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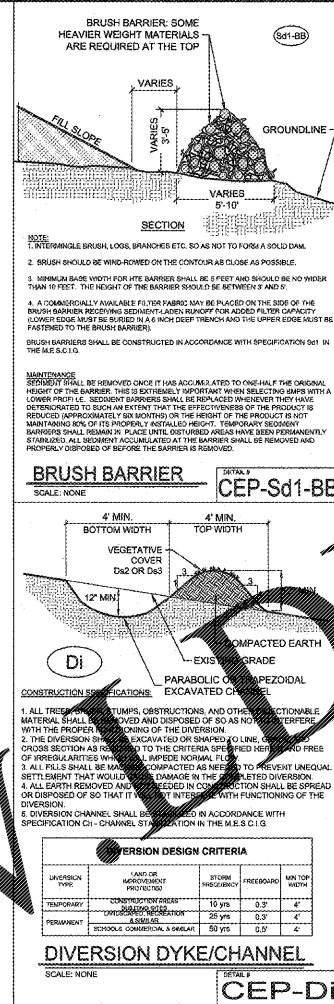


TABLE FOR PIPES WITH MANNINGS COEFFICIENT OF 0.011 OR GREATER AND SLOPE = 1.0% OR FLATTER

PIPE DIAMETER (D)	PIPE SLOPE (%)	FLOW RATE (Q) cfs	FLOW VELOCITY (V) fpm	APRON LENGTH (L _a)	INITIAL WIDTH (W _i)	FINAL WIDTH (W _f)	STONE SIZE (S ₆₀)	APRON DEPTH (D)
12"	1.0%	4.21	4.10	7.0'	3.0'	8.0'	2.5"	0'
15"	1.0%	7.63	4.01	10.0'	3.75'	11.25'	4"	0'
18"	1.0%	12.41	3.92	11.0'	4.5'	12.5'	6"	1.5"
24"	1.0%	26.74	3.78	17.0'	6.0'	19.0'	6"	1.5"
30"	1.0%	48.47	3.67	21.0'	7.5'	23.5'	8"	1.8"
36"	1.0%	78.83	3.57	26.0'	9.0'	29.0'	10"	2.3"
42"	1.0%	118.80	3.49	32.0'	10.5'	33.5'	12"	2.7"
48"	1.0%	169.76	3.42	38.0'	12.0'	40.0'	14"	3.2"
54"	1.0%	232.40	3.37	42.0'	13.5'	46.5'	16"	3.6"
60"	1.0%	307.80	3.32	46.0'	15.0'	51.0'	18"	4.3"
72"	1.0%	500.51	3.23	59.0'	18.0'	65.0'	22"	5.2"

REQUIRED CALC FOR PLAN: FULL FLOW = ...

RIP-RAP CALCS: PIPE DIA. = ...

TAILWATER COND. = MINIMUM LENGTH (L_a) = ...

INITIAL WIDTH (W_i) = ...

DOWNSTREAM WIDTH (W₂) = ...

STONE DIA. (S₆₀) = ...

APRON DEPTH (D) = ...

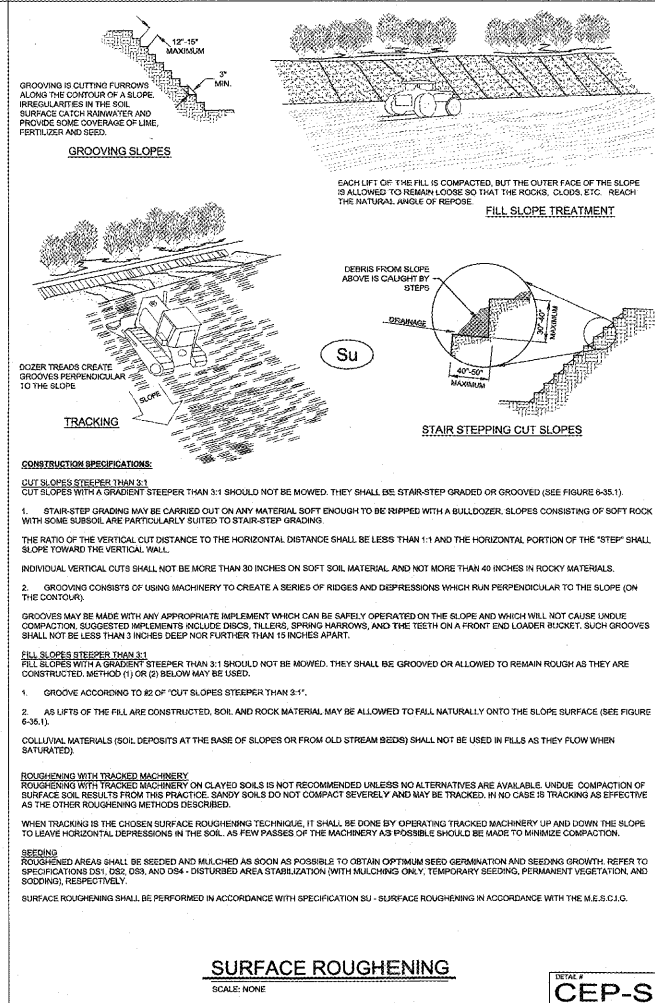
MAX. STONE DIAMETER SHALL BE 1.5 x (S)

CONSTRUCTION SPECIFICATIONS:

- ENSURE THAT THE SUB-GRADE FOR THE FILTER AND RIP-RAP FOLLOWS THE REQUIRED LIMITS AND GRADINGS SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUB-GRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUB-GRADE OR DISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIP-RAP THICKNESS.
- THE RIP-RAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
- GEOTEXTILE MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIP-RAP AND PLACING ANOTHER PRICE OF FILTER FABRIC OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER FABRIC.
- IF THE RIP-RAP IS DAMAGED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.
- THE MINIMUM THICKNESS OF THE RIP-RAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
- CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVER-FALL AT THE END. MAKE THE TOP OF THE RIP-RAP AT THE DOWNSTREAM END LEVEL, WITH THE RECEIVING AREA OR SLOPE BELOW IT.
- ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
- IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.
- STONE QUALITY: SELECT STONE FOR RIP-RAP FROM FIELD STONE OR QUARRY STONE. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT. THE SPECIFIC GRAVITY OF THE INDIVIDUAL STONES SHOULD BE AT LEAST 2.5.
- FOR EACH FULL-SCALE FILTER, INSTALL A FILTER TO PREVENT SOIL MOVEMENT THROUGH THE OPENINGS IN THE RIP-RAP. THE FILTER SHOULD CONSIST OF A GRAZED GRAVEL LAYER OR SYNTHETIC FILTER CLOTH. SEE APPENDIX G, p. C-1 IN THE M.S.C.I.G.

MANTENANCE: MAINTENANCE OF RIP-RAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP-RAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLOOGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

(MINIMUM TAILWATER CONDITION)
OUTLET PROTECTION - TAILWATER < 0.5 d
SLOPE <= 1.0%, MANNINGS >= 0.011
SCALE: NONE
DETAIL CEP-St.2



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Dawson County College and Career Academy
Dawsonville, Georgia
FOR: Dawson County Schools
Overall Squarefootage = 35,800 SF
PFI = 1025

REVISIONS

NO.	DATE	DESCRIPTION

EROSION, SEDIMENTATION & POLLUTION CONTROL DETAILS
DATE: 05-07-2018
PROJECT NUMBER: 17-303
C - 6.6