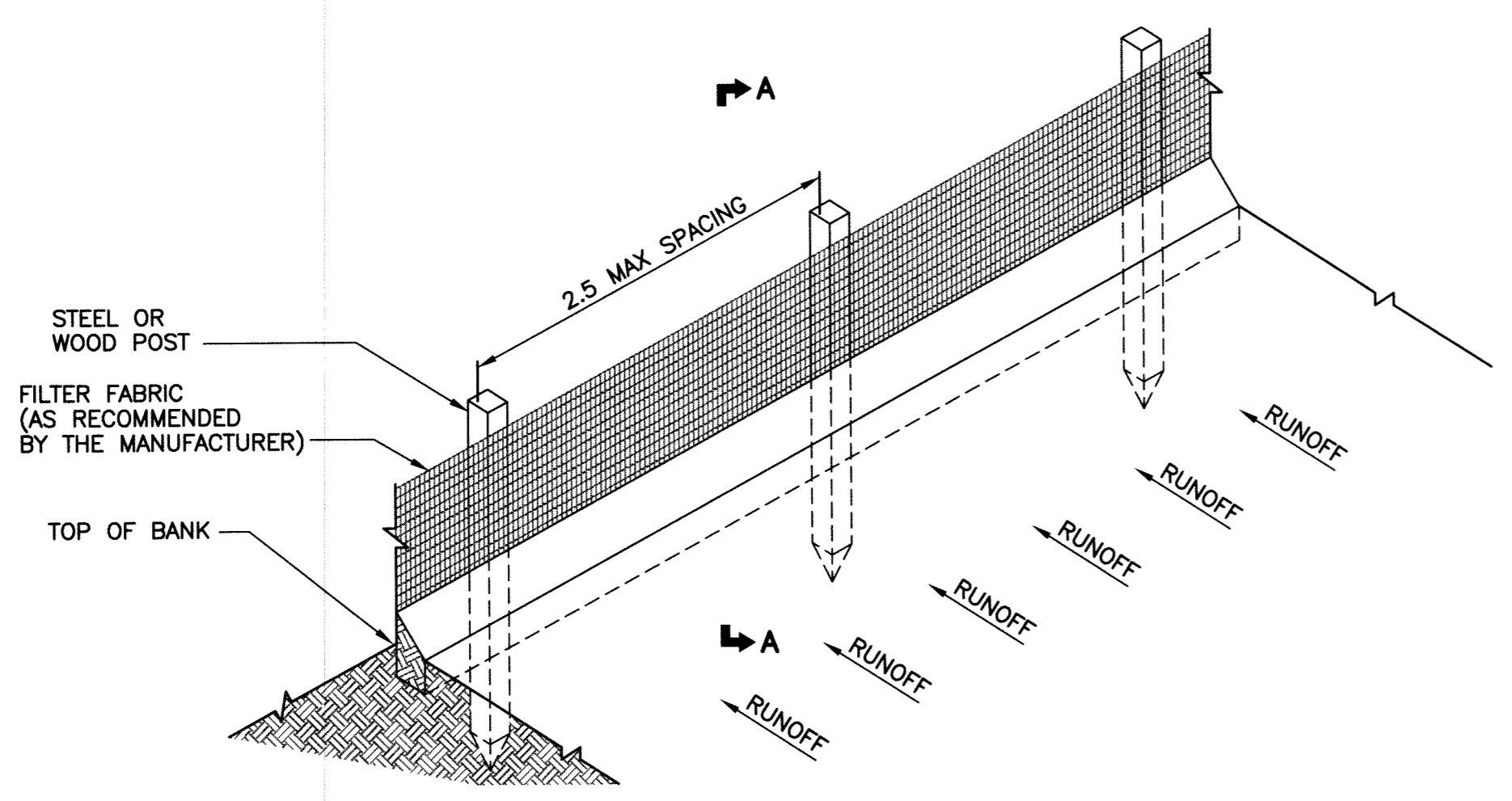
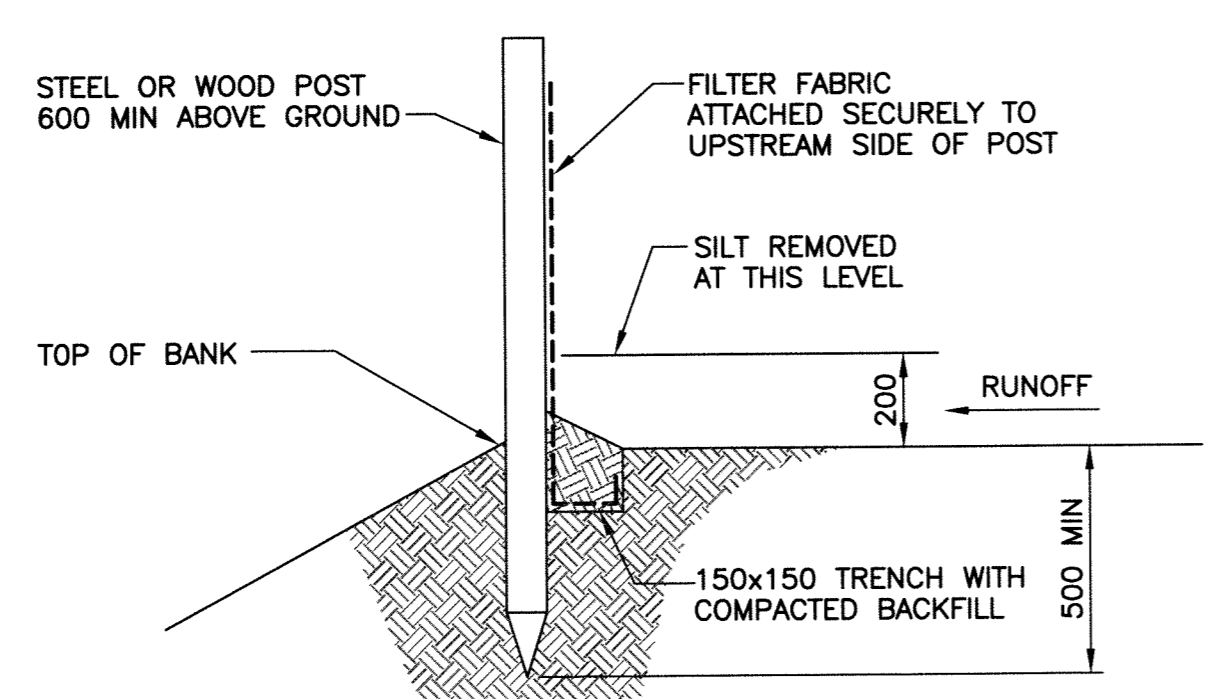


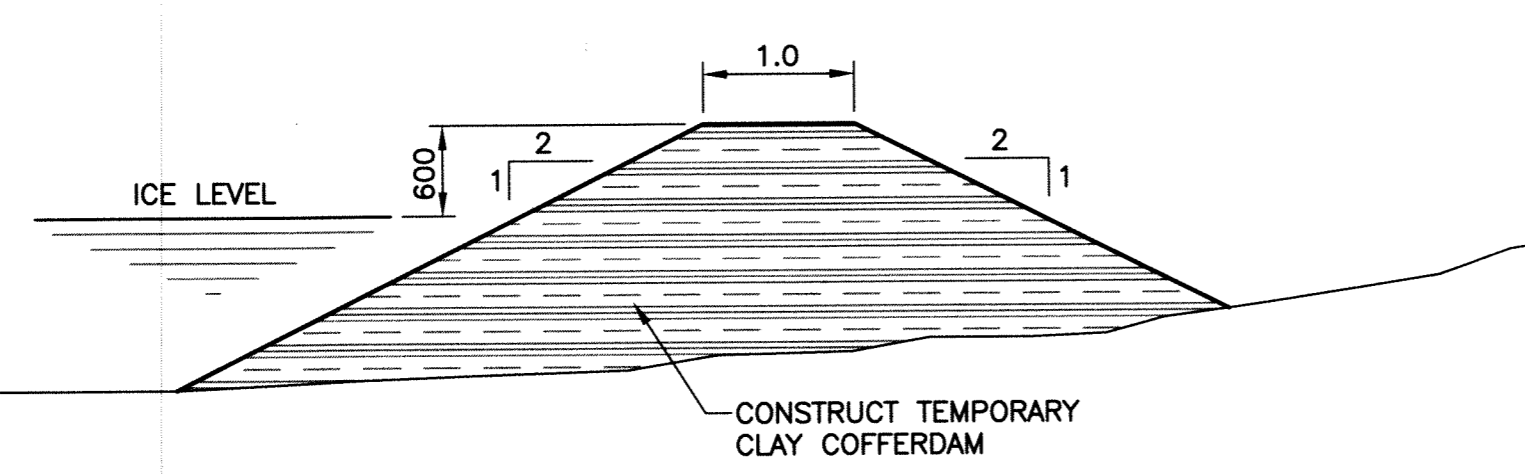
**STANDARD PIPE END DETAIL**  
SCALE: N.T.S.



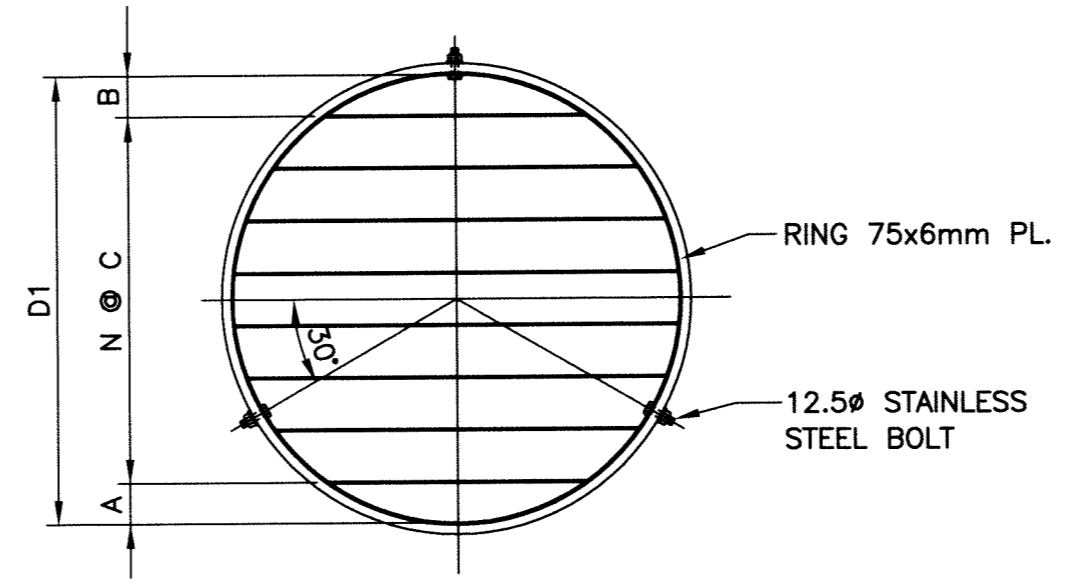
**ISOMETRIC DETAIL**  
SCALE: N.T.S.



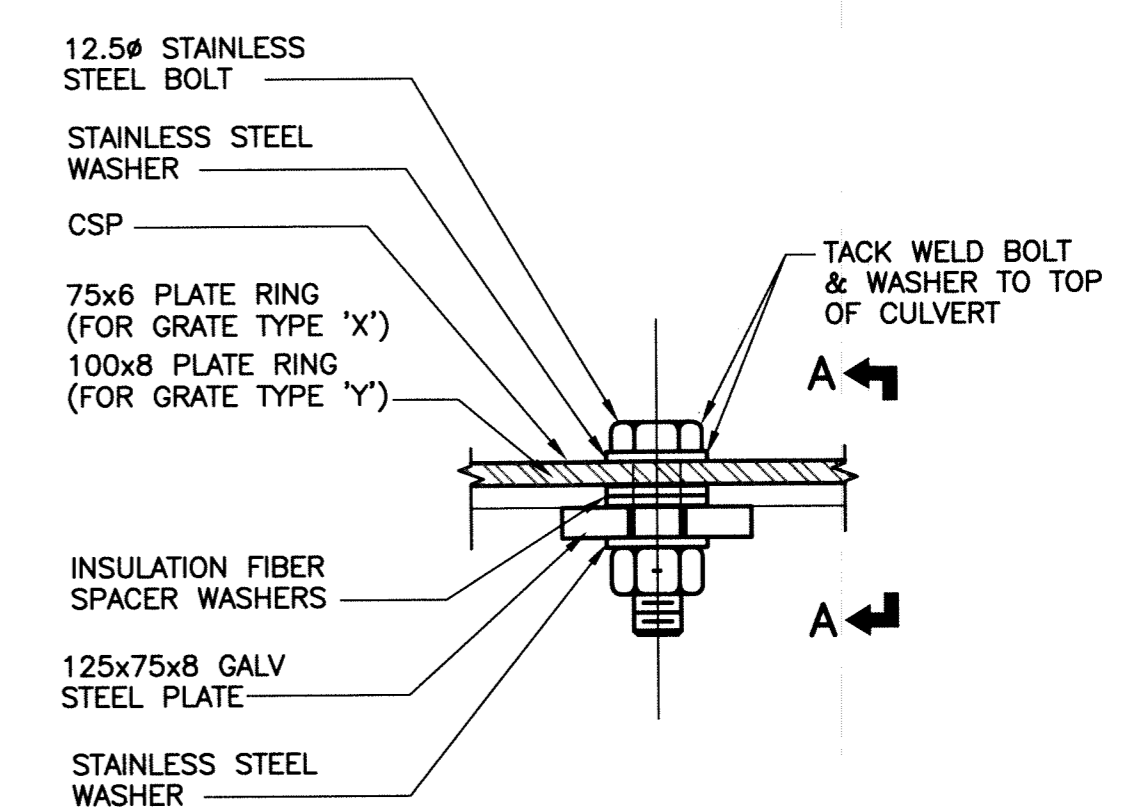
**SECTION A-A**  
SCALE: N.T.S.  
**SILT FENCE DETAILS**



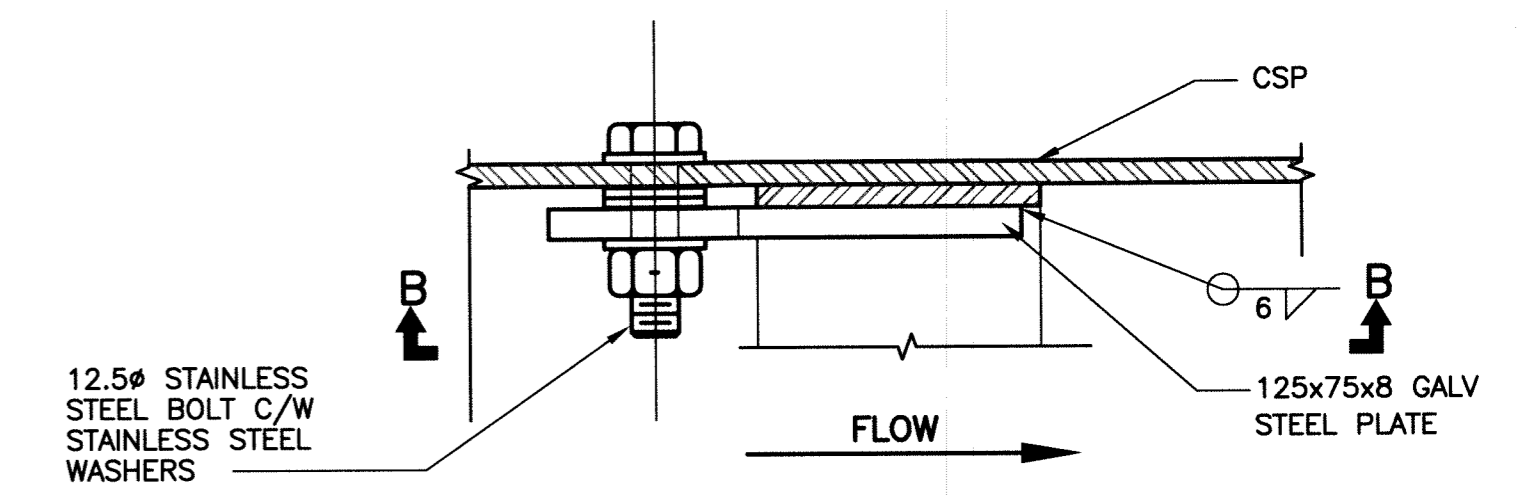
**COFFER DAM DETAIL**



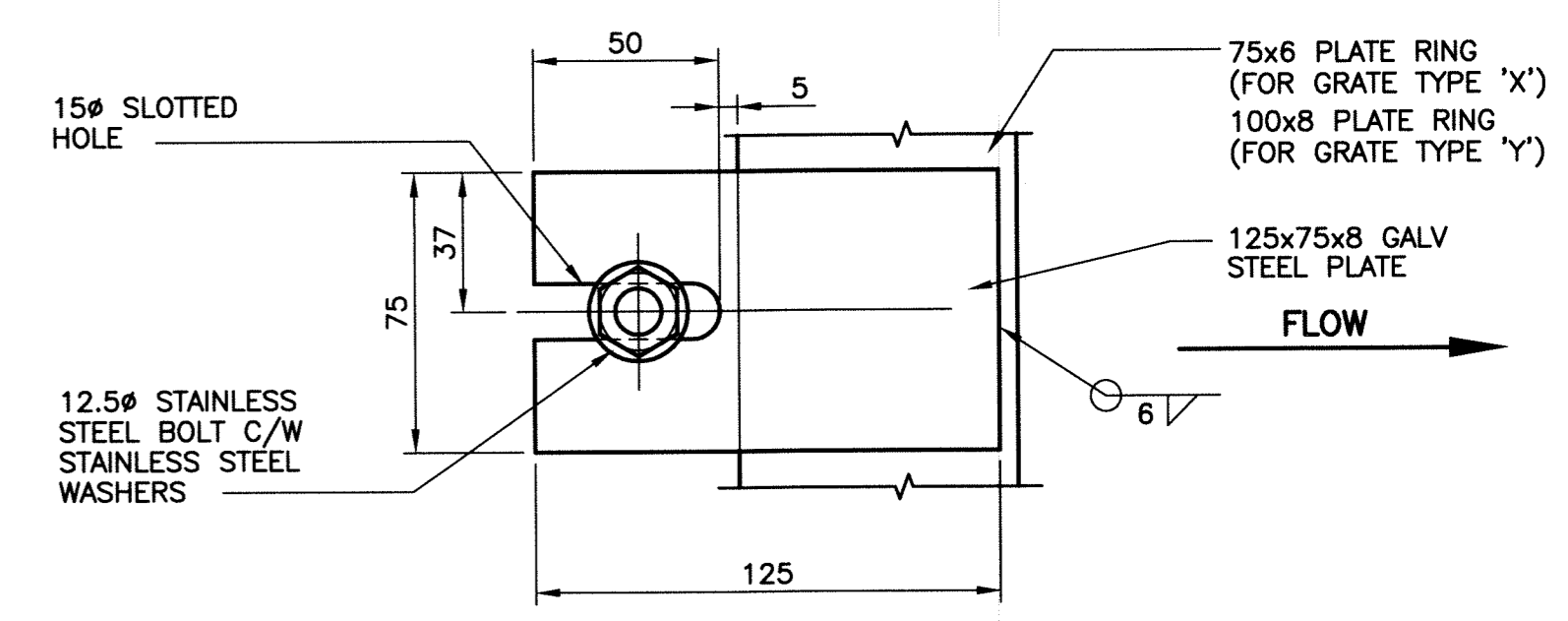
**GRATING TYPE 'X'**  
SCALE: N.T.S.



**1 DETAIL**  
SCALE: 1:2



**SECTION A-A**  
SCALE: 1:2

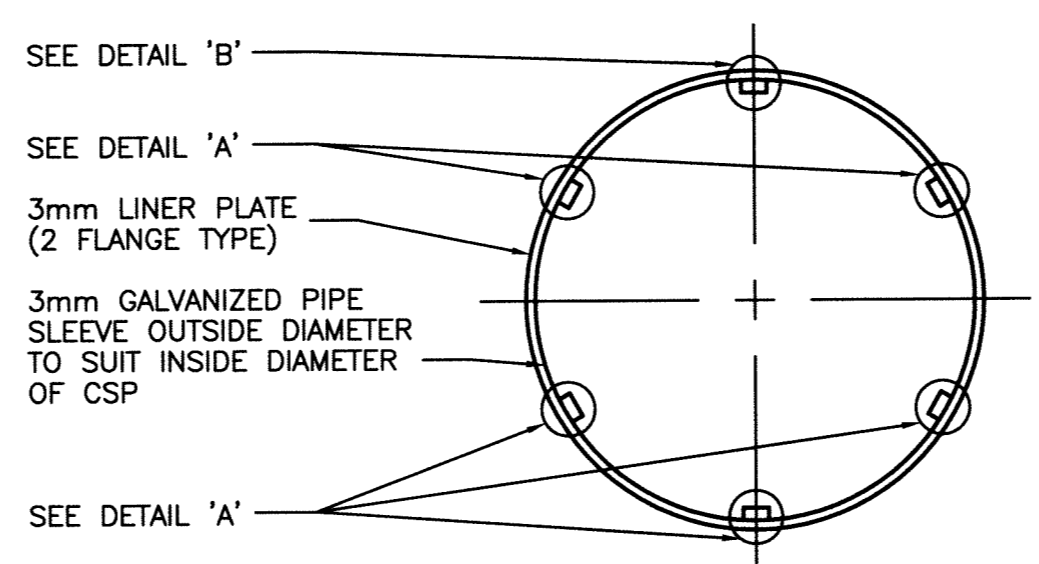


**SECTION B-B**  
SCALE: 1:2

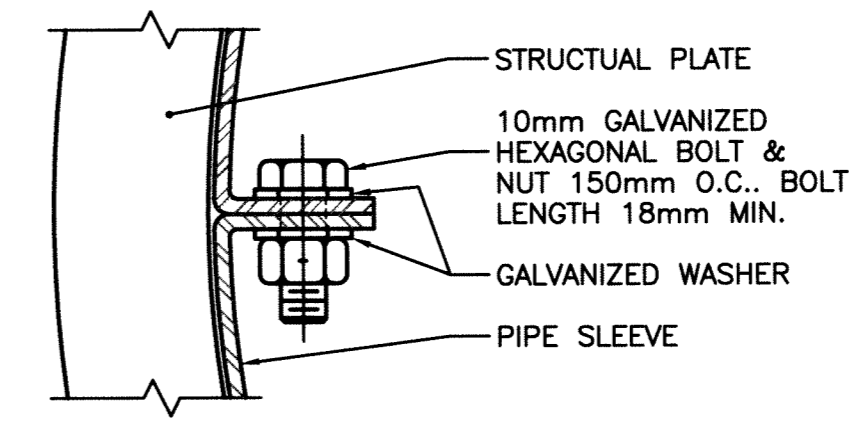
LOCATION	PIPE		END CONDITION	GRATING					WEIGHT (lbs)		
	DIAMETER D	MATERIAL		DIAMETER D1	TYPE	BAR DIA.	A	B		C	N
CRANE AVENUE (RR-27)	900	CSP	1	885±	X	20	150	75	185	4	42

NOTE:  
1. ALL PLATES AND BARS ARE CSA G40.21-300W.  
2. ALL COMPONENTS ARE GALVANIZED.  
3. ALL BOLTS TO BE TYPE 316 STAINLESS STEEL CONFORMING TO ASTM A320 GRADE B8M

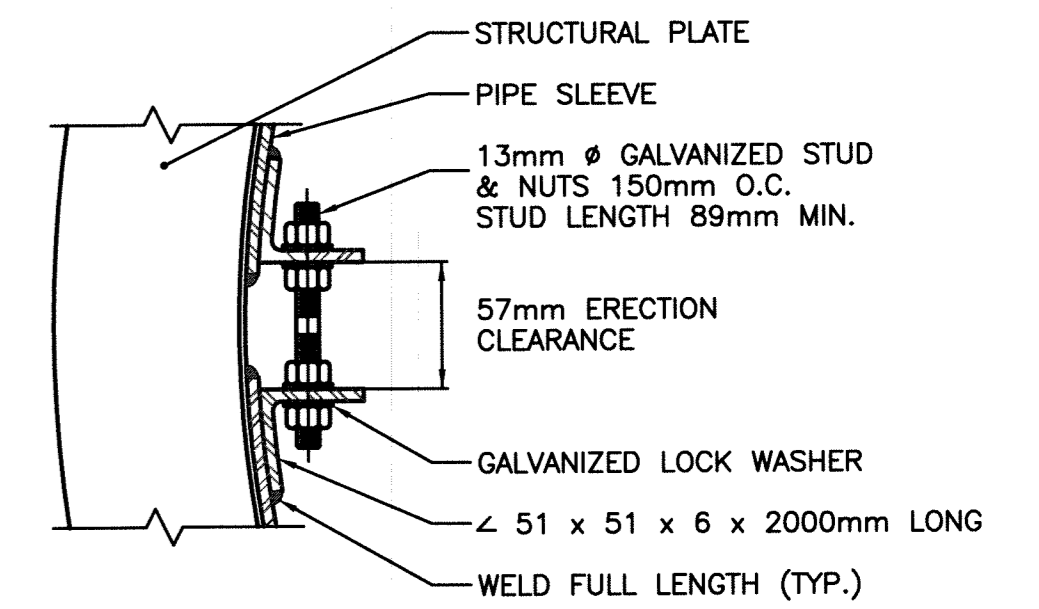
**STANDARD DEBRIS GRATE DETAILS**



**ELEVATION**



**DETAIL 'A'**



**DETAIL 'B'**

**INTERNAL SLIP JOINT DETAILS**  
SCALE: N.T.S.

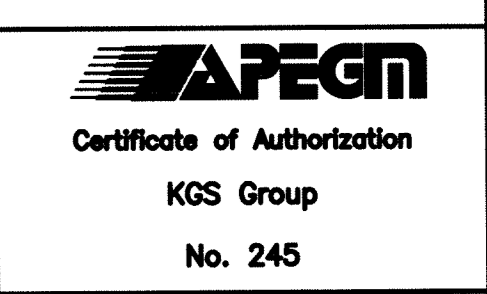
LOCATION APPROVED UNDERGROUND STRUCTURES  
SUPV. U/G STRUCTURES COMMITTEE DATE  
NOTE:  
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	11/12/19	RBO

<b>KGS GROUP</b> CONSULTING ENGINEERS	
DESIGNED BY: RBO	CHECKED BY: RJH
DRAWN BY: DMW	APPROVED BY:
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION:
DATE: 11/11/03	DATE:

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
R.B. OFFMAN  
Member  
24701  
REGISTERED PROFESSIONAL ENGINEER  
CONSULTANT DRAWING NO.  
11-0107-33\_07

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
PROJECT TITLE: 2012 OUTFALL RENEWAL/REHABILITATION PROGRAM  
SHEET 07 OF 07  
COMPUTER FILE NAME: 11-0107-33\_07  
CITY DRAWING NUMBER: LD-5732  
MISCELLANEOUS DETAILS



P:\Projects\2011\11-0107-33\_Doc.Control\Tobias\DWG\11-0107-33\_LD-5732-Rev 0.dwg - Tab: LD-5732 Plotted By: Dberche 12/19/2011 [Mon 1:52pm] CONFLGEND