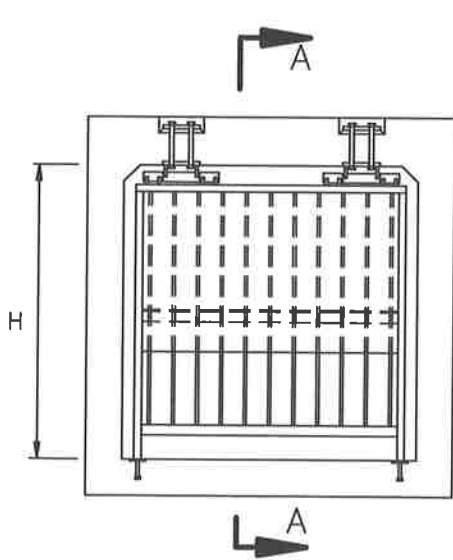
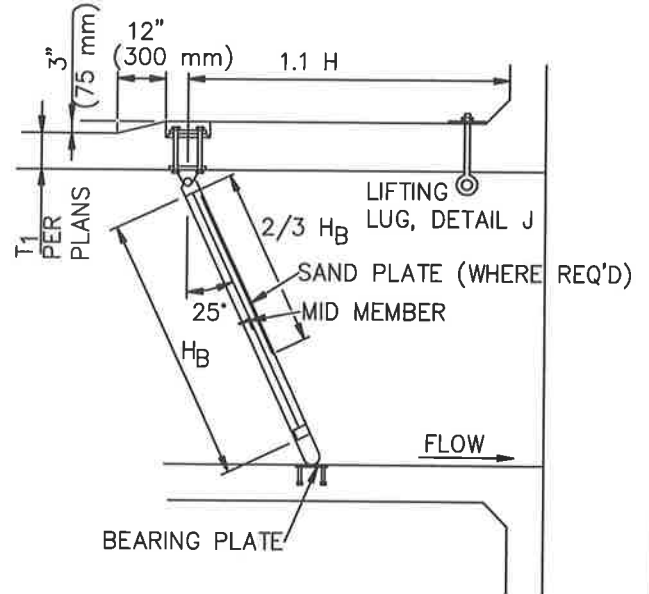


THREE-HINGED INLET/OUTLET BARRIER
FOR RCB



TWO-HINGED
INLET/OUTLET BARRIER
FOR RCB



SECTION A-A

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE
PUBLIC WORKS STANDARDS INC.
GREENBOOK COMMITTEE
1993
REV. 2005, 2009

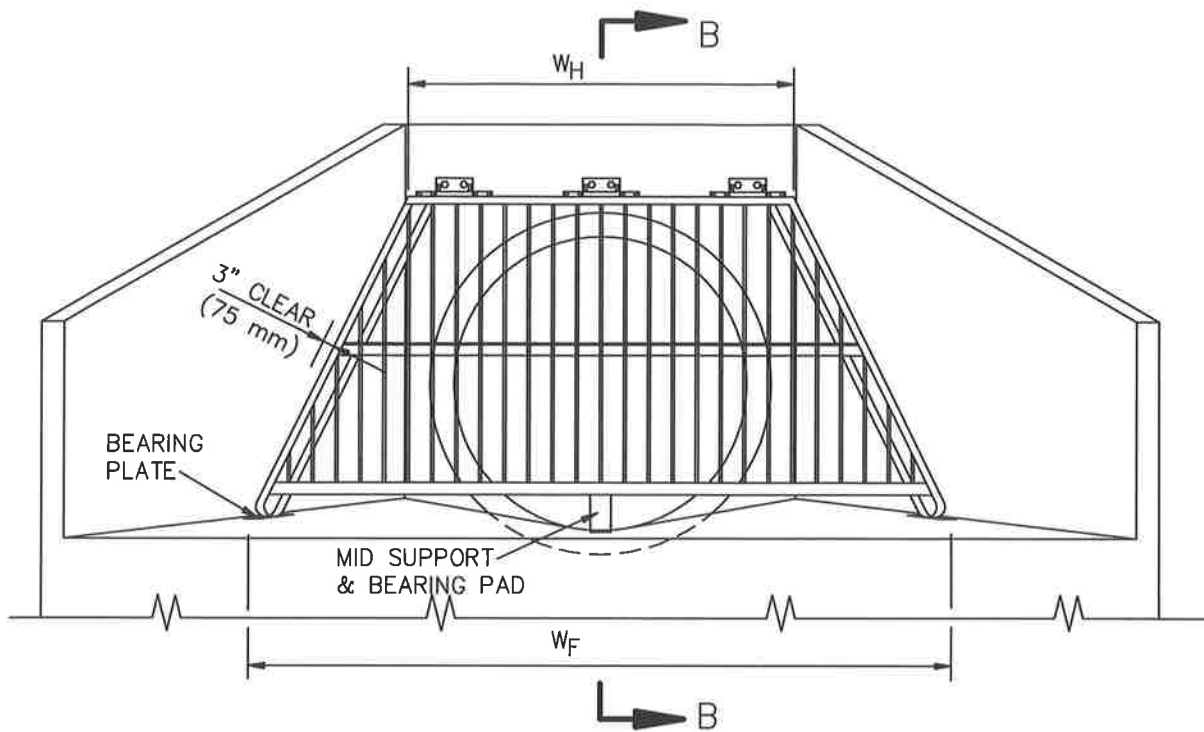
SLOPED PROTECTION BARRIER

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

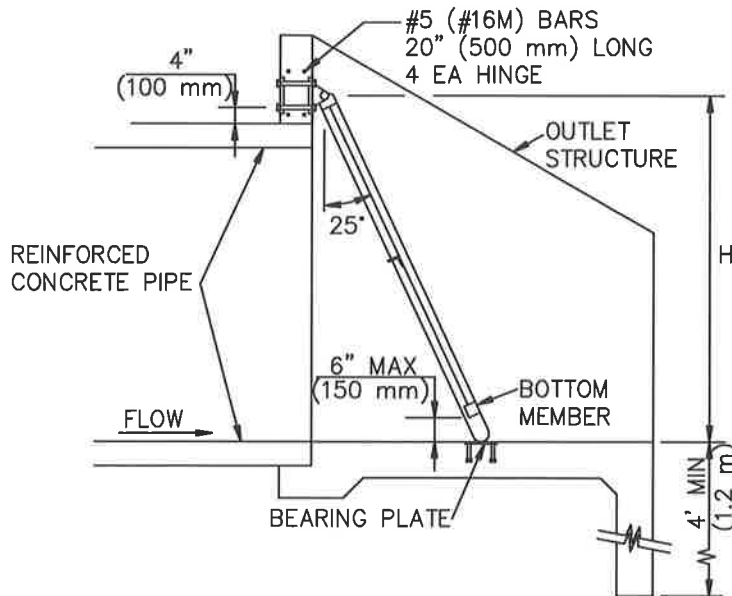
360-2

SHEET 1 OF 8



TRAPEZOIDAL OUTLET BARRIER
FOR RCP

FOR TRAPEZOIDAL OUTLET BARRIERS, USE W_H TO DETERMINE NUMBER AND SIZE OF HINGES AND USE W_F TO DETERMINE REQUIRED FRAME MEMBER SIZES.



SECTION B-B

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

SLOPED PROTECTION BARRIER

360-2

SHEET 2 OF 8

TABLE 1 — STANDARD INLET/OUTLET

BOX SIZE, W x H	VERTICAL BARS, (mm)	TOP MEMBER		SIDE MEMBERS	BOTTOM MEMBER
		VERTICAL BARS, (mm)	TOP MEMBER		
4'x4'	(1.2 x 1.2 m)	1"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2x2x0.250
4'x6'	(1.2 x 1.8)	2"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2x2x0.250
4'x8'	(1.2 x 2.4)	3"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
6'x4'	(1.8 x 1.2)	1"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2x2x0.250
6'x6'	(1.8 x 1.8)	2"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2x2x0.250
6'x8'	(1.8 x 2.4)	3"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
6'x10'	(1.8 x 3.0)	4 1/2"x1/2"	C 6x10.5	(C 152 x 15.6)	TS 4.5x4.5x0.250
8'x4'	(2.4 x 1.2)	1"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2x2x0.250
8'x6'	(2.4 x 1.8)	2"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2.5x2.5x0.250
8'x8'	(2.4 x 2.4)	3"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
8'x10'	(2.4 x 3.0)	4 1/2"x1/2"	C 6x10.5	(C 152 x 15.6)	TS 4.5x4.5x0.250
10'x6'	(3.0 x 1.8)	2"x1/2"	C 4x7.25	(C 102 x 10.8)	TS 2.5x2.5x0.250
10'x8'	(3.0 x 2.4)	3"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
10'x10'	(3.0 x 3.0)	4 1/2"x1/2"	C 6x10.5	(C 152 x 15.6)	TS 4.5x4.5x0.250
12'x6'	(3.6 x 1.8)	2"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
12'x8'	(3.6 x 2.4)	3"x1/2"	C 5x9	(C 127 x 13.4)	TS 3.5x3.5x0.250
12'x10'	(3.6 x 3.0)	4 1/2"x1/2"	C 6x10.5	(C 152 x 15.6)	TS 4.5x4.5x0.250
14'x6'	(4.2 x 1.8)	2"x1/2"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
14'x8'	(4.2 x 2.4)	3"x1/2"	C 6x10.5	(C 152 x 15.6)	TS 4x4x0.250
14'x10'	(4.2 x 3.0 m)	4 1/2"x1/2"	C 7x12.25	(C 178 x 18.2)	TS 5x5x0.250

TABLE 2 — OCEAN OUTLET

BOX SIZE, W x H	VERTICAL BARS, (mm)	TOP MEMBER		SIDE MEMBERS	BOTTOM MEMBER
		VERTICAL BARS, (mm)	TOP MEMBER		
4'x4'	(1.2 x 1.2 m)	2 1/2"x5/8"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
4'x6'	(1.2 x 1.8)	3 3/4"x5/8"	C 6x13	(C 152 x 15.2)	TS 4x2x0.313
4'x8'	(1.2 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x2x0.250
6'x4'	(1.8 x 1.2)	2 1/2"x5/8"	C 6x13	(C 152 x 15.2)	TS 4x3x0.313
6'x6'	(1.8 x 1.8)	3 3/4"x5/8"	C 6x13	(C 152 x 15.2)	TS 4x4x0.500
6'x8'	(1.8 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x4x0.375
6'x10'	(1.8 x 3.0)	6 1/2"x5/8"	C 9x20	(C 229 x 19.9)	TS 7x4x0.375
8'x4'	(2.4 x 1.2)	2 1/2"x5/8"	C 5x9	(C 127 x 13.4)	TS 3x3x0.250
8'x6'	(2.4 x 1.8)	3 3/4"x5/8"	C 6x13	(C 152 x 15.2)	TS 4x3x0.250
8'x8'	(2.4 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x2x0.250
8'x10'	(2.4 x 3.0)	6 1/2"x5/8"	C 9x20	(C 229 x 19.9)	TS 7x3x0.250
10'x6'	(3.0 x 1.8)	3 3/4"x5/8"	C 6x13	(C 152 x 15.2)	TS 4x4x0.313
10'x8'	(3.0 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x4x0.313
10'x10'	(3.0 x 3.0)	6 1/2"x5/8"	C 9x20	(C 229 x 19.9)	TS 7x3x0.313
12'x6'	(3.6 x 1.8)	3 3/4"x5/8"	C 6x13	(C 152 x 15.2)	TS 5x4x0.313
12'x8'	(3.6 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 178 x 14.6)	TS 6x4x0.375
12'x10'	(3.6 x 3.0)	6 1/2"x5/8"	C 9x20	(C 203 x 17.1)	TS 7x4x0.375
14'x6'	(4.2 x 1.8)	3 3/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x4x0.375
14'x8'	(4.2 x 2.4)	5 1/4"x5/8"	C 8x18.75	(C 203 x 17.1)	TS 6x6x0.375
14'x10'	(4.2 x 3.0 m)	6 1/2"x5/8"	C 9x20	(C 229 x 19.9)	TS 7x5x0.500

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLAN

SLOPED PROTECTION BARRIER

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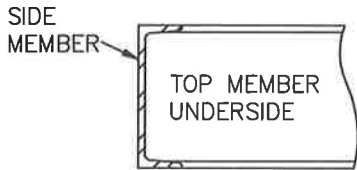
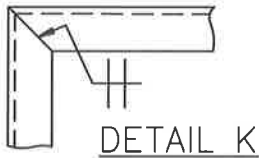
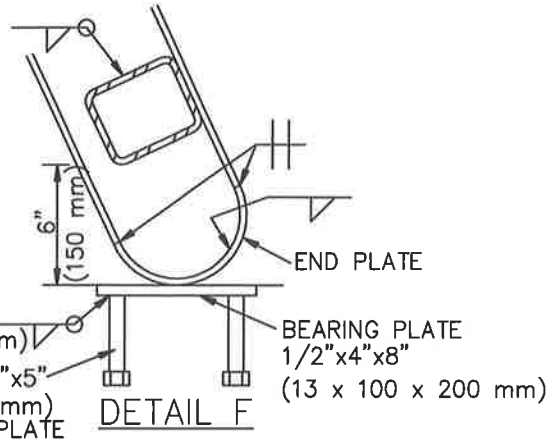
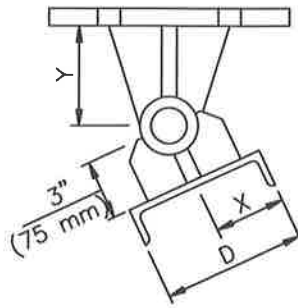
SHEET 3 OF 8

TABLE 3 - HINGES

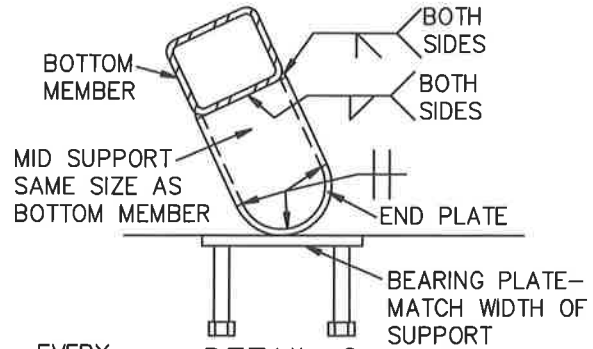
BOX SIZE, W x H	NO. OF HINGES	HINGE SIZE
4'x4' (1.2 x 1.2 m)	2	12" (300)
4'x6' (1.2 x 1.8)	2	12" (300)
4'x8' (1.2 x 2.4)	2	12" (300)
6'x4' (1.8 x 1.2)	2	18" (450)
6'x6' (1.8 x 1.8)	2	18" (450)
6'x8' (1.8 x 2.4)	2	18" (450)
6'x10' (1.8 x 3.0)	2	18" (450)
8'x4' (2.4 x 1.2)	3	12" (300)
8'x6' (2.4 x 1.8)	3	12" (300)
8'x8' (2.4 x 2.4)	3	12" (300)
8'x10' (2.4 x 3.0)	3	12" (300)
10'x6' (3.0 x 1.8)	3	18" (450)
10'x8' (3.0 x 2.4)	3	18" (450)
10'x10' (3.0 x 3.0)	3	18" (450)
12'x6' (3.6 x 1.8)	3	24" (600)
12'x8' (3.6 x 2.4)	3	24" (600)
12'x10' (3.6 x 3.0)	3	24" (600)
14'x6' (4.2 x 1.8)	3	24" (600)
14'x8' (4.2 x 2.4)	3	24" (600)
14'x10' (4.2 x 3.0 m)	3	24" (600)

TABLE 4 - HINGE CLEARANCES (mm)

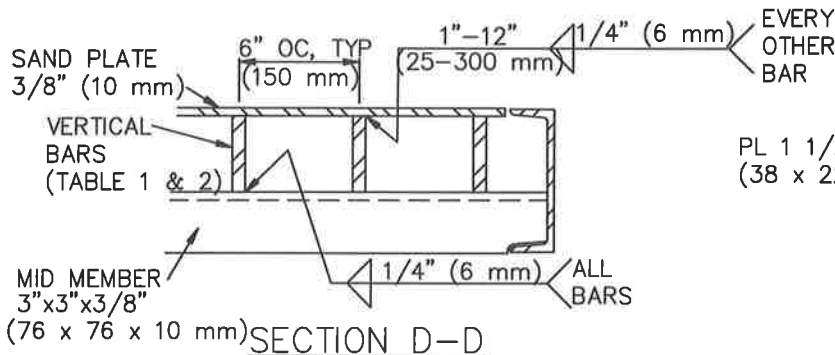
D	X	Y
4" (10)	2" (50)	3" (75)
5" (127)	2 1/2" (65)	3 1/2" (90)
6" (152)	3" (75)	4" (100)
7" (178)	3 1/2" (90)	4 1/2" (115)
8" (203)	4" (100)	5" (125)
9" (229)	4" (100)	5" (125)



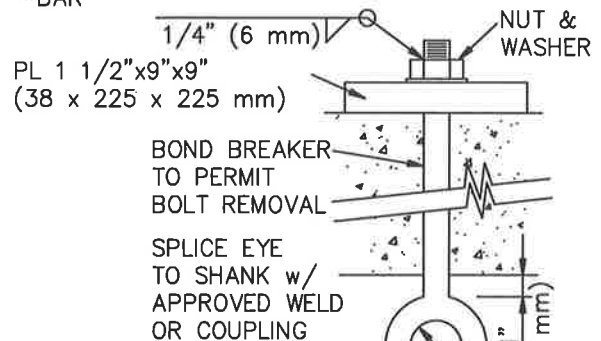
SECTION C-C



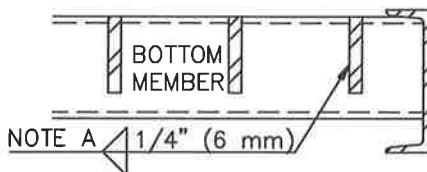
DETAIL G



SECTION D-D

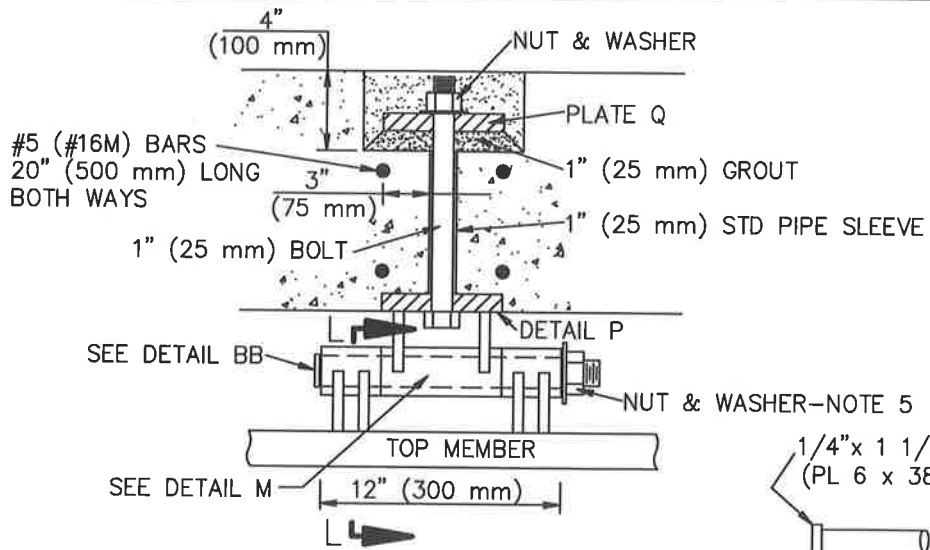


DETAIL J

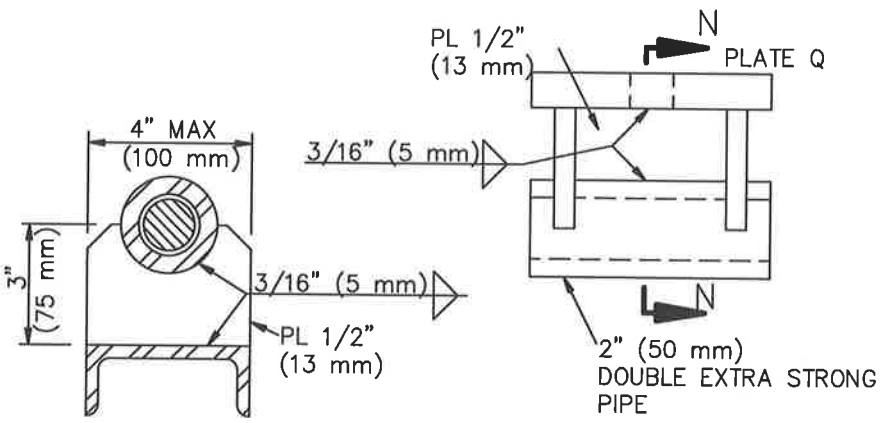
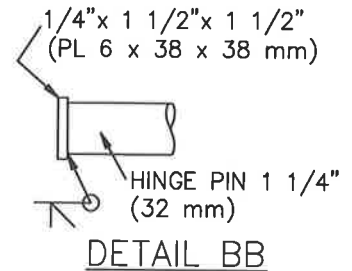


SECTION E-E

NOTE A:
 WELDS 1" (25 mm) FOR
 H = 4' & 6' (1.2 & 1.8 m)
 WELDS 1 1/2" (40 mm) FOR
 H = 8' & 10' (2.4 & 3.0 m)

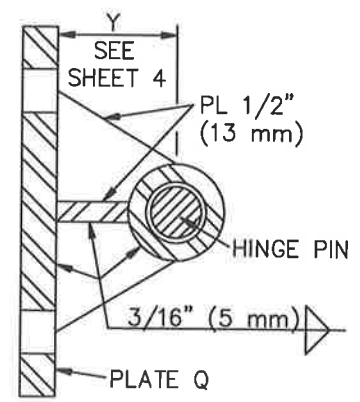


12" (300 mm) HINGE

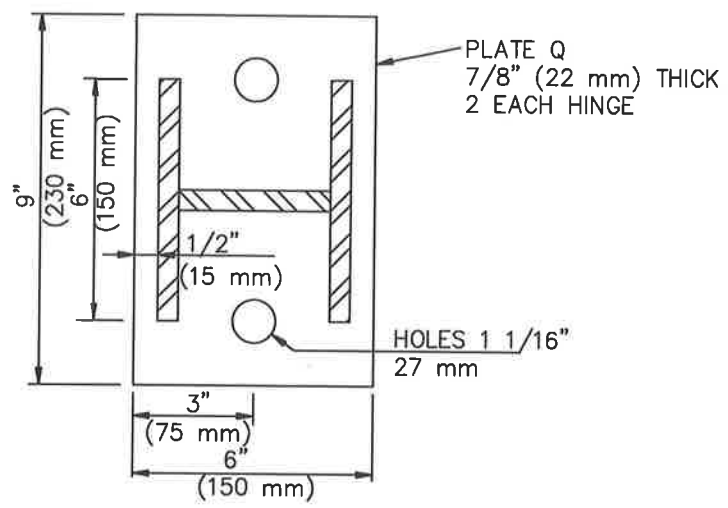


SECTION L-L

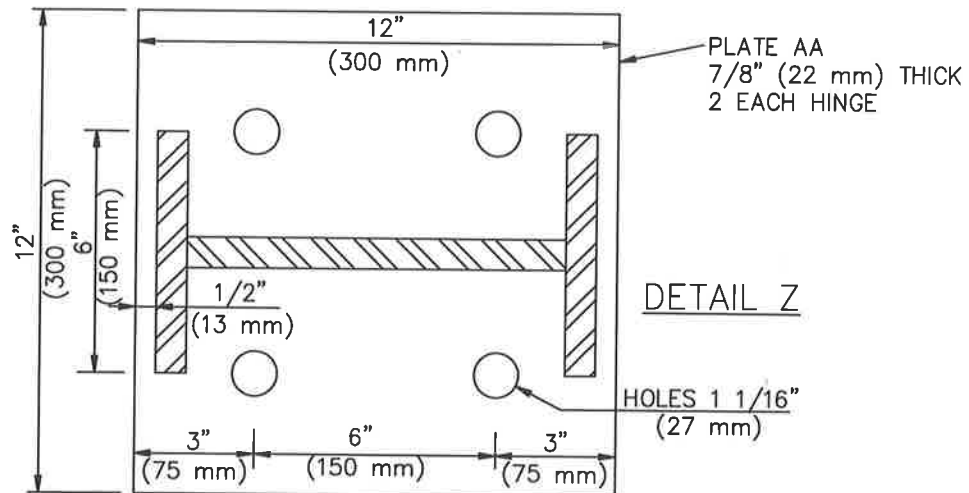
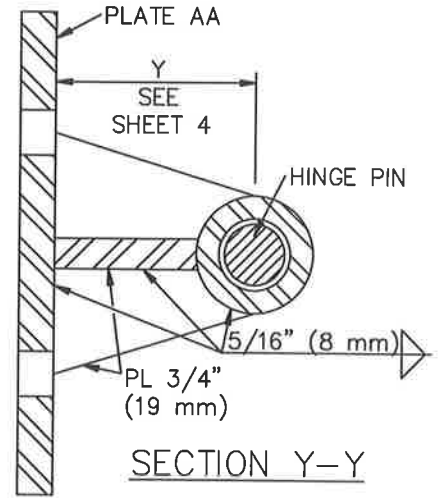
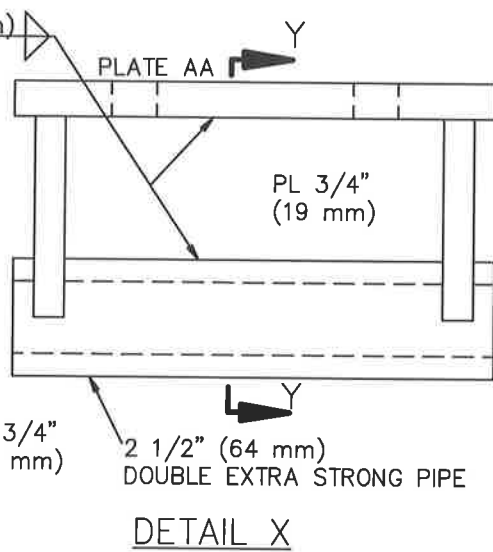
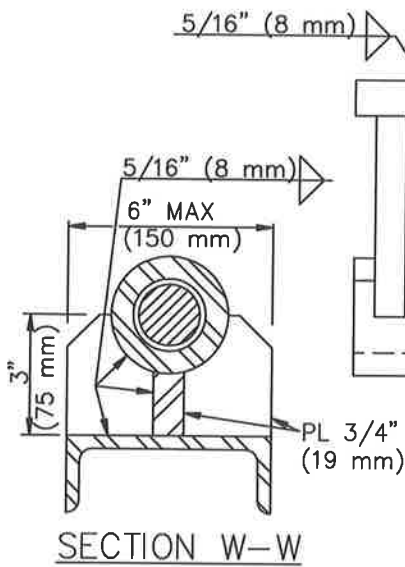
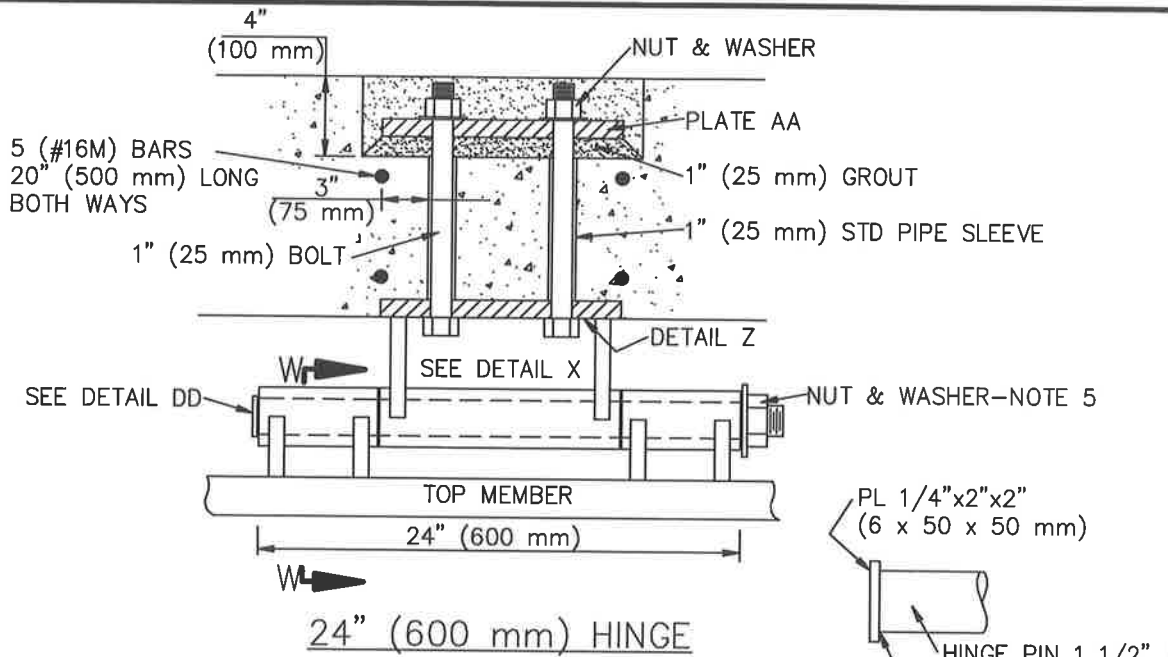
DETAIL M



SECTION N-N



DETAIL P



STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

SLOPED PROTECTION BARRIER

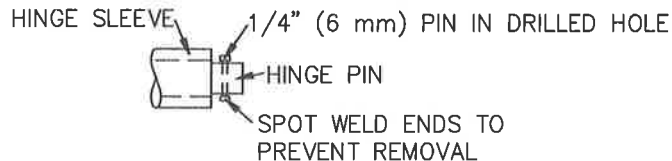
STANDARD PLAN

360-2

SHEET 7 OF 8

NOTES:

1. SUBMIT FABRICATION ("SHOP") DRAWINGS FOR APPROVAL PER SSPWC 2-5.3.3.
2. WHENEVER THE REINFORCED CONCRETE BOX SIZE FALLS BETWEEN SIZES SHOWN IN THE TABLES, USE THE HINGE AND MEMBER SIZING FOR THE LARGER BOX SIZE SHOWN.
3. FRAME MEMBERS SHALL BE ASTM A 36 STEEL OR BETTER.
4. HINGE ASSEMBLIES AND BEARING PADS SHALL BE STAINLESS STEEL.
5. MAKE NECESSARY MODIFICATIONS TO ALLOW THE SIMPLE REMOVAL OR INSERTION OF HINGE PINS FOR INSTALLATION OR REMOVAL OF THE PROTECTION BARRIER. THREAD THE END OF HINGE PINS SO THAT NUTS AND LOCK WASHERS ARE FLUSH WITH THE HINGE SLEEVE PIPE. DAMAGE THE THREADS BEYOND THE NUT FACE TO PREVENT LOOSENING. SEE ALSO ALTERNATE DETAIL BELOW.
6. GALVANIZE FRAME MEMBERS AFTER FABRICATION.
7. MINIMIZE OR ELIMINATE WELDING AFTER GALVANIZING. REPAIR POST-FABRICATION WELDS IN ACCORDANCE WITH SSPWC 210-3.5.
8. INSTALL A MID SUPPORT FOR BARRIERS WITH THREE HINGES.
9. INSTALL SAND PLATES AT OCEAN OUTLETS.
10. DESIGN LOADS:
 - A. INLET/OUTLET BARRIER: BULKED EQUIVALENT FLUID DENSITY = 85 PCF
 - B. OCEAN OUTLET:
 1. 1,800 PSF (86 kPa) OVER SAND PLATE AREA
 2. 600 PSF (29 kPa) OVER LOWER OPEN AREA



ALTERNATE HINGE PIN ATTACHMENT
USE ONLY WHERE APPROVED