

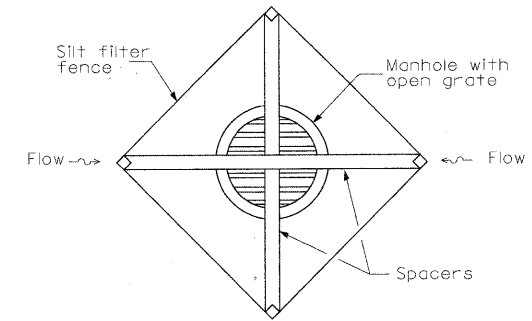
PIPE DIAMETER (IN.) D	STONE RIP RAP							BEDDING	
	QUALITY DESIGNATION	GRADATION NUMBER	MINIMUM THICKNESS (IN.) A	MINIMUM LENGTH (FT.) B	WEIGHT RANGE (#)	WEIGHT AVERAGE (#)	SIZE AVERAGE (IN.)	GRADATION NUMBER	MINIMUM THICKNESS (IN.) C
12	A	3	12"	12'	1-50	10	4.5"	N/A	N/A
15	A	3	14"	14'	1-50	10	4.5"	N/A	N/A
18	A	4	16"	16'	1-50	40	7"	1 OR CA-3	6"
21	A	4	18"	18'	1-150	40	7"	1 OR CA-3	6"
24	A	4	20"	20'	1-150	40	7"	1 OR CA-3	6"
30	A	4	22"	22'	1-150	40	7"	1 OR CA-3	6"
36	A	5	24"	24'	3-400	90	10"	1 OR CA-3	8"
42	A	5	26"	26'	3-400	90	10"	1 OR CA-3	8"
48	A	6	28"	28'	6-600	170	12"	2 OR CA-1	10"
54	A	6	32"	32'	6-600	170	12"	2 OR CA-1	10"
60	A	6	36"	36'	6-600	170	12"	2 OR CA-1	10"
72	A	6	44"	44'	6-600	170	12"	2 OR CA-1	10"

**NOTE:**

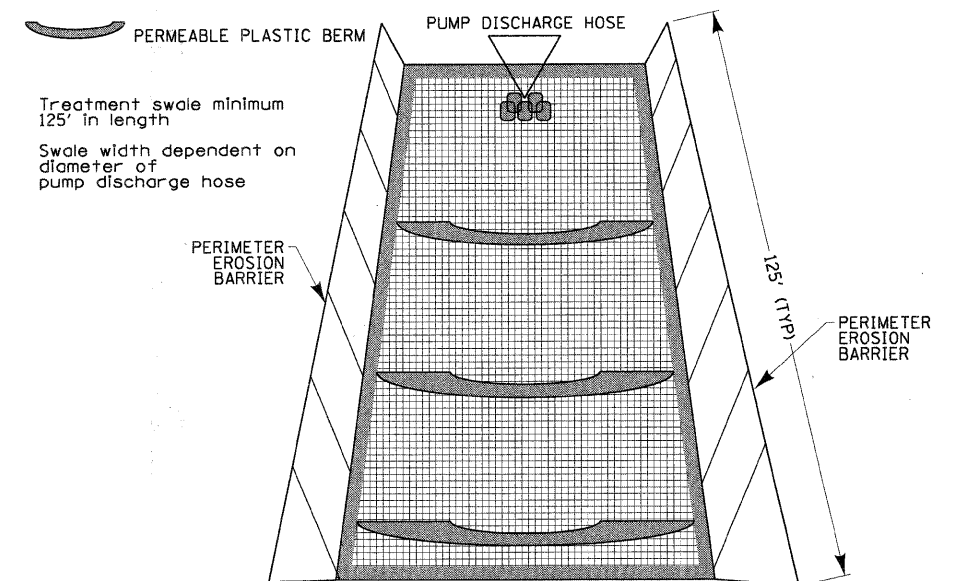
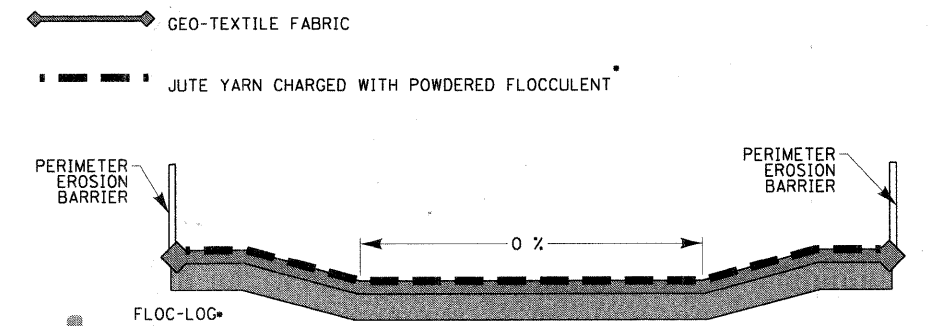
- FOR PIPE SIZE 72" AND LARGER A SPECIAL DESIGN OF RIP RAP OR APRON IS REQUIRED.
- GRADATION REFER TO IDOT SPECIFICATIONS AND STANDARDS.

**STONE RIP RAP DETAIL**

2 OF 2



**INLET PROTECTION (SPECIAL)**



Treatment swale minimum 125' in length

Swale width dependent on diameter of pump discharge hose

- Jute yarn, powdered flocculent, and flo-logs to be replaced as needed to comply with water quality standards
- Remove accumulated sediment and flocculent from check dams as needed to comply with water quality standards
- Soil sample and testing required to determine the appropriate flocculent and polymer type

**DE-WATERING TREATMENT SWALE**  
(INCLUDED IN THE COST OF DEWATERING)