)	900	LF		
9.2	SUPER SILT FENCE (PER LINEAR FOOT)	1,800	LF		
9.3	STRAW BALES (PER LINEAR FOOT)	100	LF		
9.4	STONE CHECK DAMS (PER EACH)	1	EA		
9.5	STABILIZED CONSTRUCTION ENTRANCE(PER LUMP SUM)	1	LS		
10.1	REVEGETATION (PER ACRE)	4	ACRE		
11.1	GABION WALL (PER LUMP SUM)	1	LS		

LEGEND

- 820 — EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EDGE OF PAVED ROAD
- EDGE OF UNPAVED ROAD
- TRAIL
- LIMITS OF REFUSE
- STREAM
- CH — OVERHEAD UTILITY
- EXISTING CULVERT
- FENCE
- TREE LINE
- MINE PORTAL
- CP203 — 5/8" REBAR (TYPICAL CONTROL POINT)
- UTILITY POLE
- WATERMETER
- JUNK CARS
- TIRES
- LIMITS OF CONSTRUCTION
- SILT FENCE (SF)
- SUPER SILT FENCE (SSF)
- SOIL BORROW AREA
- GROUTED RIPRAP DITCH
- RIPRAP DITCH
- RIPRAP TOE PROTECTION
- DETAIL SHEET NUMBER / DETAIL NUMBER

PLAN NORTH

POTENTIAL SOIL BORROW AREA

CONSTRUCTION LIMITS

DEMOLISH & REMOVE BLOCK BLDG

DEMOLISH RUINS

EXISTING BOOSTER PUMP STATION

AFTER REVEGETATION PLACE CURLEX II EROSION CONTROL MAT OR APPROVED EQUAL OVER THE ENTIRE REGRADED AREAS AND THE DISTURBED AREAS WHERE THE SLOPE IS STEEPER THAN 3H TO 1V

ACCESS TO SITE 1 TO BE TEMPORARILY BLOCKED OFF DURING CONSTRUCTION AND PERMANENTLY AFTER CONSTRUCTION

ACCESS TO SITE

SITE ACCESS

STABILIZED CONSTRUCTION ENTRANCE

STONE CHECK DAM

RIPRAP TOE PROTECTION

BEGIN TYPE II DITCH 1-A

END TYPE II DITCH 1-A

BEGIN TYPE I DITCH 1-B

END TYPE I DITCH 1-C

BEGIN TYPE III DITCH 1-B

END TYPE I DITCH 1-D

BEGIN TYPE I DITCH 1-D

END TYPE I DITCH 1-E

BEGIN TYPE I DITCH 1-E

END TYPE I DITCH 1-F

MINE SEAL (D-1) SEAL #1-1

MINE SEAL (D-1) SEAL #1-2

MINE SEAL (D-1) SEAL #1-3

MINE SEAL (D-1) SEAL #1-4

MINE SEAL (D-1) SEAL #1-5

BAT GATE (D-1) MINE SEAL #1-6

MINE SEAL (D-1) SEAL #1-7

WATER TANK

CONC. BLOCK BLDG.

CONC. WALL RUINS

CONCRETE RUINS

COUNTY ROUTE 5

MUD FORK

NUMBER 19 NORTH ROAD

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MINE LANDS AND RECLAMATION

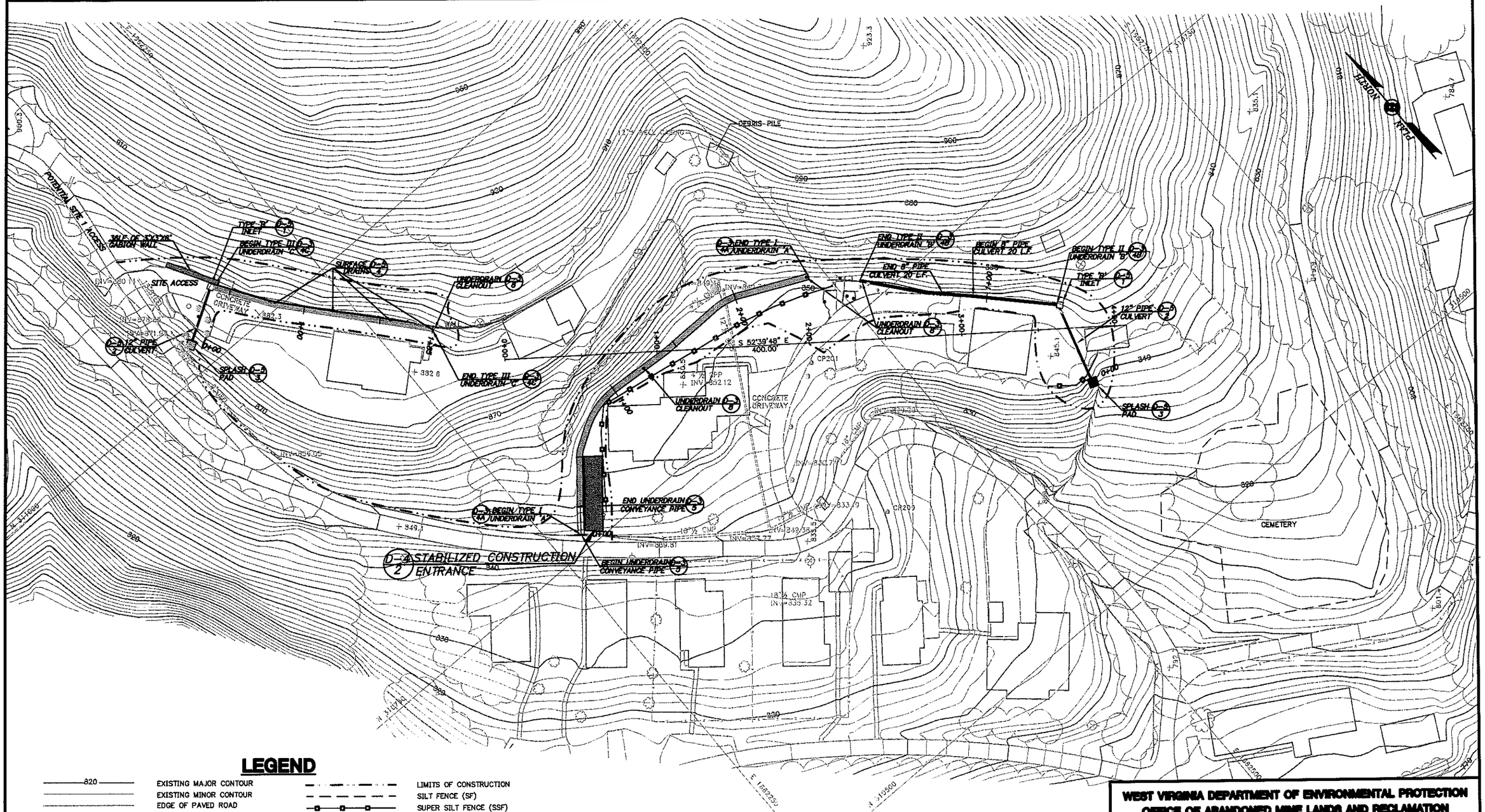
ISLAND CREEK # 18 MINE COMPLEX SITE 1 RECLAMATION PLAN SHEET

	Scale : 1" = 50' Date : MAY 2010	SURVEYING DATE DECEMBER 2008	Mapping By: STANTEC

PLANS PREPARED BY

E.L. ROBINSON

SHEET 3



LEGEND

EXISTING MAJOR CONTOUR	LIMITS OF CONSTRUCTION
EXISTING MINOR CONTOUR	SILT FENCE (SF)
EDGE OF PAVED ROAD	SUPER SILT FENCE (SSF)
EDGE OF UNPAVED ROAD	UNDERDRAIN
TELEPHONE LINE	DETAIL SHEET NUMBER / DETAIL NUMBER
STREAM	
OVERHEAD UTILITY	
EXISTING CULVERT	
FENCE	
TREE LINE	
5/8" REBAR (TYPICAL CONTROL POINT)	
UTILITY POLE	
WATERMETER	

30' 0 15' 30' 60'

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MINE LANDS AND RECLAMATION

ISLAND CREEK # 18
MINE COMPLEX
SITE 2 RECLAMATION PLAN SHEET

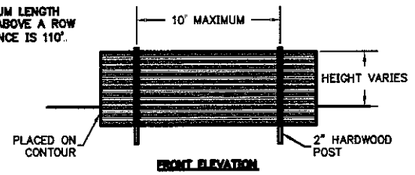
	Scale : 1" = 30'	SURVEYING DATE	Mapping By:
	Date : MAY 2010	DECEMBER 2008	STANTEC

PLANS PREPARED BY

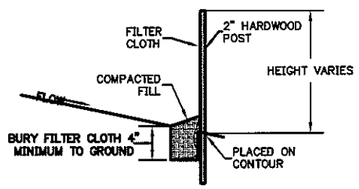
E.L. ROBINSON

SHEET 6

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



FRONT ELEVATION



SIDE ELEVATION

TOP ELEVATION

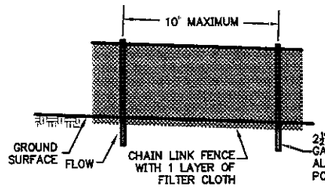
SILT FENCE DETAIL

SCALE: NTS

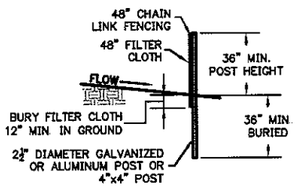
BMP3.27 SILT FENCE

A TEMPORARY SEDIMENT BARRIER CONSISTING OF A SYNTHETIC FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. USED TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.

SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL OF 0.5 INCH OR GREATER AND AT LEAST DAILY DURING PROLONGED RAINFALL OR ONCE A WEEK. ANY REQUIRED REPAIRS OR MAINTENANCE SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. IF THE FENCE IS NOT INSTALLED ON THE CONTOUR (PERPENDICULAR TO THE FLOW OF THE WATER) BOTH OF THESE CONDITIONS CAN OCCUR. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONEHALF THE HEIGHT OF THE BARRIER. IF ANY SECTION OF SILT FENCE IS KNOCKED DOWN DURING A RAIN EVENT (BECAUSE IT WAS INSTALLED IN AN AREA OF CONCENTRATED FLOW) THEN OTHER MEASURES SUCH AS A SEDIMENT TRAP AND DIVERSION OR SUPER SILT FENCE MUST BE INSTALLED.



NOTE:
FENCE POST SPACING SHALL NOT EXCEED 10' TO CENTER.



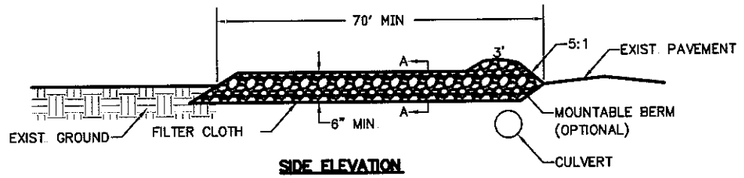
BMP3.28 SUPER SILT FENCE

A SUPER SILT FENCE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC OVER CHAIN LINK FENCE. IT IS USED TO INTERCEPT SEDMENT-LADEN RUNOFF FROM AREAS THAT ARE TOO LARGE FOR REGULAR SILT FENCE. SUPER SILT FENCE CAN BE A REPLACEMENT FOR SEDIMENT TRAPS IN CERTAIN INSTANCES.

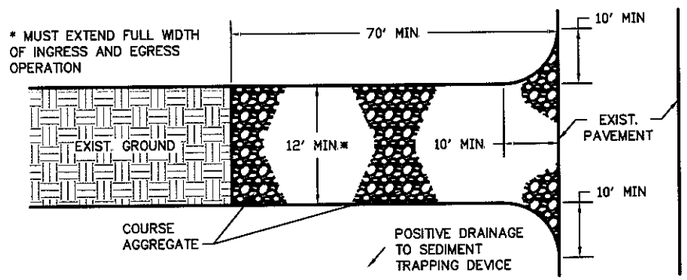
SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, DAILY DURING PROLONGED RAINFALL AND ONCE EVERY SEVEN DAYS DURING DRY PERIODS. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING. IF THE FENCE IS NOT INSTALLED PERPENDICULAR TO THE FLOW OF THE WATER, THESE CONDITIONS WILL OCCUR. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE, THE FABRIC SHALL BE PROMPTLY REPLACED. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

SUPER SILT FENCE DETAIL

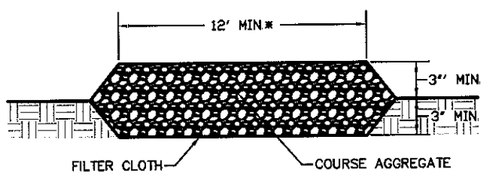
SCALE: NTS



SIDE ELEVATION



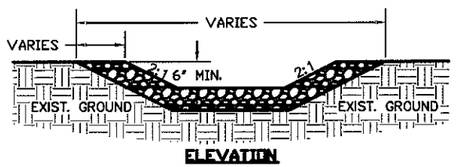
PLAN VIEW



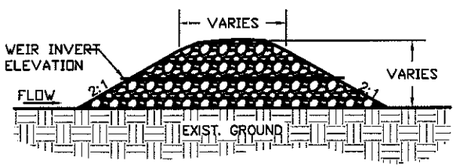
SECTION A-A

1. USE 2-4 INCH STONE FOR LOW VOLUME ENTRANCES, LARGER STONE (4-6 INCH) FOR HEAVY USE OR MATERIAL DELIVERY ENTRANCES.
2. LENGTH IS AS REQUIRED, BUT NOT LESS THAN 70 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS SHOULD BE NOT LESS THAN 6 INCHES.
4. THE WIDTH SHALL BE A MINIMUM OF 10 FEET, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO THE PLACING OF STONE.
   ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF A CULVERT IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE USED.
6. IF NECESSARY, DIVERT ANY WATER RUNNING DOWN ACCESS ROAD TO A SEDIMENT TRAP LOCATED ON EITHER SIDE OF THE STABILIZED CONSTRUCTION ENTRANCE.

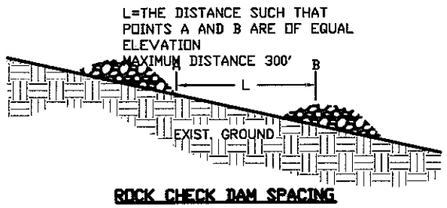
BMP3.02-STABILIZED CONSTRUCTION ENTRANCE ②



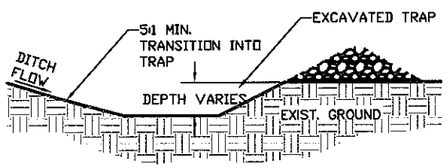
ELEVATION



CROSS SECTION



ROCK CHECK DAM SPACING



ROCK CHECK DAM WITH SUMP

1. THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN 2 TO 4 INCH AGGREGATE IS USED ALONE; AND SHALL NOT EXCEED 5 ACRES WHEN A COMBINATION OF 4 TO 8 INCH AGGREGATE (ADDED FOR STABILITY) AND THE SMALLER AGGREGATE IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE STONE TO THE TOP OF CHANNEL BANKS.
2. THE MAXIMUM HEIGHT OF THE DAM SHOULD BE 3 FEET.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES. THIS IS THE SINGLE MOST IMPORTANT ASPECT IN THE PROPER INSTALLATION OF THE ROCK CHECK DAM. HIGH FLOWS MUST GO OVER THE CENTER OF THE DAM, NOT AROUND THE EDGES WHERE SEVERE EROSION CAN OCCUR.
4. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM. THE MAXIMUM DISTANCE BETWEEN ROCK CHECK DAMS IS 300 FEET.
5. WHEN USING A SMALL TRAP IN FRONT OF THE CHECK DAM, ENSURE THE MINIMUM TRANSITION FROM THE DITCH INTO THE TRAP IS AT LEAST 5:1

BMP3.05-ROCK CHECK DAMS ①

E.L. ROBINSON
5088 WASHINGTON ST WEST
CROSS LANES, WEST VIRGINIA 25313

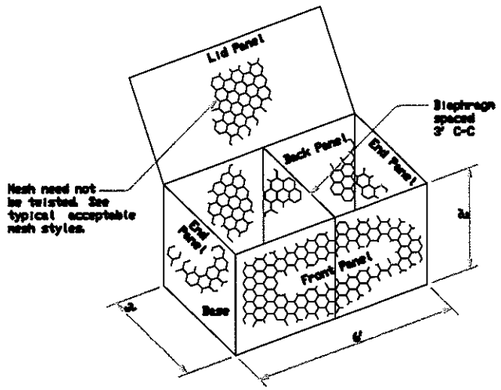
NO.	DATE	REVISION	BY

PROJECT INFORMATION
ISLAND CREEK #16
MINE COMPLEX
LOGAN COUNTY, WEST VIRGINIA

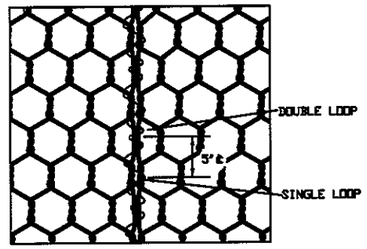
dep department of environmental protection

DRAWING TITLE
DETAIL SHEET

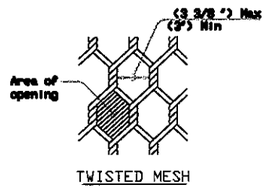
DATE
MAY 2010
SCALE
NOT TO SCALE
DRAWING NUMBER
D-4



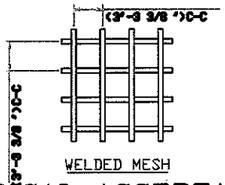
TYPICAL GABION BASKET



LACING DIAGRAM

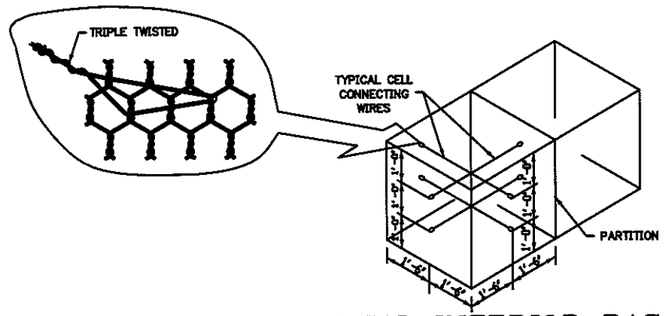


TWISTED MESH

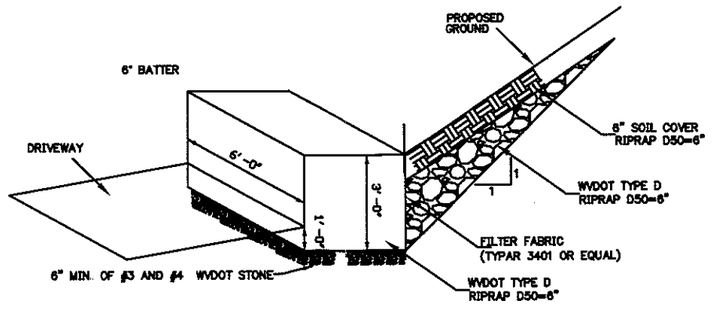


WELDED MESH

TYPICAL ACCEPTABLE MESH STYLES



TYPICAL INTERIOR BASKET WIRING DETAIL



GABION WALL
TYPICAL FDN PREPARATION

NOTES

1. Internal connecting wire (13.5-gage) to be installed across width of interior Gabions and across width and length of end Gabions.
2. Internal connecting wire and Gabion mesh shall be galvanized.
3. Preformed stiffeners (11-gage or 9-gage) are an acceptable alternative to internal connecting wires. Install them as recommended by manufacturer or as directed by the Engineer at 1/3 points.
4. Place rock in end Gabion cell first, and continue by filling interior Gabion cells.

NOTES

1. A joint connection must be made where any panel edge meets another panel. This includes adjacent gabion baskets, individual panels within a basket, diaphragm edges, etc.
2. Standard tie wire may be used as a joint connector for either twisted or welded mesh. Spiral binder is to be used

E.L. ROBINSON
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CROSS LANES, WEST VIRGINIA 25313

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LOGAN COUNTY, WEST VIRGINIA
dep

DRAWING TITLE
GABION BASKET DETAIL SHEET

DATE
MAY 2010
SCALE
NOT TO SCALE
DRAWING NUMBER
D-6