

**PROJECT GENERAL NOTES:**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- ALL INFORMATION AND DETAILS ON THESE DRAWINGS SHALL BE CONSTRUCTED AS PER THE PLANS OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- ALL STATIONING AND DIMENSIONING ARE TO BE FIELD VERIFIED BY THE CONTRACTOR.
- STORM DRAINAGE SLOPES ARE TO BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE HOWARD COUNTY ENGINEER.
- APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN. THESE LOCATIONS ARE BASED ON UTILITY PLANS OR TOPOGRAPHIC SURVEYS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.  
 COMCAST 410-461-1362      HOWARD COUNTY BUREAU OF UTILITIES 410-313-4900  
 BGE (CONTRACTOR SERVICES) 410-850-4620      HOWARD COUNTY DIVISION OF CONSTRUCTION INSPECTION 410-313-1880  
 BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9068      VERIZON 1-800-743-0033 / 410-224-9210  
 MISS UTILITY 1-800-257-7777
- SEE HOWARD COUNTY STANDARD DETAILS NO'S G-1.01 AND G-1.02 FOR STANDARD SYMBOLS AND ABBREVIATIONS.
- HORIZONTAL COORDINATES ARE BASED ON MD NAD 83/91 HORIZONTAL DATUM TRANSFERRED FROM HOWARD COUNTY CONTROL STATIONS: 21BA, 21CB, 21CMT4, AND 21CMT3  
 21BA N 588,125.209      21CB N 588,188.071      21CMT4 N 586,415.548      21CMT3 N 588,128.927  
 E 1,303,655.319      E 1,306,716.637      E 1,307,240.474      E 1,307,130.461  
 ELEV. 532.019      ELEV. 589.835      ELEV. 572.972      ELEV. 578.371
- TOPOGRAPHY SURVEY INFORMATION BASED ON FIELD SURVEY PERFORMED BY HOWARD COUNTY DPW DATED MARCH, 2010.
- INFORMATION SHOWN ADJACENT TO THIS PROJECT AND OUTSIDE THE COUNTY RIGHT-OF-WAY AS WELL AS THE EXISTING RIGHT-OF-WAY LINES ARE TAKEN FROM THE NEWSHAWAT PROPERTY PLANS, F-07-121. THIS IS FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY THIS INFORMATION.
- NO OFFSITE BORROW IS REQUIRED FOR THIS CONSTRUCTION UNLESS DIRECTED OTHERWISE BY THE COUNTY ENGINEER. THE CONTRACTOR WITH APPROVAL FROM THE COUNTY ENGINEER SHALL ADJUST THE PROPOSED FILL GRADING SHOWN ON SHEET GP-2 AS NECESSARY TO ACCOMMODATE THE MATERIAL GENERATED FROM THE EXISTING STOCKPILE REMOVAL SHOWN ON SHEET GP-1.
- ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING COUNTY RIGHT-OF-WAY.
- RIGHT OF WAY SIGNAGE SHALL BE INSTALLED ON 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL CAP SHALL BE MOUNTED ON TOP OF EACH POST. CONTRACTOR SHALL FURNISH AND INSTALL POSTS (7 TOTAL). THE COUNTY WILL FURNISH SIGNS (12 TOTAL) TO BE INSTALLED BY THE CONTRACTOR ON THE SIGN POSTS. LOCATIONS ARE SHOWN ON PLANS HOWEVER CONTRACTOR SHALL RECEIVE FINAL APPROVAL FROM THE COUNTY ENGINEER ON LOCATIONS PRIOR TO INSTALLATION. INSTALLATION OF SIGNS SHALL BE INCIDENTAL TO THE COST OF THE SIGN POSTS.

GRADING TABLE			
POINT	STATION	LOCATION	
		OFFSET	ELEV.
1	906+34	24.15', LT.	579
2	906+25	6.64', RT	579
3	906+59	27.31', LT.	578
4	906+55	11.95', RT.	578
5	906+83	43.31', LT.	577
6	906+74	27.08', LT.	577
7	906+72	14.79', RT.	577
8	907+16	37.72', LT.	577
9	907+60	23.50', LT.	577
10	907+67	18.55', RT.	577
11	907+63	41.28', LT.	578
12	908+03	26.49', RT.	578
13	908+09	7.87', LT.	578
14	908+48	21.87', LT.	579
15	908+50	2.78', RT.	579

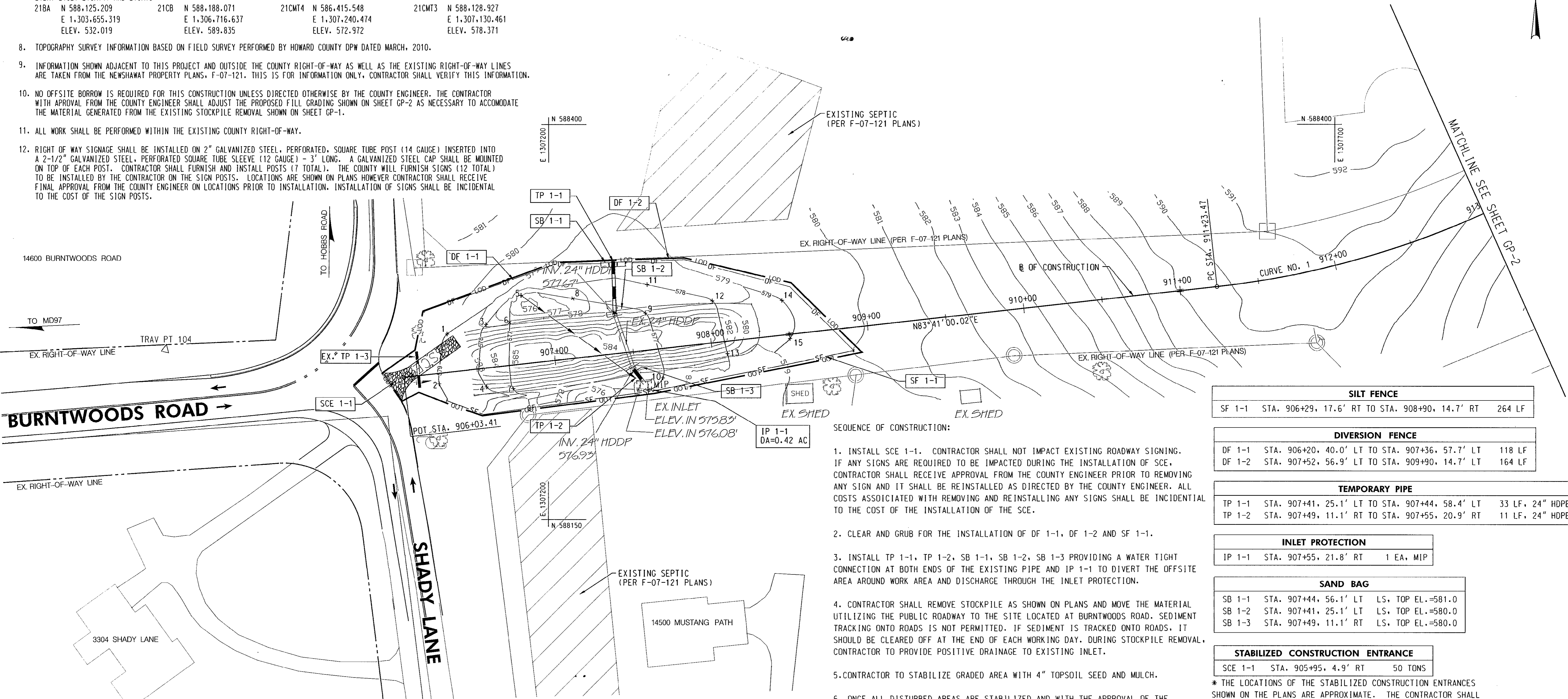
BASELINE CONTROL COORDINATES			
LOCATION	STATION	NORTH	EAST
CONSTRUCTION	POT STA. 906+03.41	588,240.1471	1,307,108.2762
	PC STA. 911+23.47	588,297.3653	1,307,625.1737
	PI (CURVE 1)	588,316.9306	1,307,801.9227
	CC	588,858.9352	1,307,563.0106
	PT STA. 914+68.03	588,434.2009	1,307,935.6039

CURVE DATA					
CURVE NO.	DELTA	Dc	RADIUS	TANGENT	EXTERNAL
1	34°56'30.61" (LT)	10°08'27.05"	565.00'	177.83'	27.32'

SURVEY CONTROL POINTS				
NO.	NORTHING	EASTING	ELEV.	DESC.
104	588,257.78	1,306,956.45	587.67	REBAR & CAP

SIGN POSTS	
STA. 906+05, BASELINE (1 SIGN)	1 EA.
STA. 908+50, BASELINE (2 SIGNS)	1 EA.
STA. 911+00, BASELINE (2 SIGNS)	1 EA.

\* SEE NOTE 12 IN GENERAL NOTES.



- SEQUENCE OF CONSTRUCTION:**
- INSTALL SCE 1-1. CONTRACTOR SHALL NOT IMPACT EXISTING ROADWAY SIGNING. IF ANY SIGNS ARE REQUIRED TO BE IMPACTED DURING THE INSTALLATION OF SCE, CONTRACTOR SHALL RECEIVE APPROVAL FROM THE COUNTY ENGINEER PRIOR TO REMOVING ANY SIGN AND IT SHALL BE REINSTALLED AS DIRECTED BY THE COUNTY ENGINEER. ALL COSTS ASSOCIATED WITH REMOVING AND REINSTALLING ANY SIGNS SHALL BE INCIDENTAL TO THE COST OF THE INSTALLATION OF THE SCE.
  - CLEAR AND GRUB FOR THE INSTALLATION OF DF 1-1, DF 1-2 AND SF 1-1.
  - INSTALL TP 1-1, TP 1-2, SB 1-1, SB 1-2, SB 1-3 PROVIDING A WATER TIGHT CONNECTION AT BOTH ENDS OF THE EXISTING PIPE AND IP 1-1 TO DIVERT THE OFFSITE AREA AROUND WORK AREA AND DISCHARGE THROUGH THE INLET PROTECTION.
  - CONTRACTOR SHALL REMOVE STOCKPILE AS SHOWN ON PLANS AND MOVE THE MATERIAL UTILIZING THE PUBLIC ROADWAY TO THE SITE LOCATED AT BURNTWOODS ROAD. SEDIMENT TRACKING ONTO ROADS IS NOT PERMITTED. IF SEDIMENT IS TRACKED ONTO ROADS, IT SHOULD BE CLEARED OFF AT THE END OF EACH WORKING DAY. DURING STOCKPILE REMOVAL, CONTRACTOR TO PROVIDE POSITIVE DRAINAGE TO EXISTING INLET.
  - CONTRACTOR TO STABILIZE GRADED AREA WITH 4" TOPSOIL SEED AND MULCH.
  - ONCE ALL DISTURBED AREAS ARE STABILIZED AND WITH THE APPROVAL OF THE HOWARD COUNTY EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE EXISTING 24" PIPE DOWNSTREAM OF TP 1-1 AND EX. TP 1-3 UNDER SCE 1-1 AND MAINTAIN EXISTING DRAINAGE PATTERNS. REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROLS.

SILT FENCE	
SF 1-1	STA. 906+29, 17.6' RT TO STA. 908+90, 14.7' RT 264 LF

DIVERSION FENCE	
DF 1-1	STA. 906+20, 40.0' LT TO STA. 907+36, 57.7' LT 118 LF
DF 1-2	STA. 907+52, 56.9' LT TO STA. 909+90, 14.7' LT 164 LF

TEMPORARY PIPE	
TP 1-1	STA. 907+41, 25.1' LT TO STA. 907+44, 58.4' LT 33 LF, 24" HDPE
TP 1-2	STA. 907+49, 11.1' RT TO STA. 907+55, 20.9' RT 11 LF, 24" HDPE

INLET PROTECTION	
IP 1-1	STA. 907+55, 21.8' RT 1 EA, MIP

SAND BAG	
SB 1-1	STA. 907+44, 56.1' LT LS, TOP EL.=581.0
SB 1-2	STA. 907+41, 25.1' LT LS, TOP EL.=580.0
SB 1-3	STA. 907+49, 11.1' RT LS, TOP EL.=580.0

STABILIZED CONSTRUCTION ENTRANCE	
SCE 1-1	STA. 905+95, 4.9' RT 50 TONS

\* THE LOCATIONS OF THE STABILIZED CONSTRUCTION ENTRANCES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION IN THE FIELD AND RELOCATE AS NEEDED WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12966, EXPIRATION DATE: MAY 19, 2012

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Steve Shavar*  
 DIRECTOR OF PUBLIC WORKS

*Willard M. Hall*  
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION

*Willard M. Hall*  
 CHIEF, BUREAU OF HIGHWAYS

**JMPT**  
 JOHNSON, MIRMIRAN & THOMPSON  
 ENGINEERS: A Partnership

72 Loveston Circle, Baltimore, Maryland 21152 0949

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 WILLARD M. HALL  
 LICENSE NO. 12966  
 EXPIRES MAY 19, 2012

DES:	SER:	BY:	NO.:	DATE:
DRN:	SER:			
CHK:	WRK:			
DATE:	SEPT 10			

CAPITAL PROJECT NO.  
**J-4223**

GRADING PLAN 1  
**BURNTWOODS ROAD  
 STOCKPILE REGRADING**

ELECTION DISTRICT 5      HOWARD COUNTY, MARYLAND

SCALE  
 1" = 30'

SHEET  
 1 OF 4

BASELINE CONTROL COORDINATES			
LOCATION	STATION	NORTH	EAST
CONSTRUCTION	PC STA. 911+23.47	588,297.3653	1,307,625.1737
	PI (CURVE 1)	588,316.9306	1,307,801.9227
	CC	588,858.9352	1,307,563.0106
	PT STA. 914+68.03	588,434.2009	1,307,935.6039
	PC STA. 915+80.03	588,508.0602	1,308,019.7990
	PI (CURVE 2)	588,733.7252	1,308,277.0437
	CC	588,083.3259	1,308,392.3924
	PT STA. 921+95.40	588,610.2857	1,308,596.2022

CURVE DATA						
CURVE NO.	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
1	34°56'30.61" (LT)	10°08'27.05"	565.00'	177.83'	344.57'	27.32'
2	62°24'11.68" (RT)	10°08'27.05"	565.00'	342.20'	615.37'	95.55'

SILT FENCE		
SF 2-1	STA. 916+80, 21.1' LT TO STA. 919+87, 25.9' LT	320 LF

SUPER SILT FENCE WITH STONE CHECK DAM		
SSF 2-1	STA. 916+47, 20.9' RT TO STA. 920+08, 20.8' LT	373 LF

STABILIZED CONSTRUCTION ENTRANCE	
SCE 2-1	STA. 919+96, 24.5' LT 50 TONS

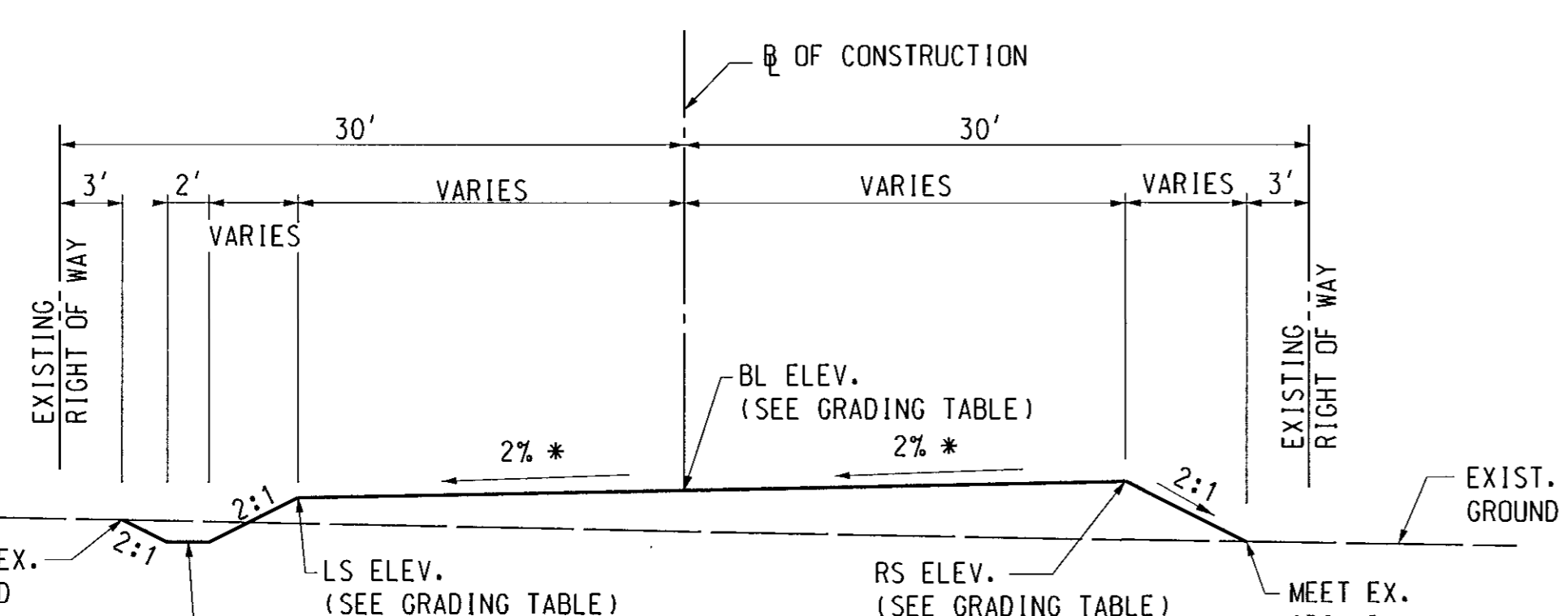
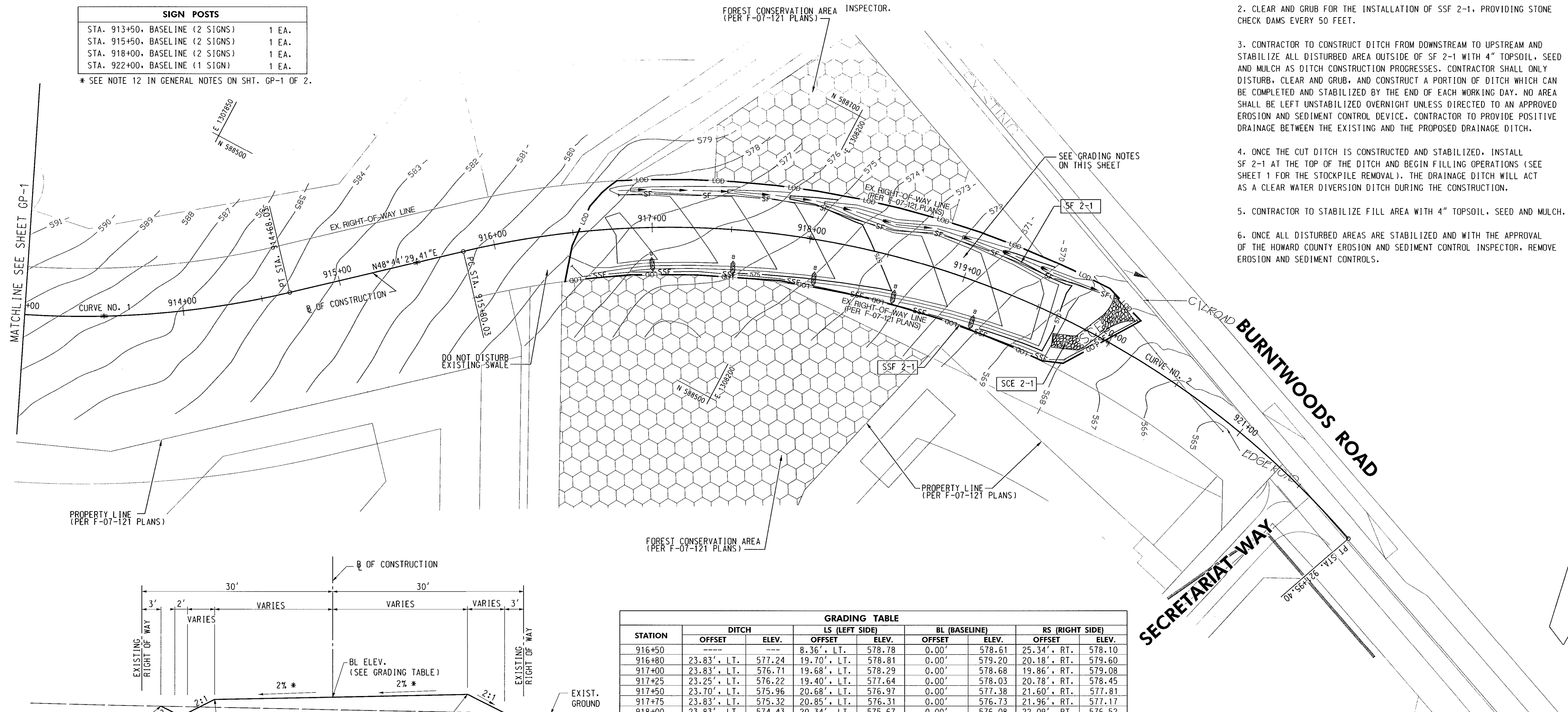
\* THE LOCATIONS OF THE STABILIZED CONSTRUCTION ENTRANCES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE EXACT LOCATION IN THE FIELD AND RELOCATE AS NEEDED WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.

SEQUENCE OF CONSTRUCTION:

1. INSTALL SCE 2-1.
2. CLEAR AND GRUB FOR THE INSTALLATION OF SSF 2-1, PROVIDING STONE CHECK DAMS EVERY 50 FEET.
3. CONTRACTOR TO CONSTRUCT DITCH FROM DOWNSTREAM TO UPSTREAM AND STABILIZE ALL DISTURBED AREA OUTSIDE OF SF 2-1 WITH 4" TOPSOIL, SEED AND MULCH AS DITCH CONSTRUCTION PROGRESSES. CONTRACTOR SHALL ONLY DISTURB, CLEAR AND GRUB, AND CONSTRUCT A PORTION OF DITCH WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. NO AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS DIRECTED TO AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE BETWEEN THE EXISTING AND THE PROPOSED DRAINAGE DITCH.
4. ONCE THE CUT DITCH IS CONSTRUCTED AND STABILIZED, INSTALL SF 2-1 AT THE TOP OF THE DITCH AND BEGIN FILLING OPERATIONS (SEE SHEET 1 FOR THE STOCKPILE REMOVAL). THE DRAINAGE DITCH WILL ACT AS A CLEAR WATER DIVERSION DITCH DURING THE CONSTRUCTION.
5. CONTRACTOR TO STABILIZE FILL AREA WITH 4" TOPSOIL, SEED AND MULCH.
6. ONCE ALL DISTURBED AREAS ARE STABILIZED AND WITH THE APPROVAL OF THE HOWARD COUNTY EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROLS.

SIGN POSTS	
STA. 913+50, BASELINE (2 SIGNS)	1 EA.
STA. 915+50, BASELINE (2 SIGNS)	1 EA.
STA. 918+00, BASELINE (2 SIGNS)	1 EA.
STA. 922+00, BASELINE (1 SIGN)	1 EA.

\* SEE NOTE 12 IN GENERAL NOTES ON SHT. GP-1 OF 2.



**GRADING - TYPICAL SECTION**  
STA. 916+50.00 TO STA. 919+70.00

\* SLOPE VARIES FROM STA. 916+50 TO STA. 916+80. SEE GRADING TABLE FOR ELEVATIONS

STATION	DITCH		LS (LEFT SIDE)		BL (BASELINE)		RS (RIGHT SIDE)	
	OFFSET	ELEV.	OFFSET	ELEV.	OFFSET	ELEV.	OFFSET	ELEV.
916+50			8.36', LT.	578.78	0.00'	578.61	25.34', RT.	578.10
916+80	23.83', LT.	577.24	19.70', LT.	578.81	0.00'	579.20	20.18', RT.	579.60
917+00	23.83', LT.	576.71	19.68', LT.	578.29	0.00'	578.68	19.86', RT.	579.08
917+25	23.25', LT.	576.22	19.40', LT.	577.64	0.00'	578.03	20.78', RT.	578.45
917+50	23.70', LT.	575.96	20.68', LT.	576.97	0.00'	577.38	21.60', RT.	577.81
917+75	23.83', LT.	575.32	20.85', LT.	576.31	0.00'	576.73	21.96', RT.	577.17
918+00	23.83', LT.	574.43	20.34', LT.	575.67	0.00'	576.08	22.09', RT.	576.52
918+25	21.68', LT.	572.38	15.18', LT.	575.13	0.00'	575.43	21.98', RT.	575.87
918+50	19.35', LT.	571.86	13.03', LT.	574.52	0.00'	574.78	21.61', RT.	575.21
918+75	23.83', LT.	571.61	18.54', LT.	573.76	0.00'	574.13	21.18', RT.	574.55
919+00	23.83', LT.	570.67	17.92', LT.	573.12	0.00'	573.48	20.68', RT.	573.89
919+25	23.83', LT.	569.75	17.36', LT.	572.48	0.00'	572.83	20.21', RT.	573.23
919+50	23.35', LT.	568.70	16.03', LT.	571.86	0.00'	572.18	19.65', RT.	572.57
919+70	MEET EX.	MEET EX.	MEET EX.	MEET EX.	0.00'	MEET EX.	MEET EX.	MEET EX.

GRADING NOTES:

1. CONTRACTOR SHALL CLEAR AND GRUB THE GRADED AREA TO THE LIMIT OF DISTURBANCE OR AS DIRECTED BY THE COUNTY ENGINEER. THE CONTRACTOR SHALL CLEAR AND GRUB PER THE REQUIREMENTS OF SECTION 101 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. ALL COSTS ASSOCIATED WITH CLEARING AND GRUBBING WILL NOT BE MEASURED BUT WILL BE PAID FOR AS A LUMP SUM.
2. CONTRACTOR SHALL PLACE AND COMPACT EMBANKMENT MATERIAL PER SECTION 204 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. COMPACTION SHALL MEET THE REQUIREMENTS OF 204.03.04 FOR ROADWAY EMBANKMENTS.

NOTE:  
ALL GRADED AREAS SHALL RECEIVE 4" OF TOPSOIL SEED AND MULCH UNLESS SPECIFIED OTHERWISE.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12966, EXPIRATION DATE: MAY 19, 2012

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Steve Shavar* 9/8/10  
DIRECTOR OF PUBLIC WORKS

*William R. Murrain* 9-10-10  
CHIEF, BUREAU OF ENGINEERING

*William R. Murrain* 9-10-10  
CHIEF, BUREAU OF HIGHWAYS

**JMPT**  
JOHNSON, MIRMIRAN & THOMPSON  
ENGINEERS, ARCHITECTS & PLANNERS  
72 Lovston Circle, Baltimore, Maryland 21152-0949

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER  
9-3-10

DES:	SER	BY	NO.	DATE
DRN:	SER			
CHK:	WRK			
DATE:	SEPT 10			

CAPITAL PROJECT NO.  
**J-4223**

GRADING PLAN 2  
**BURNTWOODS ROAD STOCKPILE REGRADING**

ELECTION DISTRICT 5  
HOWARD COUNTY, MARYLAND

**STANDARD SEDIMENT CONTROL NOTES**

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (410) 313-1855.
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

Site Analysis: (NOT FOR BIDDING PURPOSES)

Total Area of Site	0.93 Acres
Area Disturbed	0.93 Acres
Area to be roofed or paved	N/A Acres
Area to be vegetatively stabilized	0.93 Acres
Total Cut	1,200 Cu. Yds.
Total Fill	1,200 Cu. Yds.
Off-site waste/borrow area locations:	UNKNOWN

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.).
- Acceptable -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the period March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by:  
 Option 1 -- Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring;  
 Option 2 -- Use sod.  
 Option 3 -- Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseeding.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation -- Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Seeding: -- For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 -- February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

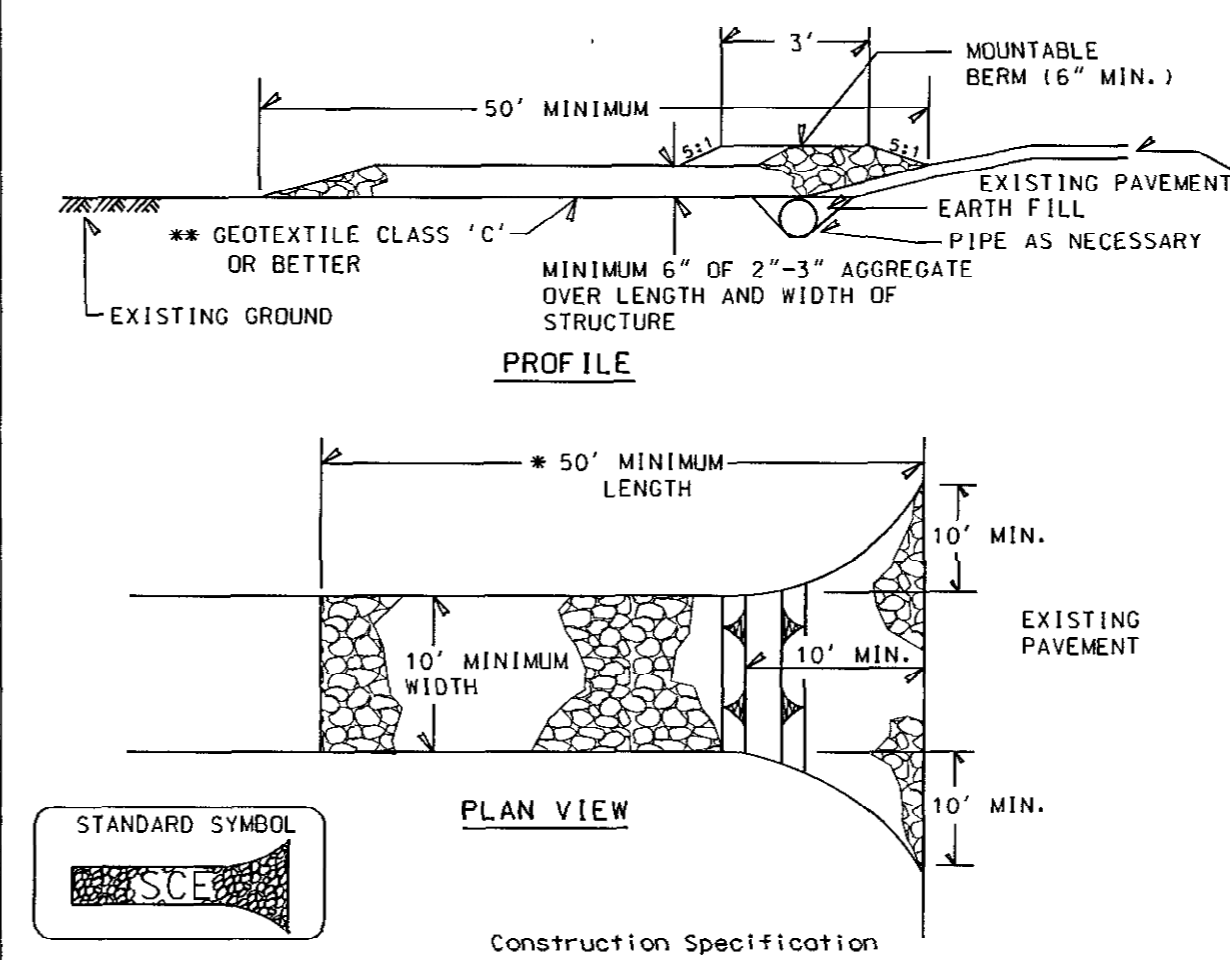
Mulching: -- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

**GENERAL SEQUENCE OF CONSTRUCTION**

- CONTRACTOR SHALL OBTAIN GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL CONTACT HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES, AND PERMITS AT (410) 313-2455 TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 72 HOURS BEFORE CONSTRUCTION IS TO BEGIN.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH APPROVAL OF THE INSPECTOR, REMOVE INLET PROTECTIONS.

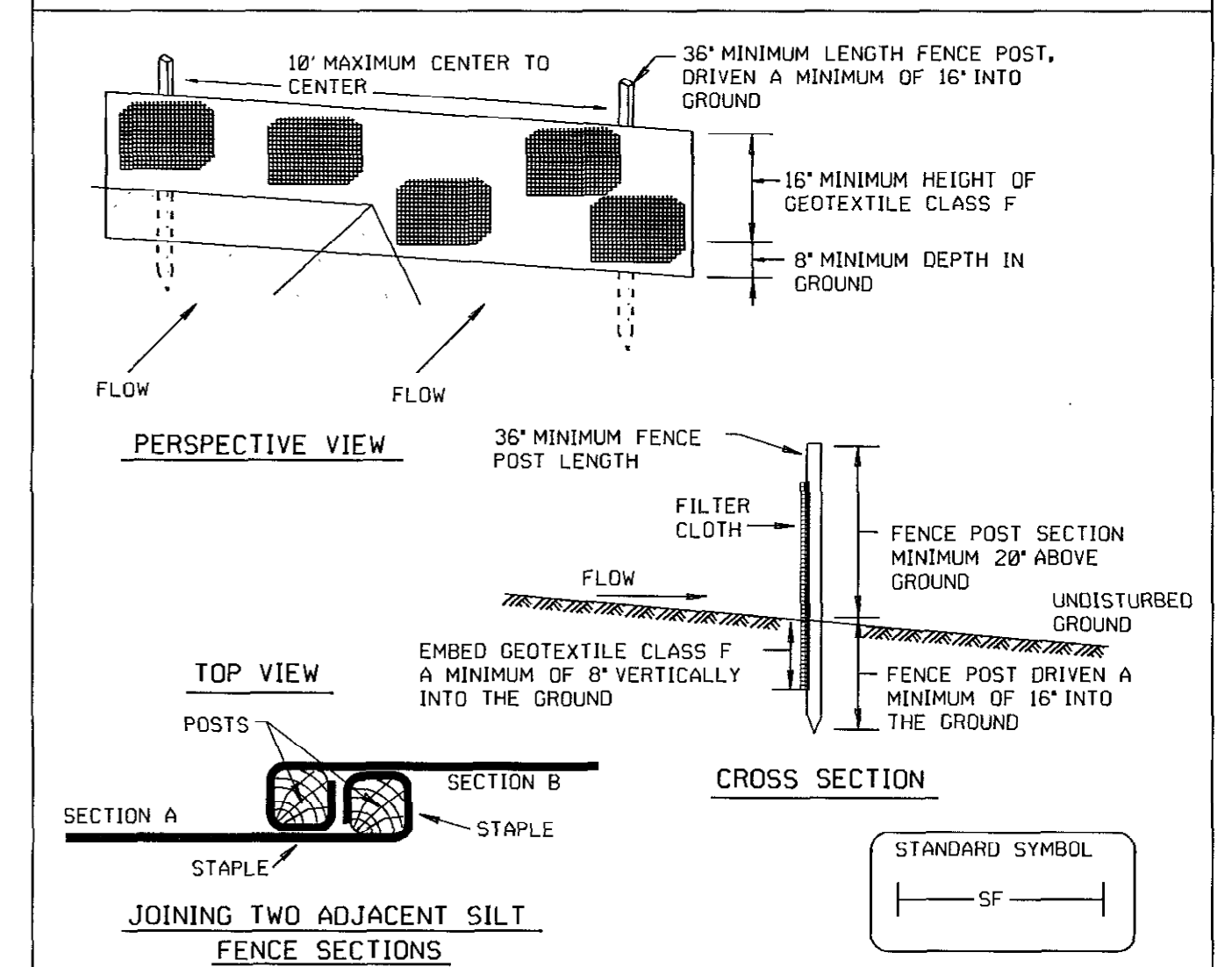
**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



- Length - minimum of 50' (#30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE P - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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**DETAIL 22 - SILT FENCE**

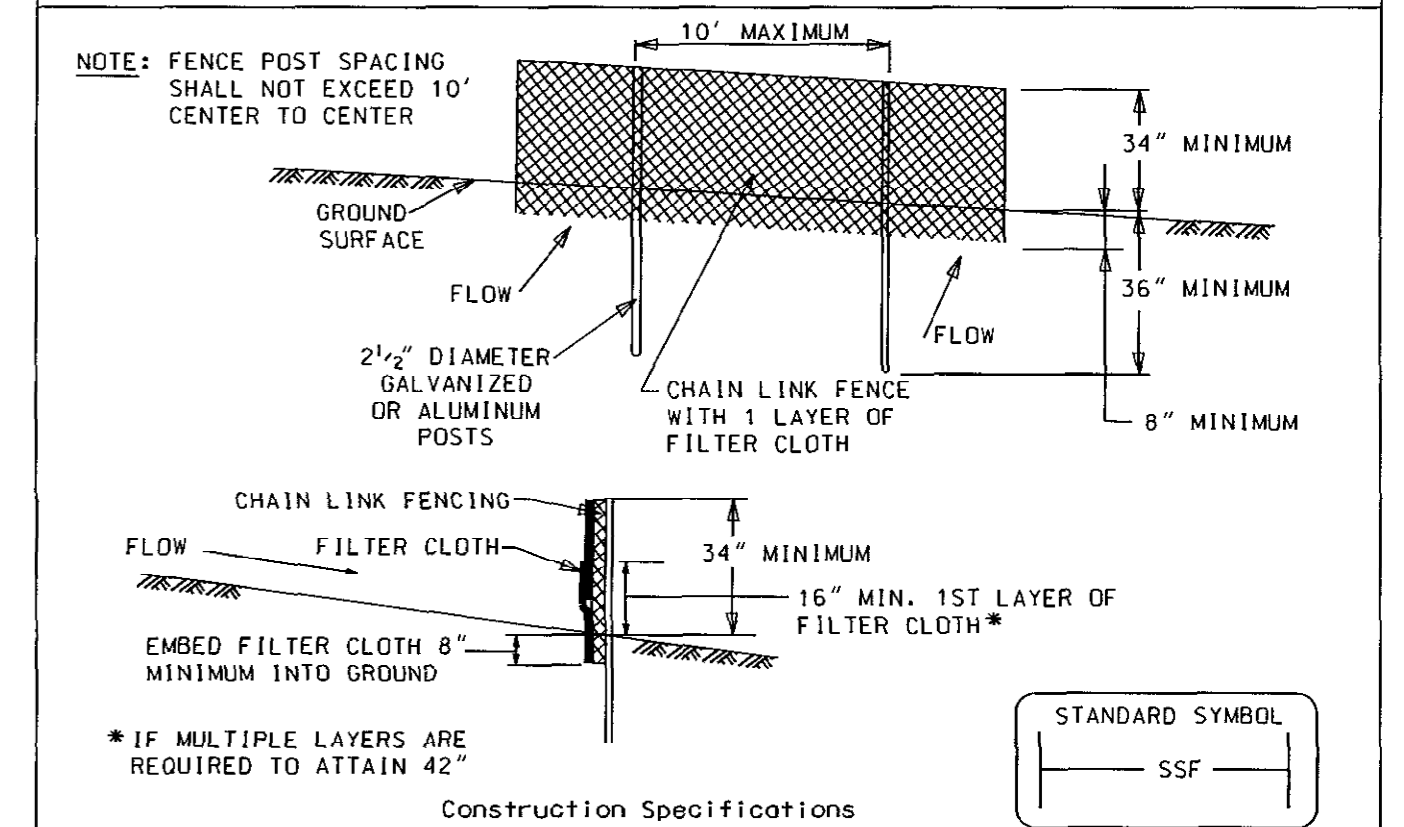


- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut), or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
  - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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**DETAIL 33 - SUPER SILT FENCE**



- NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
  - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
  - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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By the Developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

*Ronald G. Lepson*  
 Signature of Developer  
 Print name below Signature

9/10/10  
 Date

By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Paul F. Clement*  
 Signature of Engineer  
 Print name below Signature

09/03/10  
 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

*John K. Robertson*  
 Signature of Howard SCD  
 Date

9/15/10  
 Date

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2011"

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

*Steve Sharav* 9/9/10  
 DIRECTOR OF PUBLIC WORKS  
*William Z. Mulla* 9-10-10  
 CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION  
 CHIEF, BUREAU OF ENGINEERING  
 CHIEF, BUREAU OF HIGHWAYS



DES: SER	BY	NO.	DATE
DRN: SER			
CHK: WRK			
DATE: SEPT 10			

CAPITAL PROJECT NO.  
**J-4223**

**SEDIMENT AND EROSION CONTROL DETAILS AND NOTES**

**BURNTWOODS ROAD STOCKPILE REGRADING**

ELECTION DISTRICT 5 HOWARD COUNTY, MARYLAND

ED-1

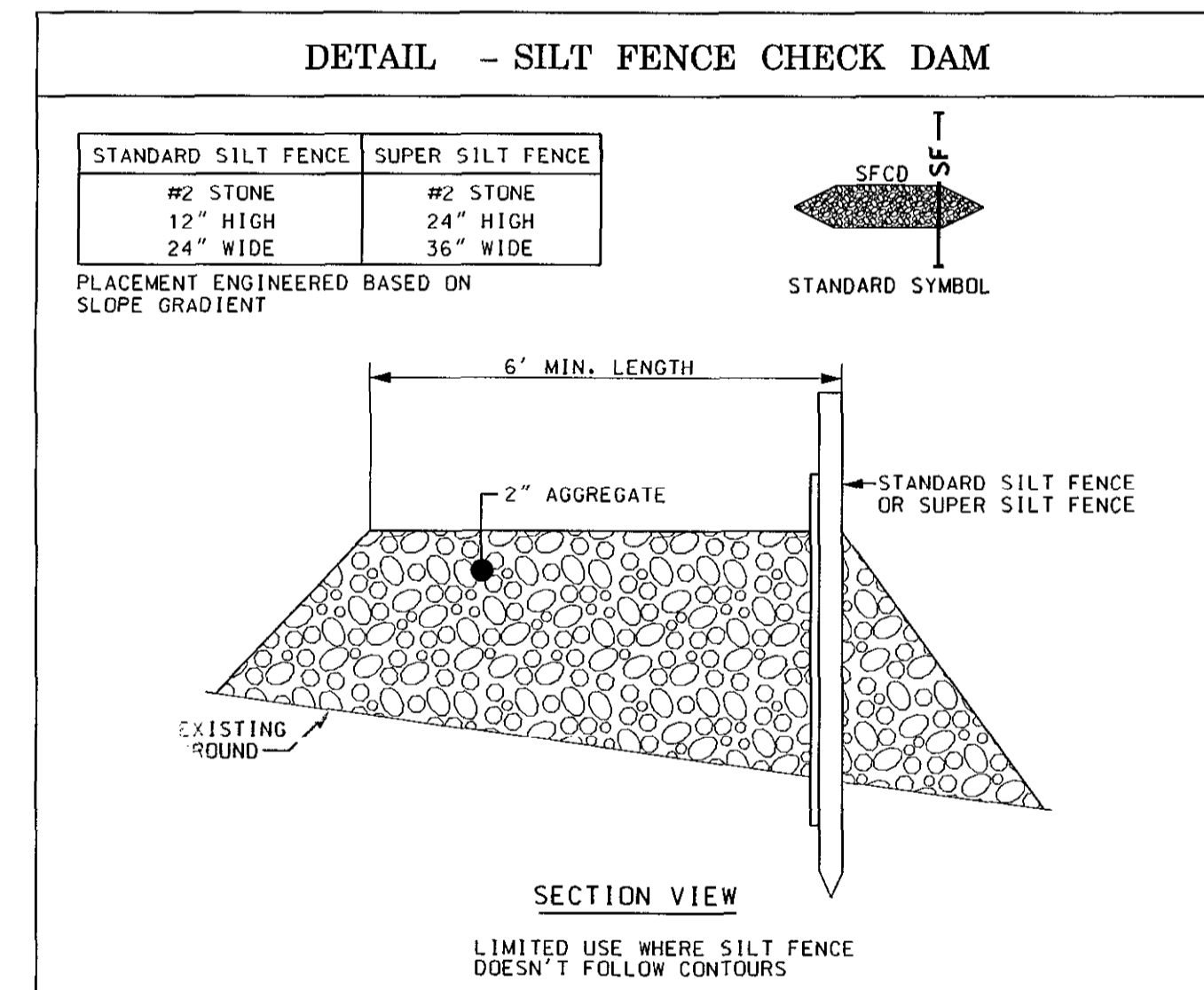
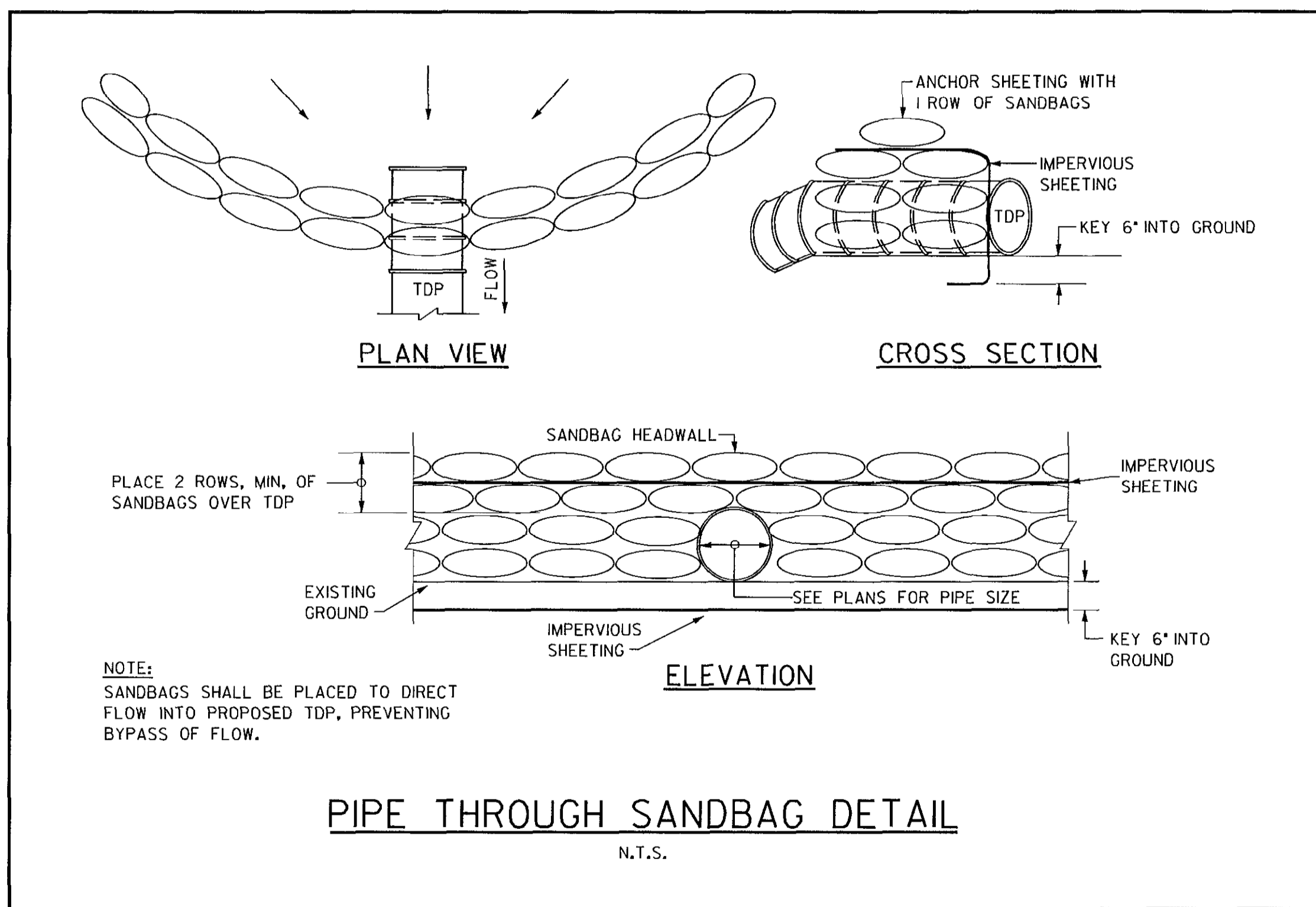
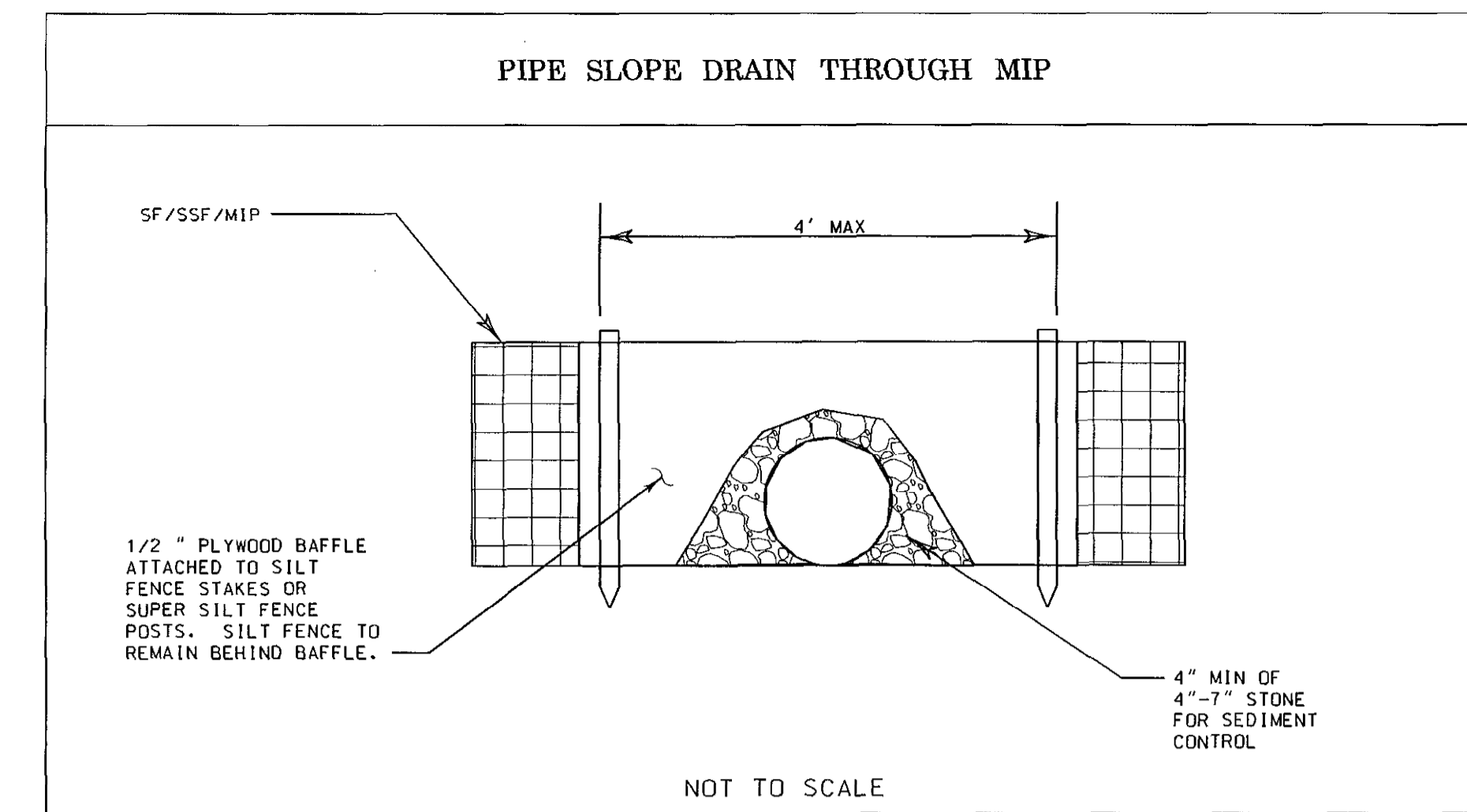
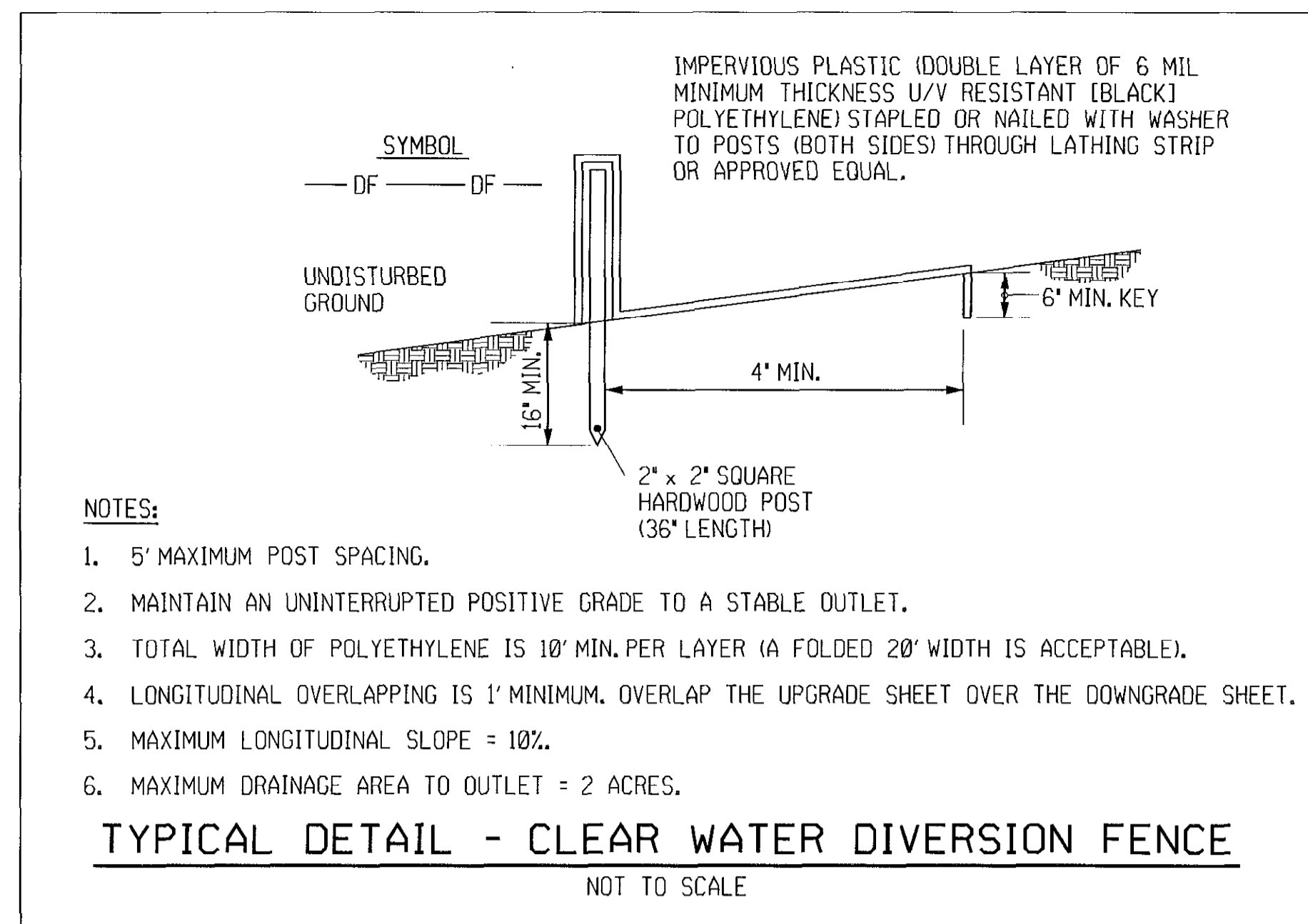
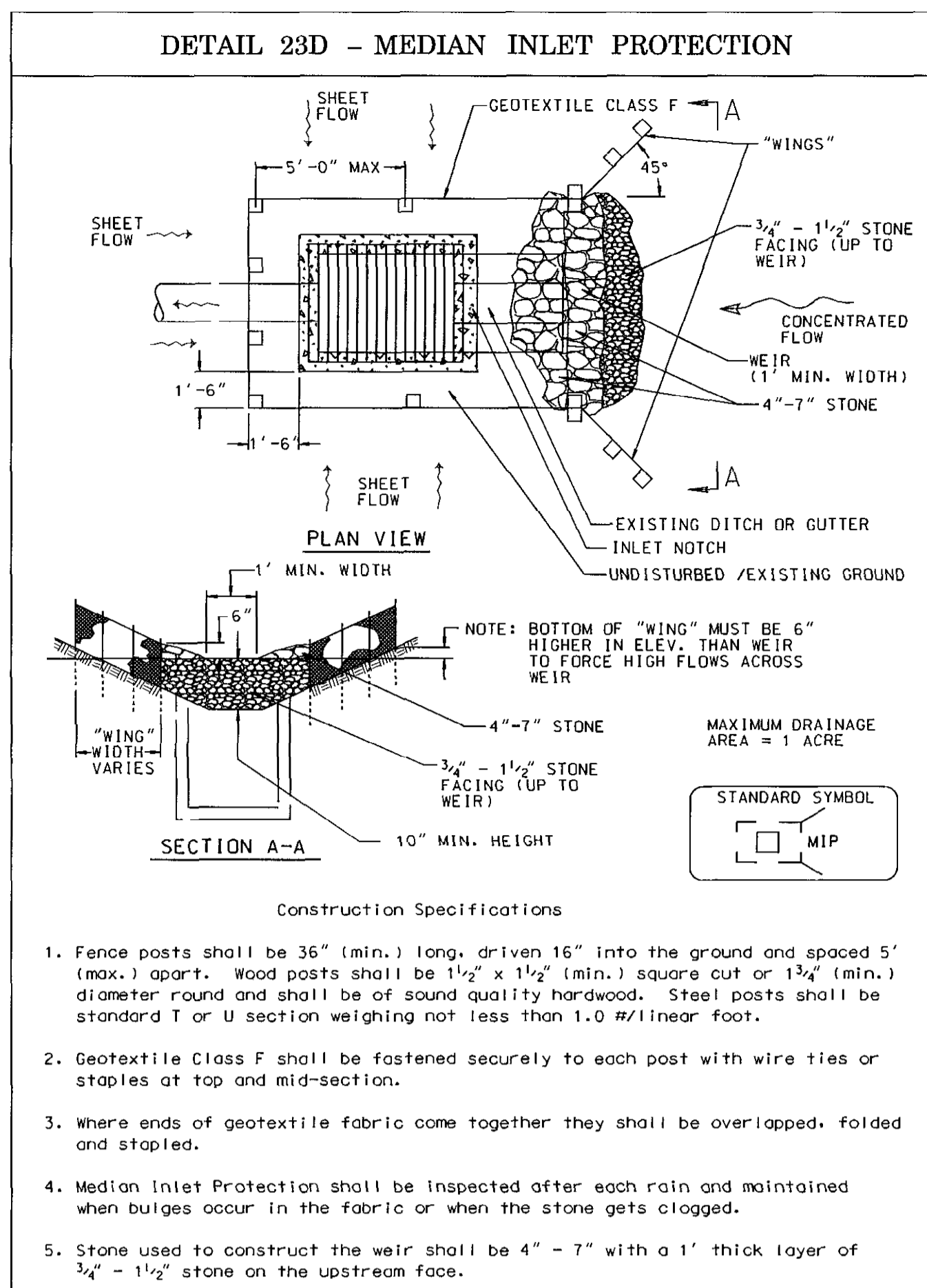
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N.T.S.

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3 OF 4

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\*PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15466, EXPIRATION DATE: JULY 15, 2011

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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Steve Shanan* 9/2/10  
DIRECTOR OF PUBLIC WORKS

*Matthew M. Wall* 9-10-10  
CHIEF, BUREAU OF ENGINEERING

CHIEF, TRANSPORTATION AND SPECIAL PROJECTS DIVISION  
CHIEF, BUREAU OF HIGHWAYS

**JMT**  
JOHNSON, MIRMIRAN & THOMPSON  
Engineers, A Registered Firm  
72 Loveston Circle, Baltimore, Maryland 21152-0949



DES:	SER:	BY:	NO.:	DATE:
DRN:	SER:			
CHK:	WRK:			
DATE:	SEPT 10			

CAPITAL PROJECT NO.  
**J-4223**

MAP NO.      BLOCK NO.

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES  
**BURNTWOODS ROAD  
STOCKPILE REGRADING**

ELECTION DISTRICT 5      HOWARD COUNTY, MARYLAND

ED-2  
SCALE  
N.T.S.  
SHEET  
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