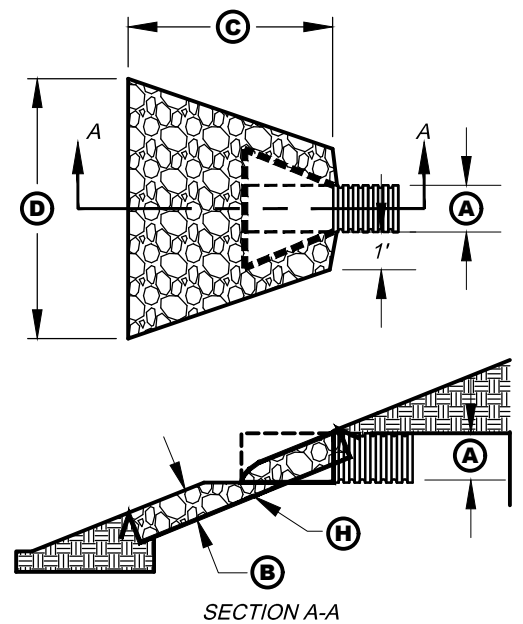


ROCK RIPRAP DESIGN TABLE

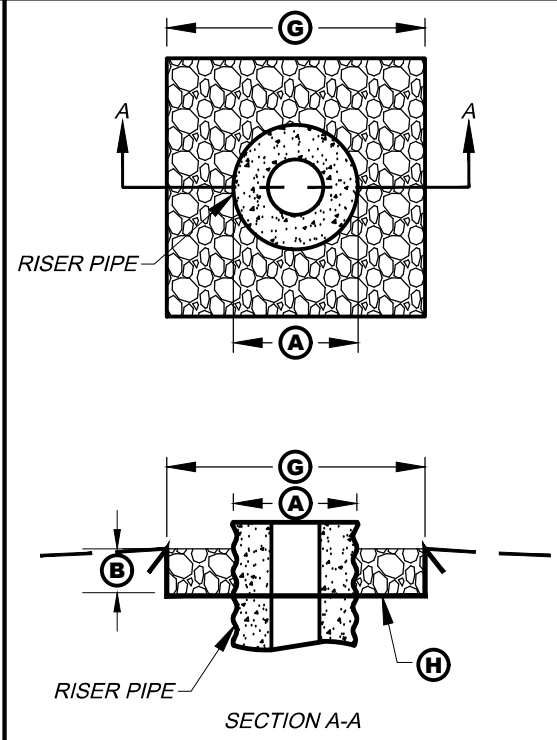
QUANTITIES

PIPE DIAMETER (INCHES)	ROCK THICKNESS (INCHES)		INLET LENGTH (FEET)	INTAKE WIDTH (FEET)	OUTLET WIDTH (FEET)	INLET LENGTH (FEET)	OUTLET LENGTH (FEET)
	CLASS II	CLASS III					
8	15	21	4	4.5	4	5	5.5
10	15	21	4.5	5	5	6	6
12	15	21	5	5.5	6	7	6.5
15	15	21	6	6.5	7.5	8.5	8
18		21	7.5	7	9	10	9
24		21	9.5	9	12	13.5	11
30		21			15		
36		21			18		

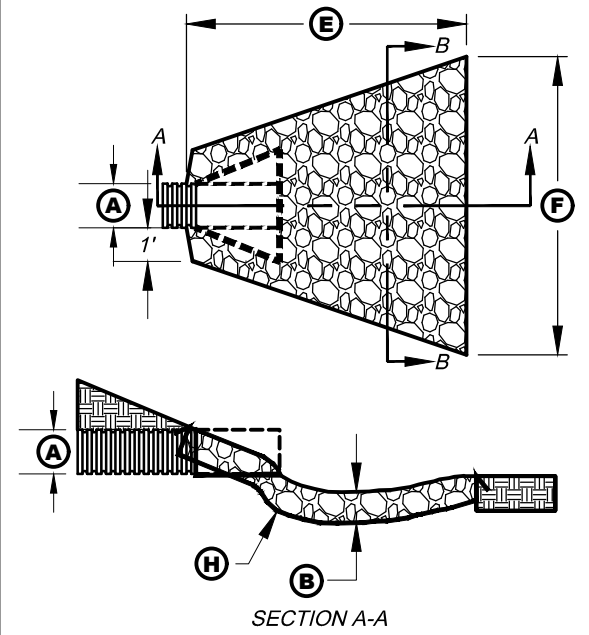
ROCK						GEOTEXTILE			
INLET (CU.YD.)		INTAKE (CU.YD.)		OUTLET (CU.YD.)		GEOTEXTILE (TYPE)	INLET (SQ.YD.)	INTAKE (SQ.YD.)	OUTLET (SQ.YD.)
CLASS II	CLASS III	CLASS II	CLASS III	CLASS II	CLASS III				
1.0	1.5	1.0	1.5	1.0	1.5	III OR IV	7	8	9
1.0	1.5	1.5	2.0	1.5	2.0	III OR IV	8	9	10
1.5	1.5	2.0	2.5	1.5	2.5	III OR IV	9	12	11
1.5	2.0	3.0	4.0	2.5	3.5	IV	10	15	14
	2.6		5.5		4.0	IV	12	19	16
	4.0		10.0		7.0	IV	16	29	23
			15.0			IV	21	41	30
			21.0			IV	26	54	38



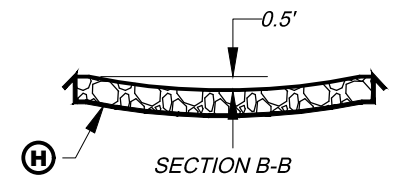
**ROCK RIPRAP
FOR PIPE INLET**
NOT TO SCALE



**ROCK RIPRAP
FOR PIPE INTAKE**
NOT TO SCALE



**ROCK RIPRAP
FOR PIPE OUTLET**
NOT TO SCALE



ESTIMATED QUANTITIES								
PIPE DESCRIPTION ID #	INLET (X)	INTAKE (X)	OUTLET (X)	ANGULAR OR RANDOM ROCK	ROCK CLASS (II OR III)	ROCK QUANTITY (CU.YD.)	GEOTEXTILE TYPE (III OR IV)	GEOTEXTILE QUANTITY (SQ.YD.)

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME / SIGNATURE DATE: LIC. NO.

STANDARD SHEET BWSR 107

WETLAND RESTORATION PLAN
ROCK RIPRAP / GEOTEXTILE DETAIL SHEET

PROJECT #:

SHEET NO. OF

