

SECTION A-A

DETAIL "A"

BILL OF REINFORCING FOR PRECAST PANELS

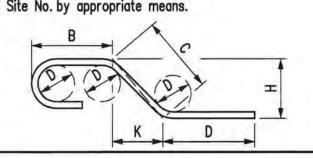
MARK	TYPE	PIN DIAMETER	LENGTH	PANEL TYPE	No. of PANELS	No. of BARS PER PANEL	TOTAL No. of BARS PER PANEL TYPE	BENDING DIAGRAM
1501_N1	STR		5 700	N1	2	6	12	
1502_N1	STR		600	N1	2	20	40	
1501_ N 1a	STR		5 700	N1a	2	6	12	
1502_ N 1a	STR		600	N1a	2	20	40	
1501_N2	STR		6 750	N2	2	10	20	
1502_ N 2	STR		1 200	N2	2	24	48	
1501_N3	STR		4 650	N3	2	10	20	
1502_N3	STR		1 200	N3	2	17	34	
1501_ N 4	STR		4 900	N4	2	16	32	
1502_N4	STR		1 900	N4	2	17	34	
1501_ N 4a	STR		4 900	N4a	2	16	32	
1502_N4a	STR		1 900	N4a	2	17	34	

Panel Type	N1	N1a	N2	N3	N4	N4a
Area m²/panel	4.10	4.10	8.90	6.20	10.00	10.00

NOTES

- All dimensions given in bending diagram are out to out, except radii and extensions on 90°, 135° & 180° hooks. Extensions on 90°, 135° & 180° hooks are the "A" of "G" dimensions for standard 90°, 135° & 180° hooks referenced from the RSIC "Manual of Standard Practice". Radii are inside dimensions. All reinforcing steel bends and hooks shall conform to Clause 6.6.2 of C.S.A. A23.1, unless noted otherwise in the BILL OF REINFORCING STEEL.
- 2. All reinforcing steel shall be deformed steel, unless noted otherwise in the BILL OF REINFORCING STEEL.
- All reinforcing steel shall conform to CSA G30.18 "Billet Steel Bars for Concrete Reinforcement" Grade 400W, unless noted otherwise in the BILL OF REINFORCING STEEL.
- 4. Like bars shall be bundled, securely tied and identified as to Mark and Site No. by appropriate means.

 All other items to be identified in a similar fashion.
- 5. All bars shall be bent in accordance with the following detail:



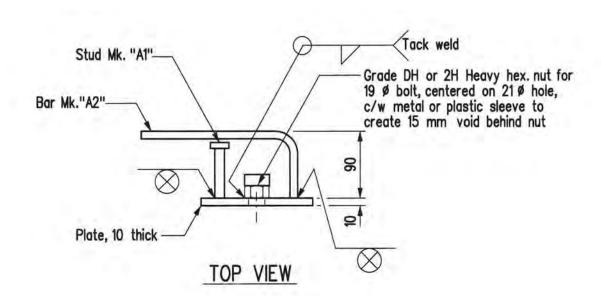
BILL OF MISCELLANEOUS METAL

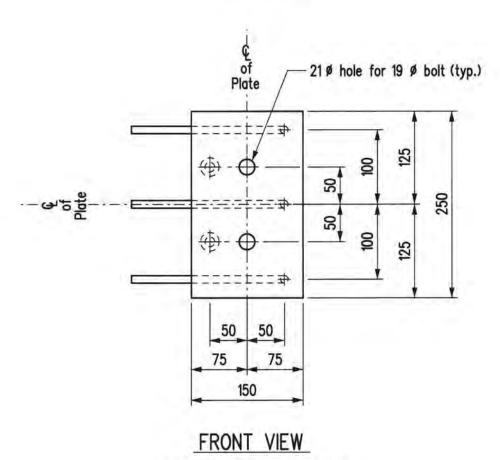
for PRECAST PANELS

MARK No.	No.	DESCRIPTION	CORROSION PROTECTION	SIZE	LENGTH	REMARKS
Q5	4	Insert units	Hot dip galvanized			
		Each unit is fabricated from:				
		Steel plate		PL 10 x 150	250	As detailed
		2 - Studs Mk. "A1"		13 dia.	75	Headed concrete anchors
		3 - Bars Mk. "A2"		10 dia.	300	Deformed bar anchors, As detailed
		2 - Heavy hex. nuts		for 19 dia. bolt		Grade DH or 2H heavy hex nut, c/w metal or plastic sleeve
R34	8	A325 bolt c/w F436 hardened washer		19 dia.	60	

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/m² 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.
- 3. All structural steel to be CSA G40.21 Grade 300W.
- 4. All bolts and inserts in the above Bill shall be Imperial thread.5. Contractor shall refer to Manitoba Infrastructure's Approved Products listing.





INSERT Mk. "Q5"

NOTES:

- 1. For location of DETAIL "A" see STD PPCC_PR_9.6_12m_PD01 Sht 1 of 2.
- 2. Precast panel concrete strength: f'c = 35 MPa.

	REVIS	IONS		PRECAST I	PANEL DET	TAILS	
DATE	BY D	ESCRIPTION			APPROVED BY:		
DESIGN SEAL RECORD SEAL Original signed and				Infrastructure /ater Management and Structures	Original signed by Michael Hagos July 28, 2020 DIRECTOR OF STRUCTURES		
sealed by Andy Pankratz July 20, 2020			DESIGN	BY: A.H.P	DATE		
				снескер:	SCALE:	SHEET No 2 of 2	
				BY:K.P./N.J		SHEET No 2_0f_2	
			DETAILS	снескер:	or as shown	STD No. PPCC_PR_9.6_12m_PD	