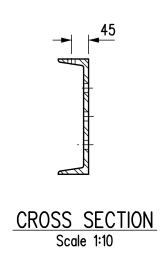
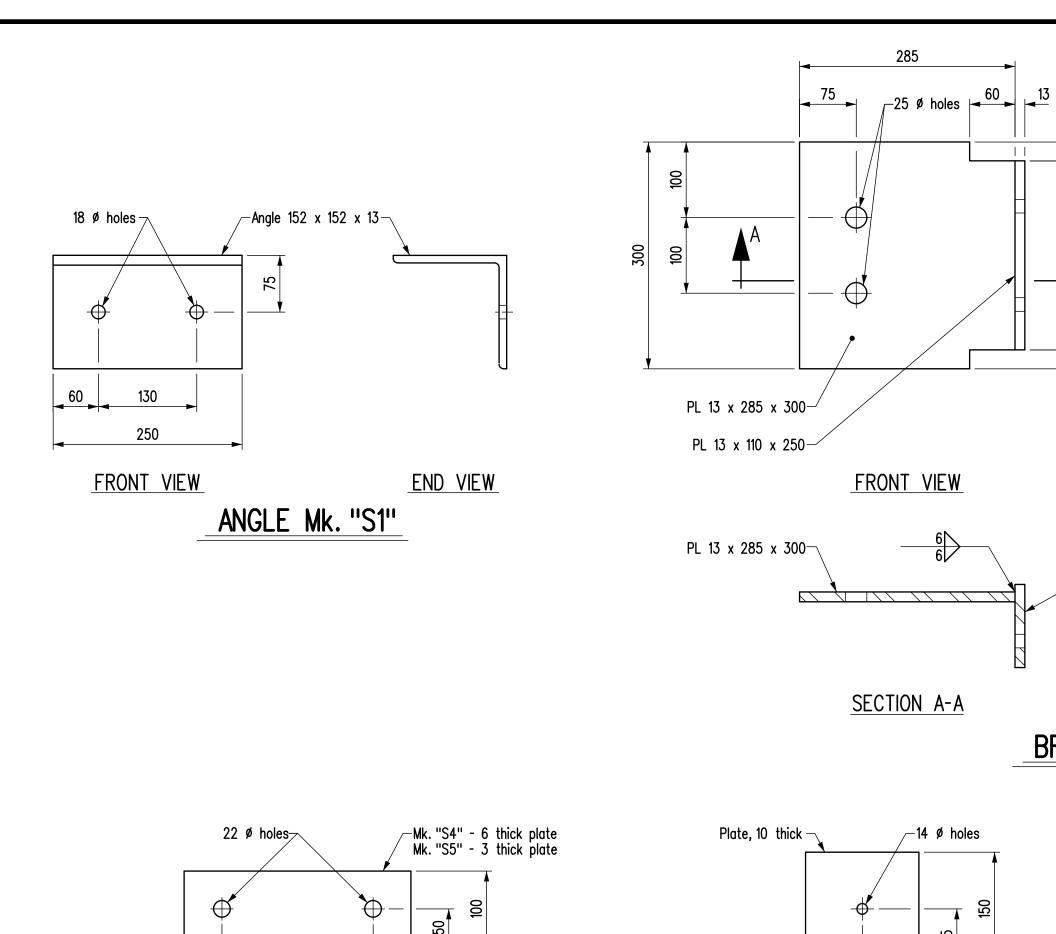
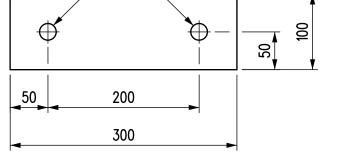


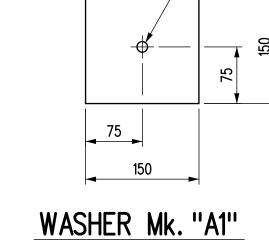
FOR ABUTMENTS



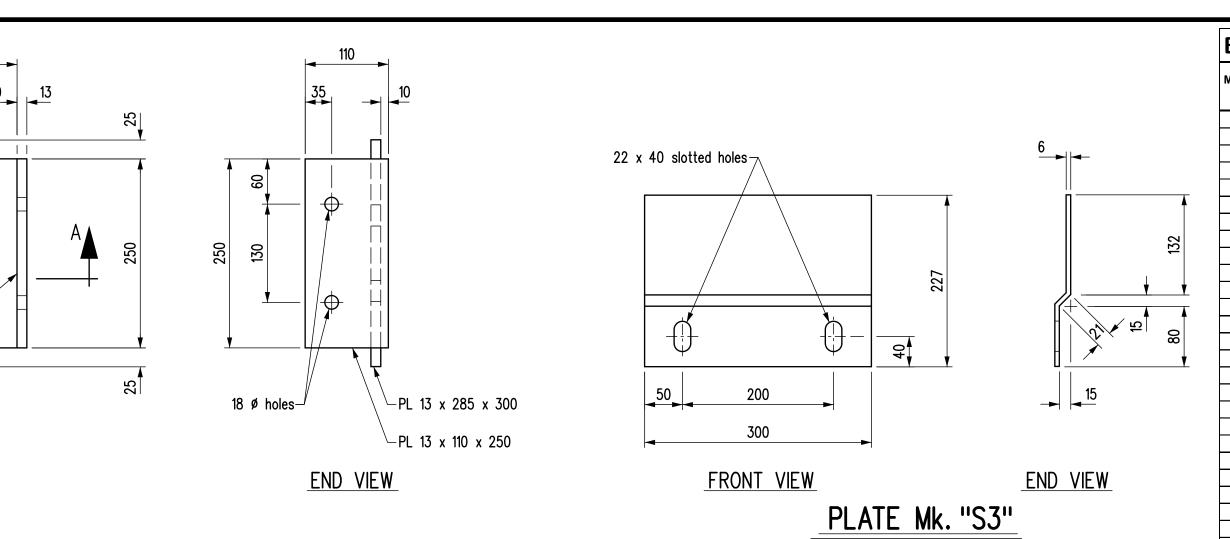
		REVIS	SIONS	STEEL PILE CAP DETAILS					
					5				
DATE	ΒY	D	ESCRIPTION		APPROVED BY:				
DESIGN SEAL Original signed and selaled by Andy Pankratz July 2, 2020			RECORD SEAL	<b>Manitoba The Structure</b> Water Management and Structures			Original signed by John LoganNovember 8, 2020 DIRECTOR OF STRUCTURES		
			l by hkratz	DESIGN		BY:		DATE SCALE:	
July	/ 2, 20	2020		DETAILS	BY:		1 : <u>2</u> 0 or_ <u>as_shown</u>	SHEET NO <u>1 of 2</u> STD NO.PPCC_PR_9.6_12m_IB_SC03	





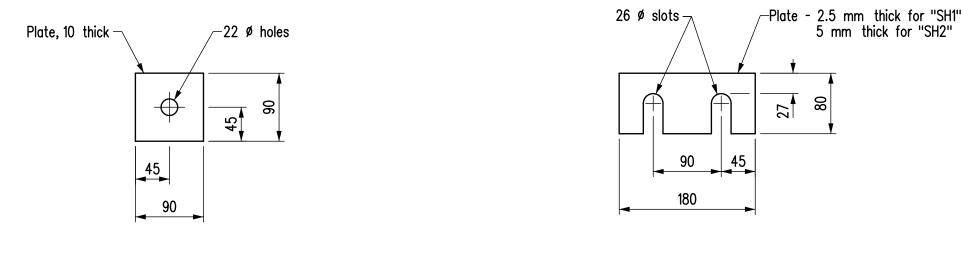


FILLER PLATES Mk. "S4" & "S5"



PL 13 x 110 x 250

## BRACKET Mk. "S2"



## SHIM PLATES Mk. "SH1" & "SH2"

## WASHER Mk. "A2"

BIL	Ο	F MISCELLANEOUS		9 600 ROA	DWAY W	IDTH - 3 SPAN			
MARK No.	No.	DESCRIPTION	CORROSION PROTECTION	SIZE	LENGTH	REMARKS	COMPONENT MASS	MASS PER UNIT	TOTAL MASS
P1	2	Steel plate	Hot dip galvanized						1602.85
		Each unit to be fabricated from :							
		1 - Steel plate		PL 32x550		See detail for Abutment	801.328	801.328	
		8 - Nelson Type NBL, no thread studs		10 dia.	19		0.012	0.096	
								801.424	
D1 -			List die nebendies d						4000.05
P1a	2	Steel plate Each unit to be fabricated from :	Hot dip galvanized						1602.85
		1 - Steel plate		PL 32x550	5 800	See detail for Abutment	801.328	801.328	
		8 - Nelson Type NBL, no thread studs		10 dia.	19		0.012	0.096	
				To dia.	10		0.012	801.424	
								0011121	
P2	2	Steel plate	Hot dip galvanized						1356.86
		Each unit to be fabricated from :	1.0						
		1 - Steel plate		PL 32x500	5 400	See detail for Intermediate Bent	678.240	678.240	
		16 - Nelson Type NBL, no thread studs		10 dia.	19		0.012	0.192	
								678.432	
P2a	2	Steel plate	Hot dip galvanized						1507.58
		Each unit to be fabricated from :							
		1 - Steel plate		PL 32x500		See detail for Intermediate Bent	753.600	753.600	
		16 - Nelson Type NBL, no thread studs		10 dia.	19		0.012	0.192	
								753.792	
P3	4	Steel channel	List die nebendies d	C310x45	11 600	See detail for Abutment		518.520	2074.08
P3 P4		Steel channel	Hot dip galvanized	C310x45	11 600	See detail for Intermediate Bent		518.520	2074.08
P4 P4a	2	Steel channel	Hot dip galvanized Hot dip galvanized	C310x45	11 400	See detail for Intermediate Bent		509.580	1019.16
r 4a	2		Hot uip galvanizeu	0310743	11400			509.500	1019.10
R30	160	A325 bolt assembly	Hot dip galvanized	16 dia.	89	Steel plate to channels		0.245	39.20
R32		A325 bolt assembly	Hot dip galvanized	16 dia.		Steel plate to channels C'bore holes		0.225	9.90
R35		A325 bolt assembly	Hot dip galvanized	22 dia.		Channels to piles		0.461	165.96
	- 10					Angles Mk. "S1" to piles & bracket Mk. "S2"		0.005	
R36	48	A325 bolt assembly	Hot dip galvanized	16 dia.	64	to cap		0.205	9.84
S1		Angle	Hot dip galvanized	L 152x152x13	250	As detailed		7.250	145.00
S2		Bracket	Hot dip galvanized			As detailed		11.226	44.90
S3		Plate	Hot dip galvanized	PL 6x300		As detailed		3.223	51.57
S4		Filler plate	Hot dip galvanized	PL 6x100	300	As detailed		1.413	45.22
S5		Filler plate	Hot dip galvanized	PL 3x100		As detailed		0.707	11.31
A1		Structural plate washer	Hot dip galvanized	PL 10x150		As detailed - One to threaded rod Mk. "TR2"		1.766	28.26
A2 TR1	8 48	Structural plate washer Threaded rods c/w two hex. nuts	Hot dip galvanized Hot dip galvanized	PL 10x90 19 dia.	90	As detailed - One to bolt Mk. "R34" Girder to steel cap plate		0.636 0.940	5.09 45.12
TR3	40 32	Threaded rods c/w two hex. huts	Hot dip galvanized	19 dia.	400 300	Steel plates Mk. "S3" to precast panels		0.940	45.12 21.12
113	52	Threaded Tods C/W two flex. huts	not dip galvanized	19 ula.	300	Steel plates wik. 35 to precast pariets		0.000	21.12
	204	Hardened bevel washer	Hot dip galvanized	for 16 dia. bolts		One to bolts Mk. "R30" & "R32"		0.110	22.44
		Standard flat washer	Stainless Steel	for 13 dia. rod		One to threaded rod Mk. "TR2"		0.010	0.16
		Standard flat washer	Hot dip galvanized	for 19 dia. rod		One to "TR1", two to "TR3"		0.020	2.24
	16	Standard lock washer	Stainless Steel	for 12 dia. rod		One to threaded rod Mk. "TR2"		0.010	0.16
	80	Structural lock washer	Hot dip galvanized	for 19 dia. rod		One to "TR1" & "TR3"		0.020	1.60
	360	F436 Hardened washer	Hot dip galvanized	for 22 dia. bolts		One to bolt Mk. "R35"		0.032	11.52
	48	F436 Hardened washer	Hot dip galvanized	for 16 dia. bolts		One to bolt Mk. "R36"		0.014	0.67
R1		A325 bolt assembly	Hot dip galvanized	22 dia.		R.C. girder connection		0.499	83.83
W1		Structural flat washer	Hot dip galvanized	for 22 dia. bolts		One to bolt Mk. "R1"		0.050	8.40
	168	Pair Nord-Lock lock washers		for 22 dia. bolts		One pair to bolt Mk. "R1"		0.020	3.36
SH1		Shim plate	Hot dip galvanized	PL 2.5x80	180	As detailed - use as required		0.231	19.40
SH2	84	Shim plate	Hot dip galvanized	PL 5x80	180	As detailed - use as required		0.463	38.89
		<u> </u>						٨٩٩ (٢٠٠٠)	10007.74
							TOTAL M	ASS (kg) =	10997.71

NOTES:

1. All material noted in the above Bill shall be hot dip galvanized after fabrication in accordance with ASTM A123, A153 & A143 for a minimum net retention of 610 g/m<sup>2</sup> unless otherwise stated in the specified material ASTM standards. The fabricator and galvanizer shall safeguard against embrittlement using recommended practices from applicable standards.

Seal all welds prior to galvanizing.
 Apply Galvaloy to all field welds and areas where galvanizing has been damaged.
 All bolts and threaded rod in the above Bill shall be Imperial thread.

		REVIS	SIONS	STEEL PILE CAP DETAILS							
DATE	BY		ESCRIPTION					APPROVED BY:			
DESIGN SEAL			RECORD SEAL	Manitoba 🗫			Original signed by John Logan November 8, 2020				
Original signed and sealed by Andy Pankratz July 2, 2020				w	Infrastructure ater Management and Structures		DIRECTOR OF	DIRECTOR OF STRUCTURES			
			atz	DESIGN	BY:	A.H.P	DATE				
						A.H.P	SCALE:	SHEET No 2 of 2			
					BY:	<u> </u>	_ <u>_ 1:5</u>				
				DETAILS	CHECKED:	A.H.P	<u>or_as_shown</u>	STD NO. PPCC_PR_9.6_12m_IB_SC03			