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PROJECT REFERENCE NO.	SHEET NO.
U-3109A	2D-2
R/W SHEET NO.	

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON

DocuSigned by: Joshua G. Dalton 1089AD8C14994C3... 3/10/2017

SUNGATE DESIGN GROUP, P.A.
915 Jones Franklin Road
Raleigh, NC 27606
NC COA No. C-0890

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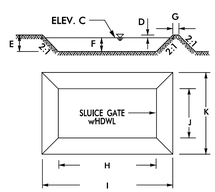
DETAILS

DETAIL 47
HAZARDOUS SPILLBASIN

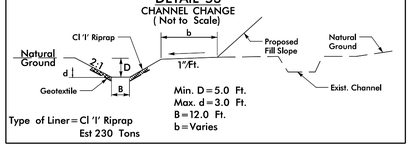
	DIM.	BASIN # 1	2	3	4
A	cf	2480	6560	3740	2300
B	cf	2630	7526	4760	2590
C	ft	597.0	604.0	608.0	597.5
D	ft	1.0	1.0	1.0	1.0
E	ft	4.0	4.0	VARIES	4.0
F	ft	3.0	3.0	VARIES	3.0
G	ft	2.0	2.0	2.0	2.0
H	ft	23	VARIES	29	VARIES
I	ft	39	75	41	59
J	ft	23	54	40	21
K	ft	39	68	57	47

TOTAL CAPACITY REQUIRED: 'A' cf
TOTAL CAPACITY PROVIDED: 'B' cf
@ ELEV. 'C' w/'D' FT. FREEBOARD



BASIN #	LOCATION (AT OUTLET)
1	STA 161+85 –L– RT
2	STA 179+50 –L– RT
3	STA 20+50 –Y16RPA– LT
4	STA 32+50 –Y20– LT

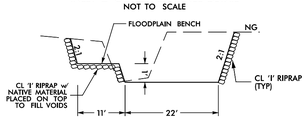
DETAIL 53
CHANNEL CHANGE
(Not to Scale)



Type of Liner=Cl 'I' Riprap
Est 230 Tons

FROM STA. 93+93 TO STA. 96+36 –L– RT

DETAIL 54
INLET & OUTLET CHANNEL DETAIL
NOT TO SCALE

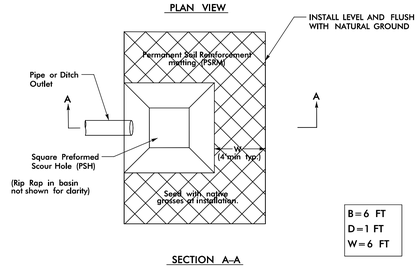


*THE FLOODPLAIN BENCH SHALL BE COVERED WITH COIR FIBER MATTING AND THE PERIMETER SHALL BE LINED WITH CLASS 'I' RIP RAP. IF FILL IS NEEDED FOR THE BENCH, USE CLASS 'I' RIP RAP AND PLACE NATIVE MATERIAL ON TOP TO FILL VOIDS.

FROM STA. 95+54 TO STA. 96+27 –L– RT
FROM STA. 97+18 TO STA. 97+57 –L– LT

PREFORMED SCOUR HOLE DETAIL 55
*NOT TO SCALE

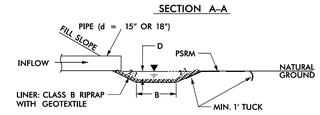
PLAN VIEW



(Rip Rap in basin not shown for clarity)

B=6 FT
D=1 FT
W=6 FT

SECTION A–A



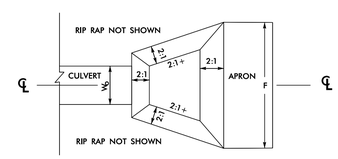
3/08

FROM STA. 130+39 TO STA. 130+60 –L– LT
FROM STA. 140+39 TO STA. 140+60 –L– LT

ENERGY DISSIPATOR DETAIL 56
RIP–RAPPED ENERGY DISSIPATOR BASIN

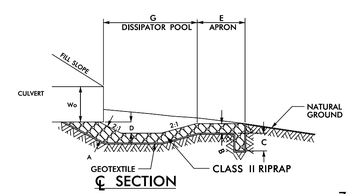
DIM. (ft)	RIP RAP BASIN # 1		
A	2.5		
B	2.0		
C	2.0		
D	0.9		
E	11.8		
F	10.1		
G	10.1		

ALL DIMENSIONS APPROXIMATE



PLAN

BASIN #	LOCATION (AT OUTLET)
1	STA 100+70 –L– LT



℄ SECTION

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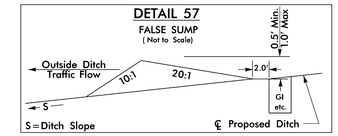
DETAIL 57
FALSE SUMP
(Not to Scale)



STA. 62+53 –L– RT
STA. 73+15 –L– LT
STA. 84+16 –L– LT
STA. 85+16 –L– RT
STA. 92+40 –L– LT
STA. 92+40 –L– RT
STA. 93+51 –L– LT
STA. 100+55 –L– RT
STA. 101+52 –L– RT
STA. 102+19 –L– LT
STA. 103+85 –L– RT
STA. 107+91 –L– RT
STA. 109+36 –L– LT
STA. 110+95 –L– LT
STA. 114+84 –L– LT
STA. 114+85 –L– RT
STA. 117+45 –L– RT
STA. 117+44 –L– LT
STA. 122+65 –L– RT
STA. 122+64 –L– LT
STA. 165+85 –L– LT
STA. 169+35 –L– RT
STA. 169+35 –L– LT
STA. 173+34 –L– RT
STA. 173+35 –L– LT
STA. 189+65 –L– RT
STA. 190+06 –L– LT
STA. 193+01 –L– LT
STA. 13+57 –RPD– RT
STA. 13+58 –RPD– RT
STA. 16+96 –Y7– RT
STA. 12+35 –Y13– LT
STA. 20+75 –Y16– LT
STA. 23+85 –Y16– LT
STA. 32+96 –Y16– LT
STA. 35+84 –Y16– RT
STA. 14+65 –Y16RPA– RT
STA. 14+66 –Y16RPA– LT
STA. 17+16 –Y16RPA– LT
STA. 17+16 –Y16RPA– RT
STA. 19+65 –Y16RPA– LT
STA. 26+85 –Y16RPA– RT
STA. 27+75 –Y16RPA– RT
STA. 11+35 –Y19– RT
STA. 14+35 –Y20–RT
STA. 19+36 –Y20– LT
STA. 21+35 –Y20– LT
STA. 22+35 –Y20– LT
STA. 30+15 –Y20– LT
STA. 31+65 –Y20– LT

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