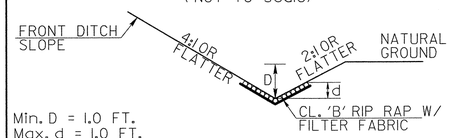
MULKEY ENGINEERS & CONSULTANTS
PO Box 33127
Raleigh, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM

PROJECT REFERENCE NO.	SHEET NO.
B-3375	2-B

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 25606 ENGINEER JENNY SUMMERLIN FLEMING — 11/22/04

HIGHWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 19563 ENGINEER TIMOTHY SCOTT HAYES

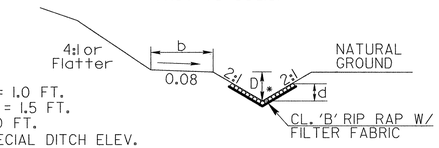
DITCH DETAIL 'A'
CLASS 'B' RIP RAP DITCH LINER
(Not to Scale)



Min. D = 1.0 FT.
Max. d = 1.0 FT.

LINE	STA. TO STA.	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-	32+75 - 34+00 RT.	44	131
-L-	49+00 - 56+25 LT.	253	759
-L-	47+00 - 51+50 RT.	157	471

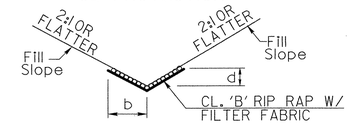
DITCH DETAIL 'B'
LAT. 'V' DITCH W/ CLASS 'B' RIP RAP
(Not to Scale)



Min. D = 1.0 FT.
Max. d = 1.5 FT.
b = 5.0 FT.
* = SPECIAL DITCH ELEV.

LINE	STA. TO STA.	D. D. E. (CU. YDS.)	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-	34+00 - 35+75 RT.	520	81	227

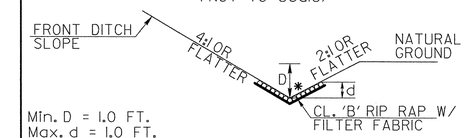
DITCH DETAIL 'C'
TOE PROTECTION



b = 3.0 FT.
d = 1.0 FT.

LINE	STA. TO STA.	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-	36+50 - 39+50 LT.	150	200
-L-	44+25 - 44+80 RT.	30	40

DITCH DETAIL 'D'
SPECIAL ROADWAY DITCH W/ CLASS 'B' RIP RAP
(Not to Scale)

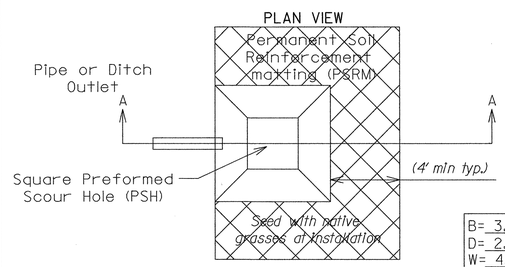


Min. D = 1.0 FT.
Max. d = 1.0 FT.
* = SPECIAL DITCH ELEV.

LINE	STA. TO STA.	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-	51+50 - 55+35 RT.	134	227

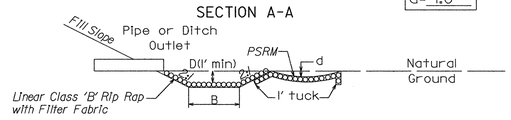
DETAIL 'E'
PREFORMED SCOUR HOLE WITH LEVEL SPREADER APRON
(Not to Scale)

PLAN VIEW



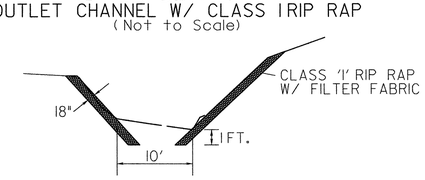
B= 3.75'
D= 2.0'
W= 4.0'
d= 1.0'

SECTION A-A



STATION	B FT.	D FT.	W_{PSR} FT.	d FT.	CLASS B RIP RAP TONS	DDE FT^3	FILTER FABRIC FT^2	PSRM FT^2
-L- STA. 35+72 RT.	4.0	2.0	4.0	1.0	6.0	475	230	180
-L- STA. 39+05 RT.	4.0	2.0	4.0	1.0	6.0	475	230	180

DITCH DETAIL 'F'
OUTLET CHANNEL W/ CLASS I RIP RAP
(Not to Scale)



LINE	STA. TO STA.	D. D. E. (CU. YDS.)	RIP RAP (TONS)	FILTER FABRIC (SQ. YDS.)
-L-	40+50 RT.	20.0	80	40