

**RIPRAP AREA SIZES**

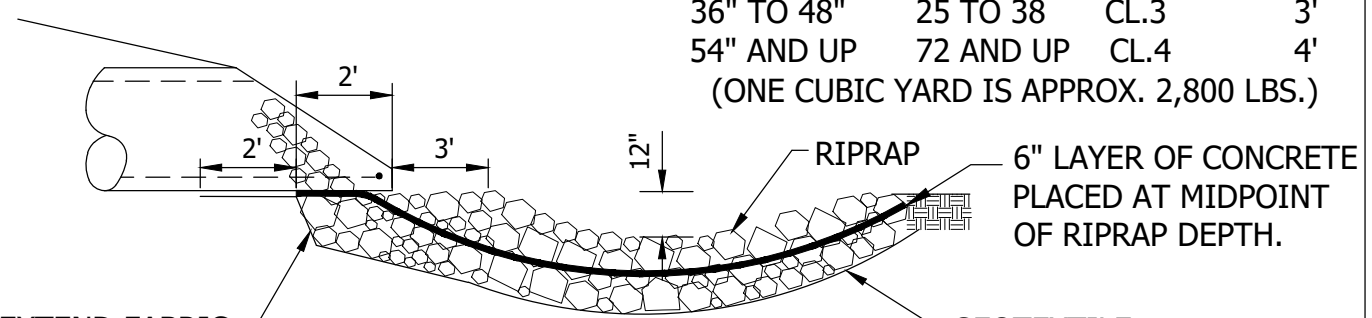
D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

**R**  
(15' MIN.)

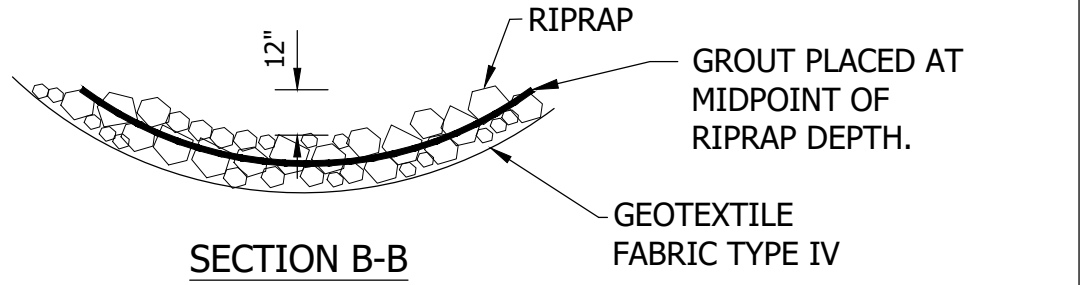
**RIPRAP REQUIREMENTS**

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)



EXTEND FABRIC AND RIPRAP UNDER FLARED END SECTION



**STANDARD DETAILS**  
GROUTED RIPRAP AT FLARED END SECTION  
**COTTAGE GROVE, MINNESOTA**

JANUARY 2021

PLATE NO.  
**STO-13**