

TEMPORARY SEEDING MIXTURE:

THE SEEDING INFORMATION PROVIDED BELOW IS FOR GENERAL COMPLIANCE WITH EROSION & SEDIMENT CONTROL REQUIREMENTS. REFER TO VE&SC STD. SPEC. 3.31 FOR ADDITIONAL TECHNICAL REQUIREMENTS.

FERTILIZER: SHALL MEET REQUIREMENTS OF FEDERAL SPECIFICATION OF 241. PROVIDE FERTILIZER THAT IS COMPLETE, INORGANIC, UNIFORM IN COMPOSITION, AND SUITABLE FOR APPLICATION WITH APPROVED EQUIPMENT. NEVER APPLY MORE THAN 1 POUND OF WATER SOLUBLE NITROGEN PER 1,000 SQUARE FEET WITHIN A 30 DAY PERIOD. APPLY 450 LBS/ACRE (10 LBS/1,000 SQUARE FEET), PROPORTIONS OF FERTILIZER NUTRIENTS SHALL BE THE FOLLOWING:

10 LBS. OF ACTUAL NITROGEN
10 LBS. OF ACTUAL PHOSPHATE
10 LBS. OF ACTUAL POTASH

TEMPORARY SEED MIXTURE: SHALL HAVE THE FOLLOWING CHARACTERISTICS:

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
SEPT. 1 – FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50–100 (LBS/ACRE)
FEB. 16 – APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60–100 (LBS/ACRE)
MAY 1 – AUG. 31	GERMAN MILLET	50 (LBS/ACRE)

LIME: SHALL BE GROUND AGRICULTURAL GRADE LIMESTONE CONTAINING NOT LESS THAN 85 PERCENT CALCIUM AND MAGNESIUM CARBONATES. FINENESS SHALL BE SUCH THAT 100 PERCENT WILL PASS A NO. 20 SIEVE, AND NOT LESS THAN 50 PERCENT WILL PASS A NO. 100 SIEVE. BURNT LIME OR HYDRATED LIME MAY BE SUBSTITUTED IN EQUIVALENT CARBONATES, IF REQUESTED. APPLY 2 TONS/ACRE (90 POUNDS PER 1,000 SQUARE FEET) OR AS REQUIRED TO ADJUST SOIL pH TO 6.25–6.5.

MULCH: TYPE I MULCH SHALL BE CURLEX BLANKET EROSION CONTROL FABRIC BLANKET. THE FABRIC SHALL BE MANUFACTURED OF MATERIALS WHICH DEGRADE IN 6 TO 8 MONTHS UNDER OUTDOOR EXPOSURE. TYPE II MULCH COMPOSED OF THRESHED STRAW OF CEREAL GRAIN, PINE NEEDLES, OR WOOD FIBER SHALL BE FREE OF OBJECTIONABLE WEED SEEDS OR OTHER HARMFUL MATERIAL.

BINDER: SYNTHETIC MULCH BINDER FOR USE WITH TYPE II MULCH: CURASOL, DCA 70, PETROSET, OR TERRA TACK.

TEMPORARY SEEDING MIXTURE

TS

(STD. & SPEC. 3.31–B)

PERMANENT SEEDING MIXTURE:

THE SEEDING INFORMATION PROVIDED BELOW IS FOR GENERAL COMPLIANCE WITH EROSION & SEDIMENT CONTROL REQUIREMENTS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL TECHNICAL REQUIREMENTS.

LIME: AS REQUIRED BY SOIL TEST TO ADJUST THE pH TO BETWEEN 6.25 AND 6.5. AGRICULTURAL LIMESTONE CONTAINING MINIMUM OF 85 PERCENT CARBONATES. MINIMUM GRADATION: 100 PERCENT PASSING A 10 MESH SIEVE; 98 PERCENT A 20 MESH SIEVE; 55 PERCENT A 60 MESH SIEVE; AND 40 PERCENT A 10 MESH SIEVE.

FERTILIZER: SHALL BE GRANULAR, OR PELLETTED, COMPLETE COMMERCIAL TYPE WITH 50 PERCENT OF THE NITROGEN IN SLOWLY AVAILABLE FORM. ALL FERTILIZER SHALL BE A COMMERCIAL BALANCED FORMULA WITH AT BEST 25 PERCENT ORGANIC MATERIAL, AND SHALL CONFORM TO APPLICABLE STATE FERTILIZER LAWS. IT SHALL BE UNIFORM IN COMPOSITION, IN GRANULAR FORM DRY AND FREE-FLOWING. NEVER APPLY MORE THAN 1 POUND OF WATER SOLUBLE NITROGEN PER 1,000 SQUARE FEET WITHIN A 30 DAY PERIOD.

SEED: ALL PERMANENT GRASS SEED SHALL BE MANUFACTURED BY A SEED COMPANY THAT CAN GUARANTEE ALL SEED SHALL BE FREE OF NOXIOUS WEED SEEDS, CLEANED GRADE A RECENT CROP SEED. SEED COMPANY SHALL PROVIDE GUARANTEED GERMINATION OF 80 PERCENT.

MULCH: SHALL BE CLEAN WHEAT OR BARLEY STRAW, FREE FROM NOXIOUS WEED SEED AND OTHER HARMFUL MATERIAL. COMMERCIAL PRODUCTS MAY BE USED WITH APPROVAL.

BINDER: SHALL BE FIBER MULCH BASED TACK BINDER SUCH AS "ENVIRO-BLEND" BY CONVED OR EQUAL. APPLY AT 25 LBS. PER THOUSAND SQUARE FEET ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

REFER TO EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN NO. 4-- "NUTRIENT MANAGEMENT FOR DEVELOPED SITES" FOR ADDITIONAL INFORMATION AND REQUIREMENTS

PERMANENT SEEDING MIXTURE

PS

(STD. & SPEC. 3.32)

TABLE 3.32-C
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA

SEED ¹		
LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹	90-100%
	Perennial Ryegrass ²	0-10%
	Kentucky Bluegrass ¹	0-10%
		TOTAL: 200-250 lbs.
High-Maintenance Lawn	Minimum of three (3) up to five (5) varieties of Kentucky Bluegrass from approved list for use in Virginia	TOTAL: 125 lbs.
	Tall Fescue ¹	128 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
General Slope (3:1 or less)	Seasonal Nurse Crop ³	20 lbs.
		TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue ¹	108 lbs.
	Red Top Grass or Creeping Red Fescue	2 lbs.
	Seasonal Nurse Crop ³	20 lbs.
		TOTAL: 150 lbs.
1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html		
2 - Perennial Ryegrass will germinate faster and at lower soil temperatures than Tall Fescues, thereby providing cover and erosion resistance for seedbed.		
3 - Use seasonal nurse crop in accordance with seeding dates as stated below:		
March, April - May 15 th		Annual Rye
May 16 th - August 15 th		Foxtail Millet
August 16 th - September, October		Annual Rye
November - February		Winter Rye
4 - All legume seed must be properly inoculated. If Flatpea is used, increase to 30 lbs/acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30-40 lbs/acre.		
FERTILIZER & LIME		
• Apply 10-20-10 fertilizer at a rate of 500 lbs. / acre (or 12 lbs. / 1,000 sq. ft.)		
• Apply Pulverized Agricultural Limestone at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)		
NOTE:		
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.		
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by diskimg or by other means.		
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Developed Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs		

PERMANENT SEEDING MIXTURE

PS

(STD. & SPEC. 3.32C)

EROSION & SEDIMENT CONTROL BOND COST ESTIMATE

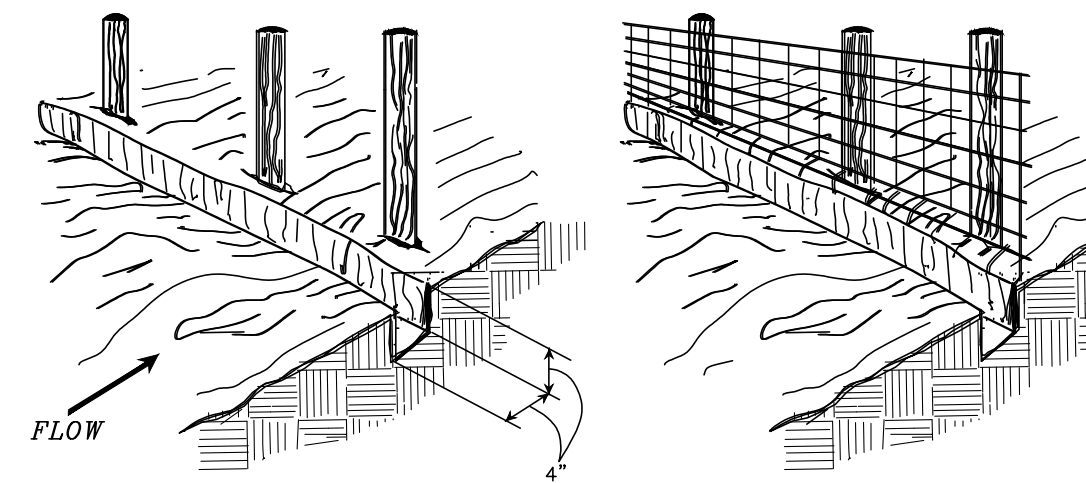
PROJECT: THE VILLAGE AT TINKER CREEK – PHASE IIIA
T.M. #: 027.20-01-38.02-0000
LOCATION: ROANOKE COUNTY, VA
BY: MATTERN & CRAIG

ITEM NO.	DESCRIPTION	UNIT	UNIT COST	APPROVED PLAN		PLAN REV. NO. 2	
				QTY	TOTAL (1)	QTY	TOTAL (1)
3.02	CONSTRUCTION ENTRANCE (CE)	EA	\$1,200.00	1	\$1,200		
3.03	CONSTRUCTION ROAD STABILIZATION (CRS)	SF	\$0.35				
3.05	SILT FENCE (SF)	LF	\$4.00	907	\$3,628	160	\$640
3.05	SUPER SILT FENCE (SSF)	LF	\$6.00				
3.07	INLET PROTECTION (IP)	EA	\$150.00	3	\$450		
3.09	DIVERSION DIKE (DD)/(BM)	LF	\$5.00	803	\$4,015	120	\$600
3.11	RIGHT-OF-WAY DIVERSION (RWD)	LF	\$10.00	45	\$450		
3.13	SEDIMENT TRAP (ST)	-	-	-			
LESS THAN 1 ACRE DRAINAGE AREA				EA	\$1,500.00		
1 – 3 ACRE DRAINAGE AREA				EA	\$3,000.00	2	\$6,000
3.14	SEDIMENT BASIN (SB)	-	-	-			
3 – 6 ACRE DRAINAGE AREA				EA	\$5,000.00		
3.15	TEMPORARY CULVERT	LF	\$10.00				
3.15	TEMPORARY SLOPE DRAIN (TSD)	LF	\$15.00				
3.17	STORMWATER CONVEYANCE CHANNEL:	-	-	-			
– EC-3 / GRASS		SY	\$15.00	225	\$3,375		
– RIP-RAP		SY	\$60.00	50	\$3,000		
3.18	OUTLET PROTECTION (OP)	EA	\$250.00	2	\$500		
3.19	RIP RAP BERM (RR)	SY	\$30.00				
3.20	ROCK CHECK DAM (CD)	EA	\$100.00	7	\$700	2	\$200
3.21	LEVEL SPREADER (LS)	EA	\$150.00				
3.29	SURFACE RUFFENING (SR)	AC	\$500.00	0.38	\$190		
3.31	TEMPORARY SEEDING (TS)	SF	\$0.04	145,814	\$5,833	48,028	\$1,921
3.32	PERMANENT SEEDING WITH STRAW (PS)	SF	\$0.05	145,814	\$7,291	48,028	\$2,401
3.36	SOIL STABILIZATION BLANKETS AND MATTINGS	SF	\$0.25	39,705	\$9,926	517	\$129
3.38	TREE PRESERVATION & PROTECTION (TP)	EA	\$100.00				
-	CONCRETE WASH-OUT FACILITY	LS	\$600.00	1	\$600		
-	MAINTENANCE (10%)	LS		1	\$4,656	1	\$589
				SUB-TOTAL =		\$51,814	
				10% CONTINGENCY =		\$5,181	
				GRAND TOTAL =		\$56,995	

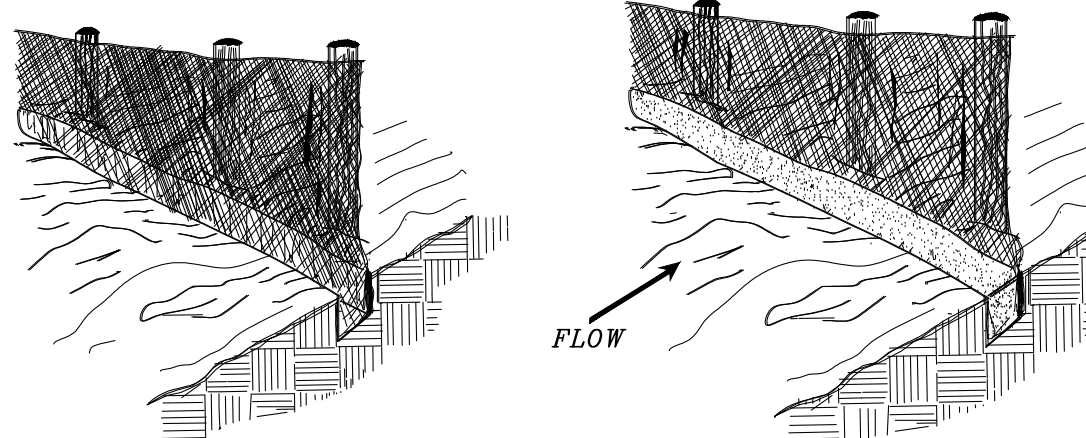
(1) VALUES IN THE "TOTAL" COLUMN HAVE BEEN ROUNDED TO THE NEAREST DOLLAR.

CONSTRUCTION OF A SILT FENCE
(WITH WIRE SUPPORT)

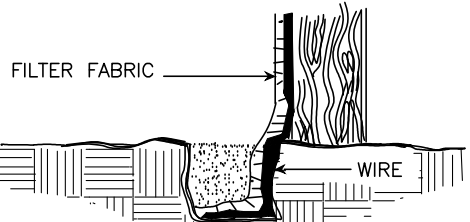
1. SET POSTS AND EXCAVATE A 4"x4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.

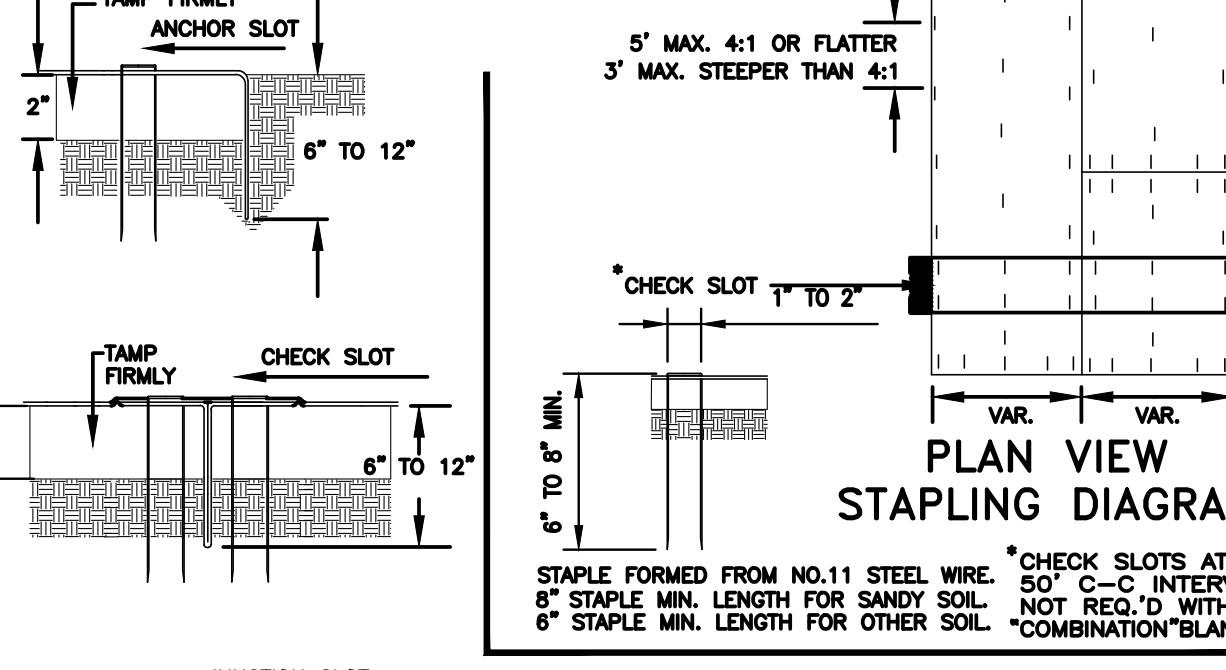
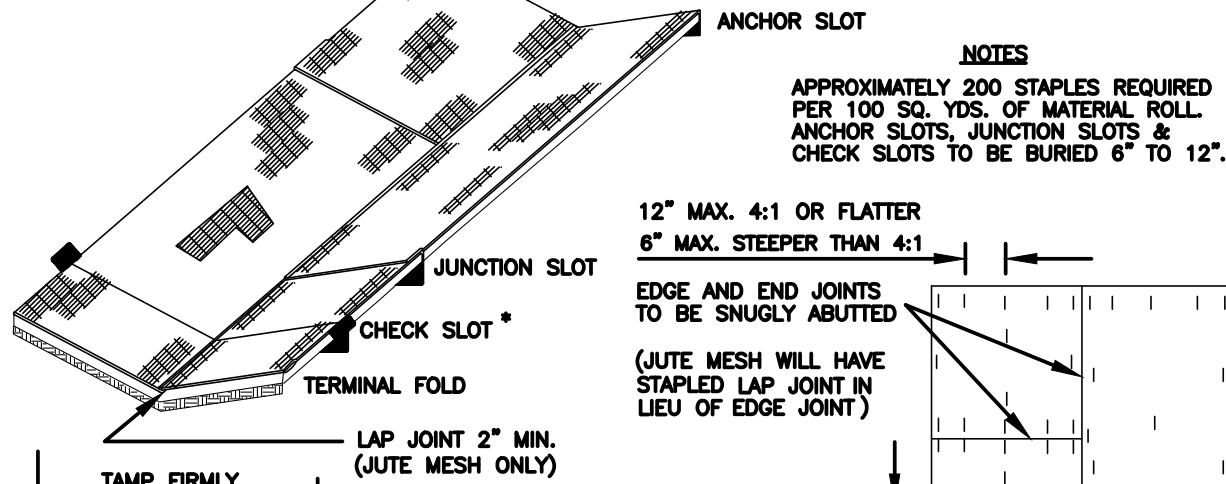


SUPER SILT FENCE

SSF

(STD. & SPEC. 3.05)

TYPICAL TREATMENT – 1
(SOIL STABILIZATION BLANKET)
INSTALLATION CRITERIA

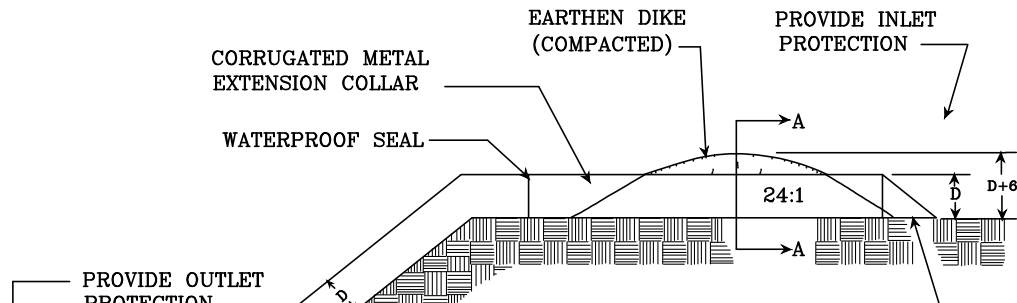


SOIL STABILIZATION BLANKETS
AND MATTING

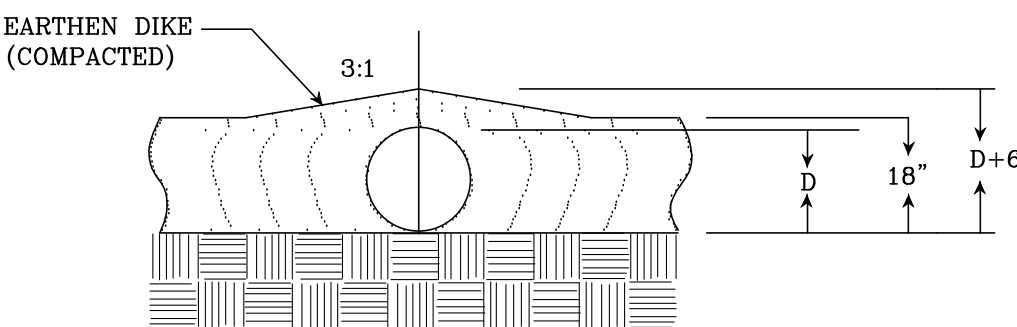
BM

(STD. & SPEC. 3.36)

TEMPORARY SLOPE DRAIN



NOTE: SEDIMENT MAY BE CONTROLLED AT OUTLET IF UPLAND PONDING WILL CREATE PROBLEMS

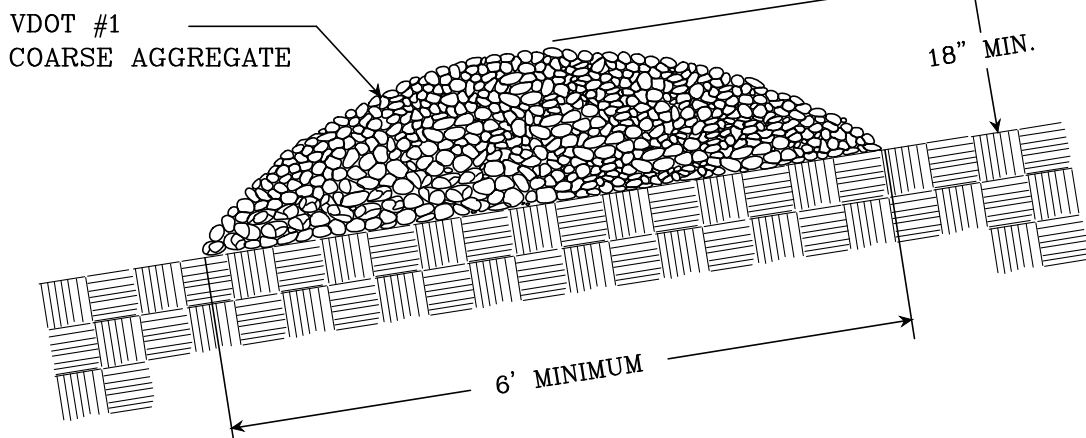


TEMPORARY SLOPE DRAIN

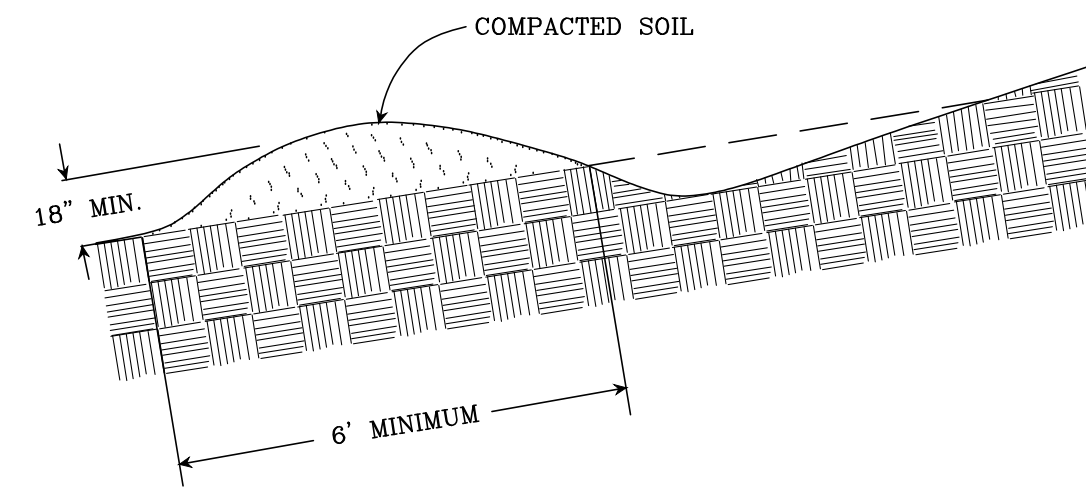
TSD

(STD. & SPEC. 3.15)

TEMPORARY RIGHT-OF-WAY
DIVERSIONS



TYPICAL GRAVEL STRUCTURE



TYPICAL EARTHEN STRUCTURE

TEMPORARY RIGHT-OF-WAY
DIVERSION DIKE

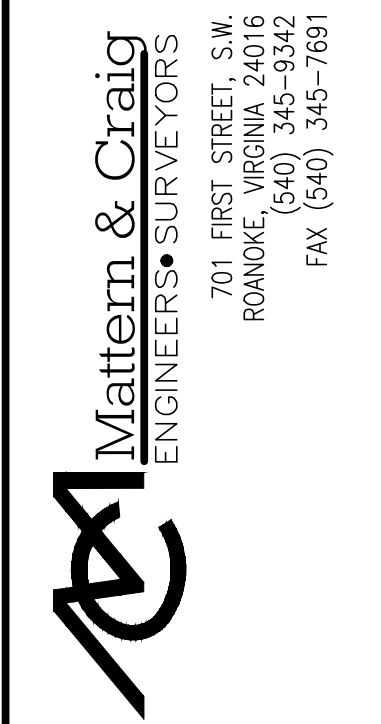
RWD

(STD. & SPEC. 3.11)



Revisions	Date	1ST REVIEW COMMENTS
1	7/17/15	APPROVED SET
2	9/4/15	PLAN REVISION NO. 2
3	3/12/20	

Issue Date:	MAY 11, 2015
Drawn By:	RWA
Designed By:	RWA
Checked By:	WTA
Date:	5/11/15



THE VILLAGE AT TINKER CREEK – PHASE IIIA
EROSION & SEDIMENT CONTROL
DETAILS
ROANOKE COUNTY, VIRGINIA

Vertical Scale:
N/A

Horizontal Scale:
N/A

Commission Number:
1966–P3

Sheet No.:

EC-5