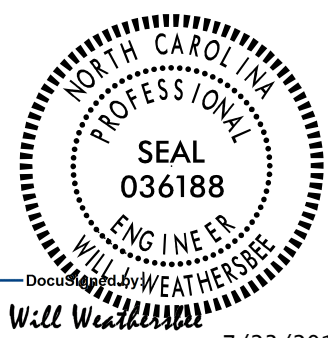


DRAINAGE DETAILS

PROJECT REFERENCE NO. R-2915A	SHEET NO. 2D-3
RW SHEET NO.	
HYDRAULICS ENGINEER	
	
7/23/2015	



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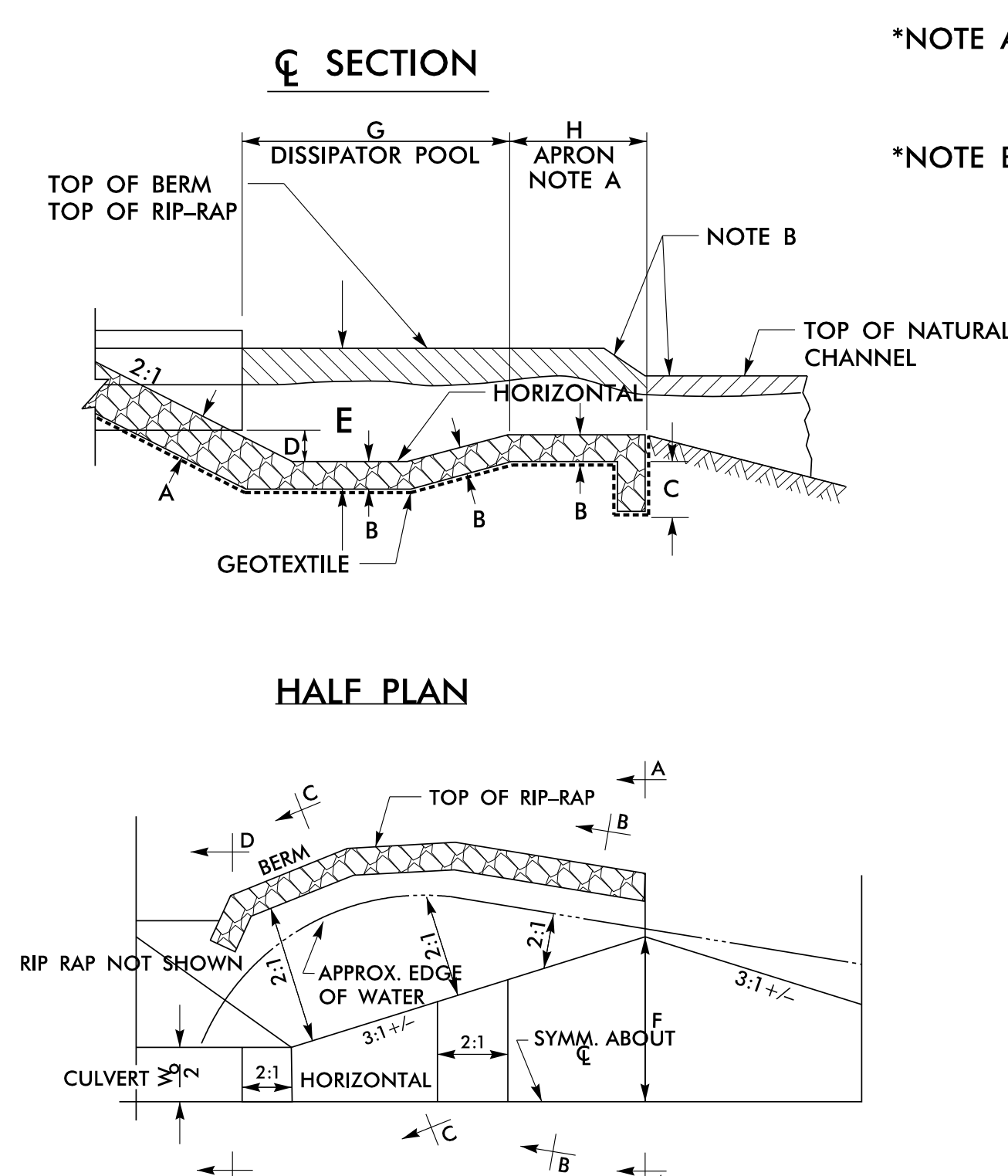
Asheville, NC 828-253-2796
Raleigh, NC 919-977-9455
Charlotte, NC 704-357-0488
Atlanta, GA 770-427-2609

Boone, NC 828-250-9933
Tri-Cities, TN 423-457-8902
Knoxville, TN 865-546-5800
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Charleston, SC 803-974-5650
Wadesboro, NC 704-248-6600
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DETAIL Q

RIP-RAPPED ENERGY DISSIPATOR BASIN



SECTION

HALF PLAN

***NOTE A:** IF EXIT VELOCITY OF BASIN IS SPECIFIED, EXTEND BASIN AS REQUIRED TO OBTAIN SUFFICIENT CROSS SECTIONAL AREA AT SECTION A-A SUCH THAT $Q_{des} / (CROSS\ SECTIONAL\ AREA\ AT\ SEC.\ A-A) = SPECIFIED\ VELOCITY$.

***NOTE B:** WARP BASIN TO CONFORM TO NATURAL STREAM CHANNEL. TOP OF RIP-RAP IN FLOOR OF BASIN SHOULD BE AT SAME ELEVATION OR LOWER THAN NATURAL CHANNEL BOTTOM AT SEC. A-A. PROVIDE SMOOTH TRANSITION FROM END OF APRON TO NATURAL CHANNEL WIDTH.

SEC. A-A
GEOTEXTILE

SEC. B-B
GEOTEXTILE

SEC. C-C
GEOTEXTILE

SEC. D-D
GEOTEXTILE

NATURAL GROUND

BERM AS REQUIRED TO SUPPORT RIP-RAP

EXCAVATE TO THIS LINE BACKFILL w/CLASS 1 RIP-RAP

BERM AS REQUIRED TO SUPPORT RIP-RAP

EXCAVATE TO THIS LINE BACKFILL w/CLASS 1 RIP-RAP

BERM AS REQUIRED TO SUPPORT RIP-RAP

BERM AS REQUIRED TO SUPPORT RIP-RAP

NOTE: $W_o =$ DIAMETER OF PIPE, WIDTH OF BOX OR SPAN OF PIPE-ARCH CULVERTS

DIM.	1	2	3	4	5	6	7	8
A	3.0'							
B	2.5'							
C	2.0'							
D	2.5'							
E	8.0'							
F	12.0'							
G	18.0'							
H	9.0'							

BASIN #	LOCATION (AT OUTLET)
1	449
2	
3	
4	
5	
6	
7	
8	

*ALL DIMENSIONS APPROXIMATE IN FEET

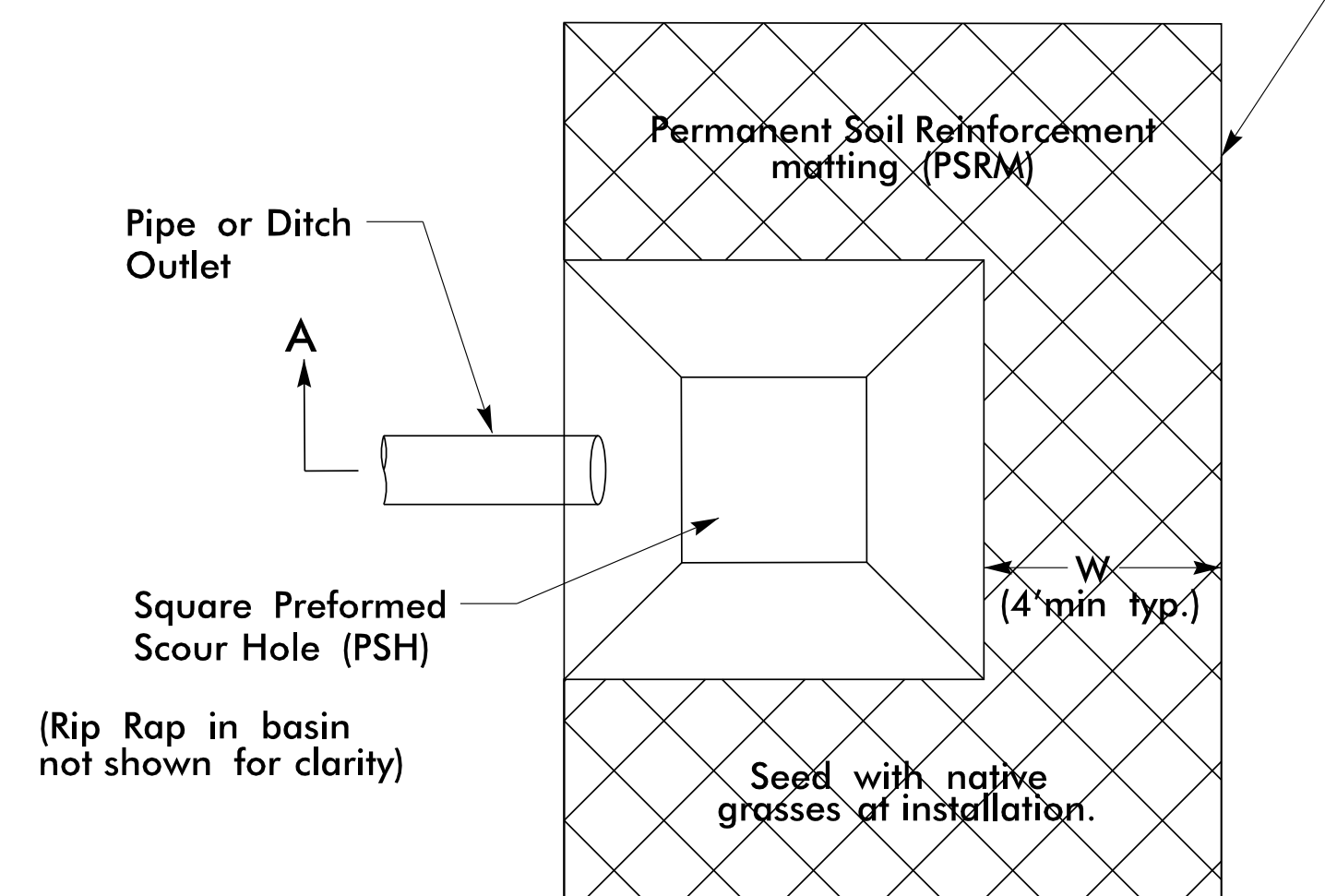
-L- STA. 13 + 20 TO STA. 13 + 54 LT
Type of Liner = Est. 275 Tons Class 1 Rip-Rap
Est. 200 S.Y. Geotextile

505

DETAIL T

PREFORMED SCOUR HOLE

*NOT TO SCALE



PLAN VIEW

SECTION A-A

INSTALL LEVEL AND FLUSH WITH NATURAL GROUND

Permanent Soil Reinforcement matting (PSRM)

Pipe or Ditch Outlet

Square Preformed Scour Hole (PSH)

(Rip Rap in basin not shown for clarity)

Seed with native grasses at installation.

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

-L- STA. 132 + 06 LT
-L- STA. 136 + 40 LT

B = 4.5'
D = 1.5'
W = 4.0'

-L- STA. 109 + 65 LT

PIPE (d = 15" OR 18")

FILL SLOPE

INFLOW

PSRM

NATURAL GROUND

LINER: CLASS B RIPRAP WITH GEOTEXTILE

MIN. 1' TUCK

3/08

-L- STA. 109 + 65 LT
-L- STA. 132 + 06 LT
-L- STA. 136 + 40 LT

\$DATE\$