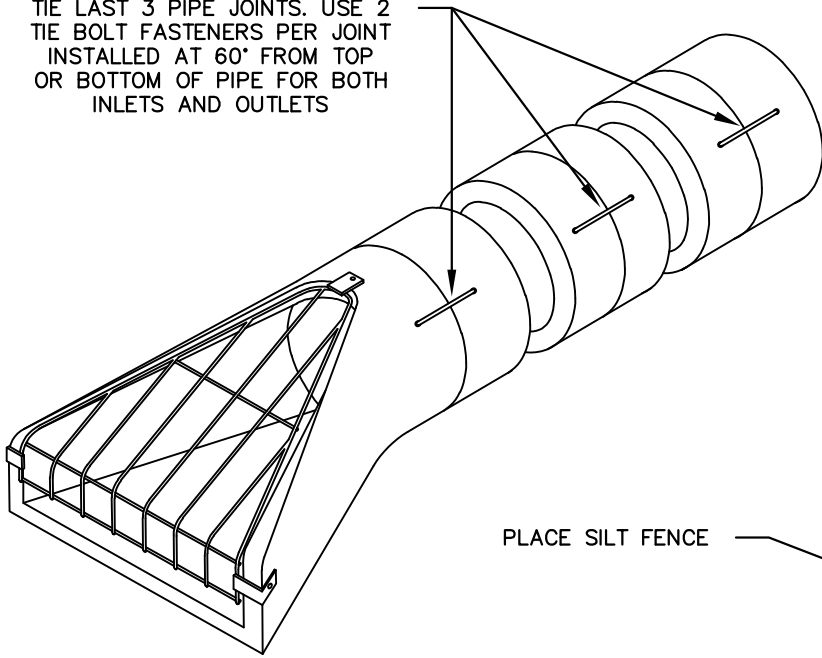


TIE LAST 3 PIPE JOINTS. USE 2 TIE BOLT FASTENERS PER JOINT INSTALLED AT 60° FROM TOP OR BOTTOM OF PIPE FOR BOTH INLETS AND OUTLETS



**NOTES:**

RIP RAP AS SPECIFIED IN MNDOT STANDARD SPECS. 2511.3 AND 3601.2. RIP RAP QUANTITY SHALL BE IN ACCORDANCE WITH MNDOT STANDARD PLATE 3133.

RIP RAP TO BE INSTALLED AT BOTH INLET AND OUTLET LOCATIONS

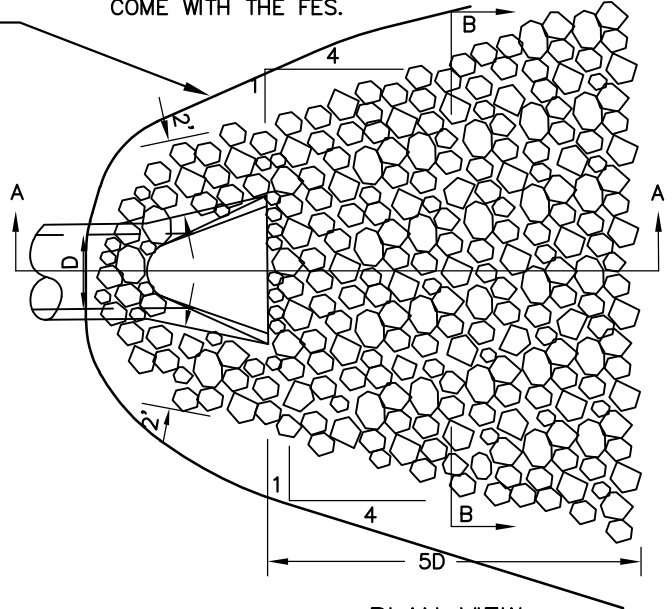
PROVIDE 3 CLIPS TO FASTEN TRASH GUARD TO FLARED END.

TRASH GUARD TO BE HOT DIP GALVANIZED AFTER FABRICATION.

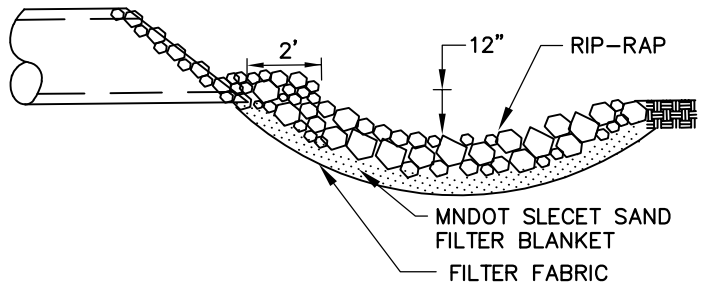
SIZED OUTLETS AT THE DISCRETION OF THE ENGINEER.

IF THE PLANS CALL FOR A HDPE FLARED END SECTION THE CONTRACTOR SHALL SUPPLY A STAINLESS STEEL THREADED ROD, WASHERS AND WING NUTS INSTEAD OF THE PLASTIC ONES THAT COME WITH THE FES.

PLACE SILT FENCE

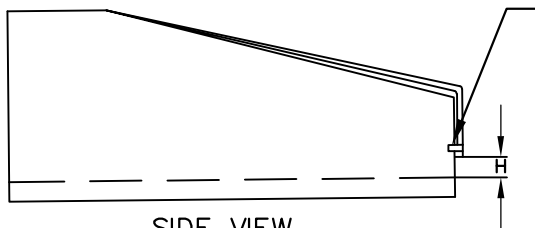


**PLAN VIEW**



**SECTION A-A**

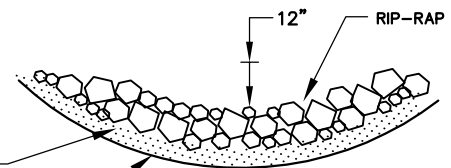
ANCHOR BOTH SIDES



**SIDE VIEW**

MNDOT SELECT SAND FILTER BLANKET

FILTER FABRIC



**SECTION B-B**

PIPE SIZE	RIP RAP
12" TO 18"	4 CUBIC YARDS CL. 3
21" TO 27"	8 CUBIC YARDS CL. 3
30" TO 36"	12 CUBIC YARDS CL. 3
42" TO 48"	16 CUBIC YARDS CL. 3
54" AND UP	20 CUBIC YARDS CL. 4

PIPE SIZE	BAR SIZE	"H"	BOLT SIZE
12" TO 18"	3/4"φ	6"	5/8"
21" TO 42"	1"φ	6"	3/4"
48" TO 72"	1 1/4"φ	12"	1"



LAST REVISION  
JANUARY 2021

**FLARED END SECTION**

CITY OF MAPLE GROVE ENGINEERING  
& PUBLIC WORKS DEPARTMENTS

STANDARD  
PLATE #  
STS-7