

BILL OF MATERIALS

MK.	QTY.	DESCRIPTION
1	1	OCTAGONAL SHAFT 400 A/F TO 300 A/F x 9.525
2	1	OCTAGONAL SHAFT 400 A/F TO 300 A/F x 9.525
3	1	OCTAGONAL SHAFT 450 A/F TO 300 A/F x 9.525
4	1	OCTAGONAL SHAFT 450 A/F TO 300 A/F x 9.525
5	2	BASE PLATE 700 DIA. x 50 THICK (GR. 300W)
6	4	BACKUP STRIP 19 x 500 x 600 (FOR SHAFT)
7	2	TOP SHAFT BEARING PLATE 25 x 500 x 500 (GR. 300W)
8	2	END CROSSBEAM BEARING PLATE 19 x 500 x 600
9	16	25 DIA. x 90 BOLT A325 GALV. C/W NUT & WASHER
10	4	SIDE GUSSET PLATE 19 x 150 x 500
11	4	BACK GUSSET PLATE 6 THICK
12	2	FRONT GUSSET PLATE 6 THICK
13	2	END CROSSBEAM COVER PLATE 6 x 300 OCTAGONAL SHAPE
14	2	BACKUP STRIP 6 x 40 (FOR CROSSBEAM)
15	2	FLANGE PLATE 700 DIA. x 38 THICK (GR. 300W)
16	16	25 DIA. BOLT A325 GALVANIZED C/W NUT & WASHER, LENGTH TO SUIT
17	2	WEDGE PLATE 700 DIA. x THICKNESS VARIES
HANDHOLE MK. H1 (2 REQUIRED)		
18	1	COVER PLATE 11 GA. x 160 x 340 (ASTM A569)
19	1	REINFORCING RING 8 x 65 x 830
20	2	CLAMP BAR 6 x 40 x 180
21	2	10 DIA. x 140 BOLT S/S (TYPE 316)
22	1	GROUND STUD ASSEMBLY 10 DIA. x 40 (STAINLESS STEEL)
HANDHOLE MARK H2 (2 REQUIRED)		
23	1	COVER PLATE 11 GA. x 130 x 220 (ASTM A569)
24	1	REINFORCING RING 8 x 65 x 555
25	1	CLAMP BAR 6 x 40 x 180
26	1	10 DIA. x 140 BOLT S/S (TYPE 316)
27	1	GROUND STUD ASSEMBLY 10 DIA. x 40 (STAINLESS STEEL)
SIGN MOUNTING BRACKET BR1 (8 REQUIRED)		
28	2	CLAMP BAR 10 x 76 (LENGTH TO SUIT)
29	1	BRACKET PLATE 10 THICK
30	2	3/4" DIA. GALVANIZED THREADED ROD, LENGTH TO SUIT
31	2	3/4" DIA. x 2" S/S BOLT (TYPE 316)
32	32	ROUND PLATE WASHER 114 DIA. x 6 THICK
33	32	SLOTTED PLATE WASHER 150 x 100 x 10 THICK

- NOTES**
- MK. 20 & 25 CLAMP BARS C/W TAPPED HOLE IN CENTRE FOR MK. 21 & 26 BOLT. RE-TAP AFTER GALVANIZING.
 - MK. 21 AND 26 BOLTS C/W TAMPER PROOF ALUMINUM CAP WASHER.
 - MK. 22 AND 27 GROUND STUD ASSEMBLY C/W HEW NUT, 2 TERMINAL WASHERS AND 1 LOCK WASHER (ALL STAINLESS STEEL).

GENERAL NOTES

- "RAISED" IDENTIFICATION NO. WITH WELDING ELECTRODE PROVIDED FOR THE SIGN STRUCTURE.
- ALL SHARP POINTS AND EDGES ROUND.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

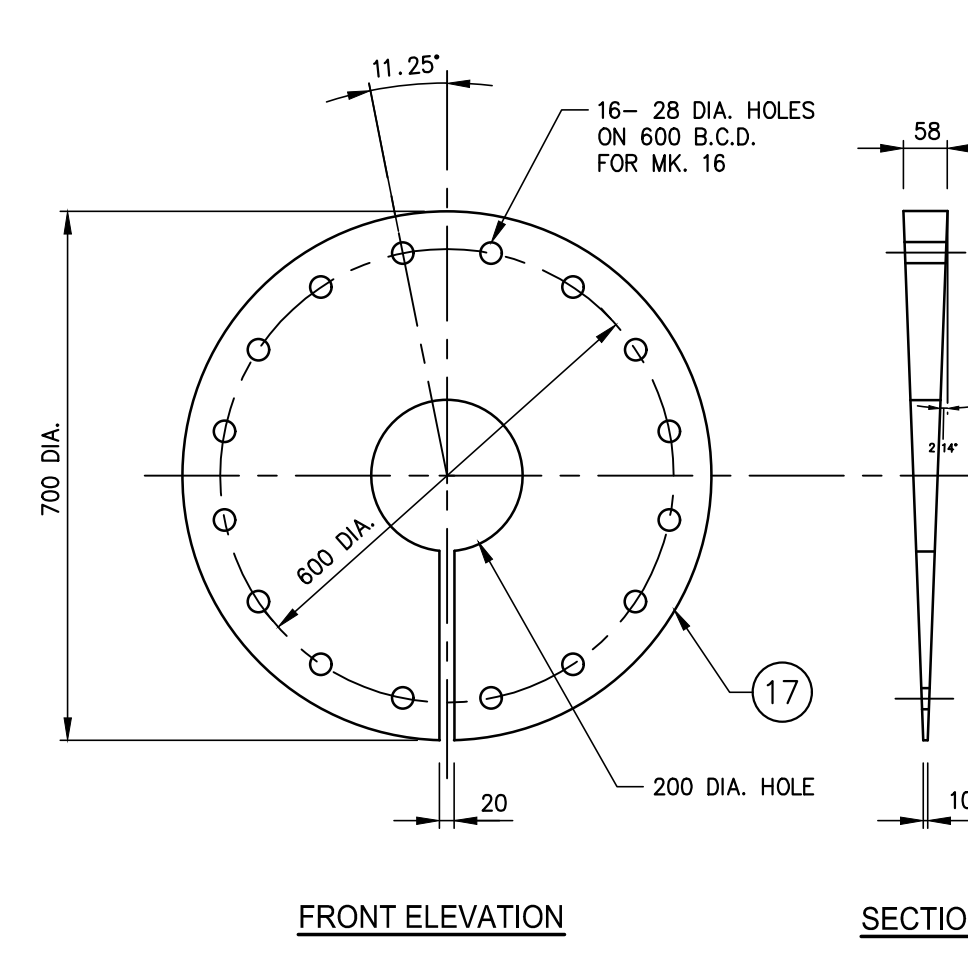
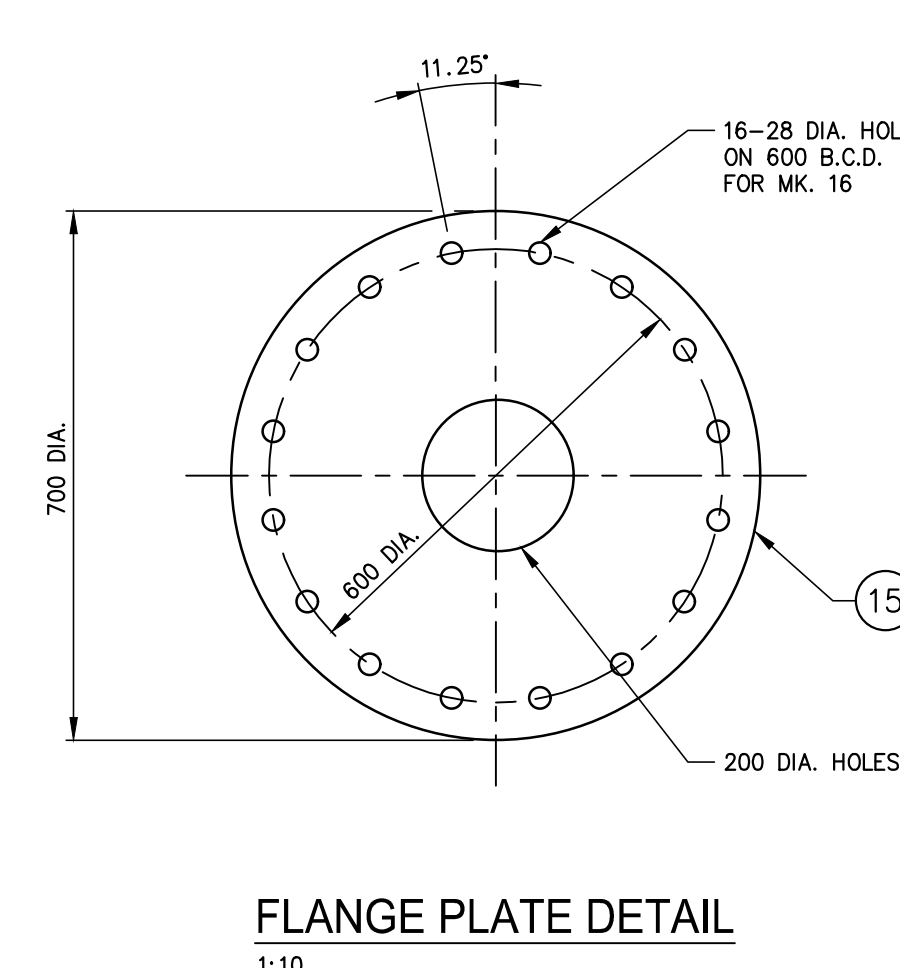
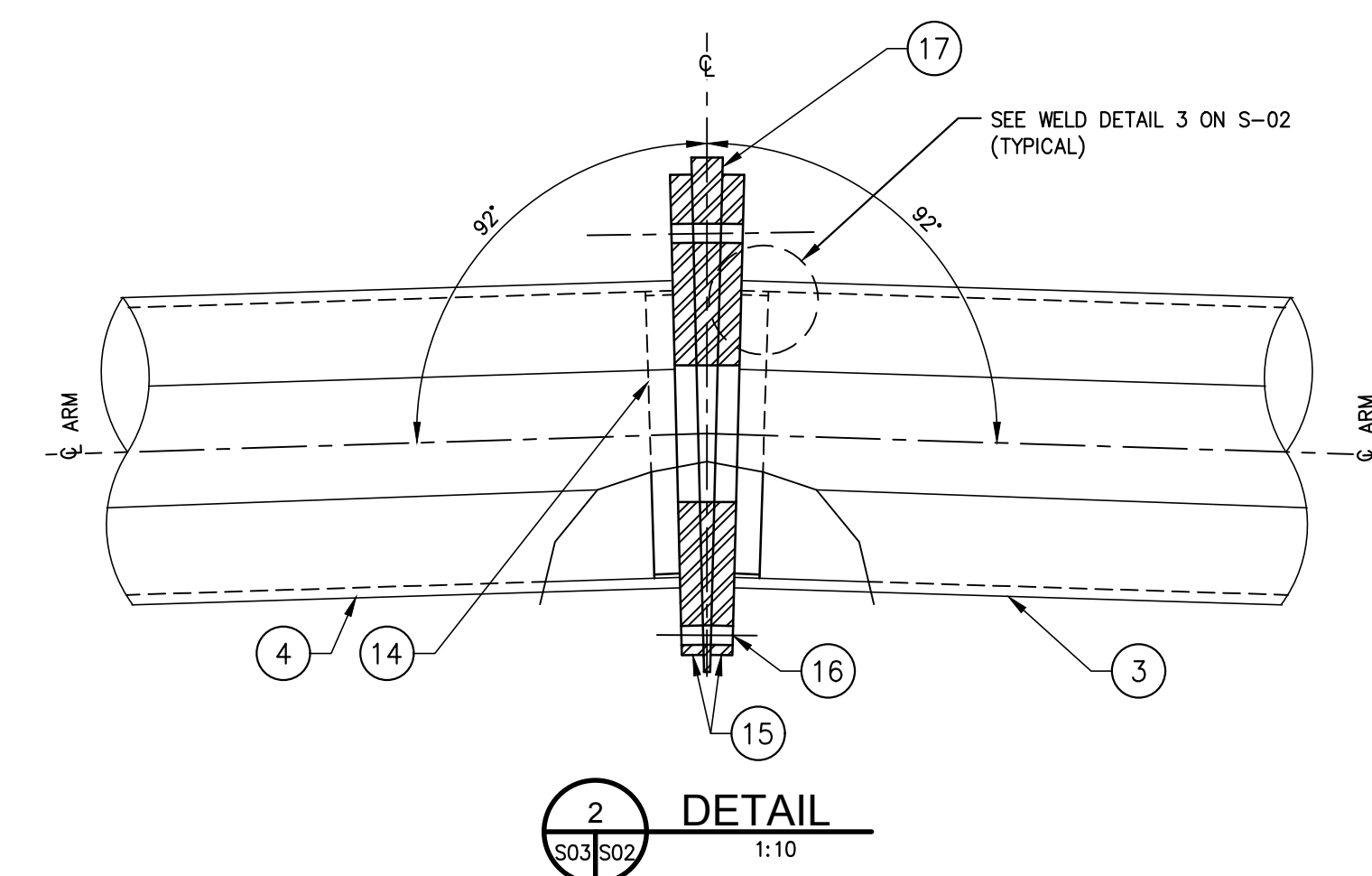
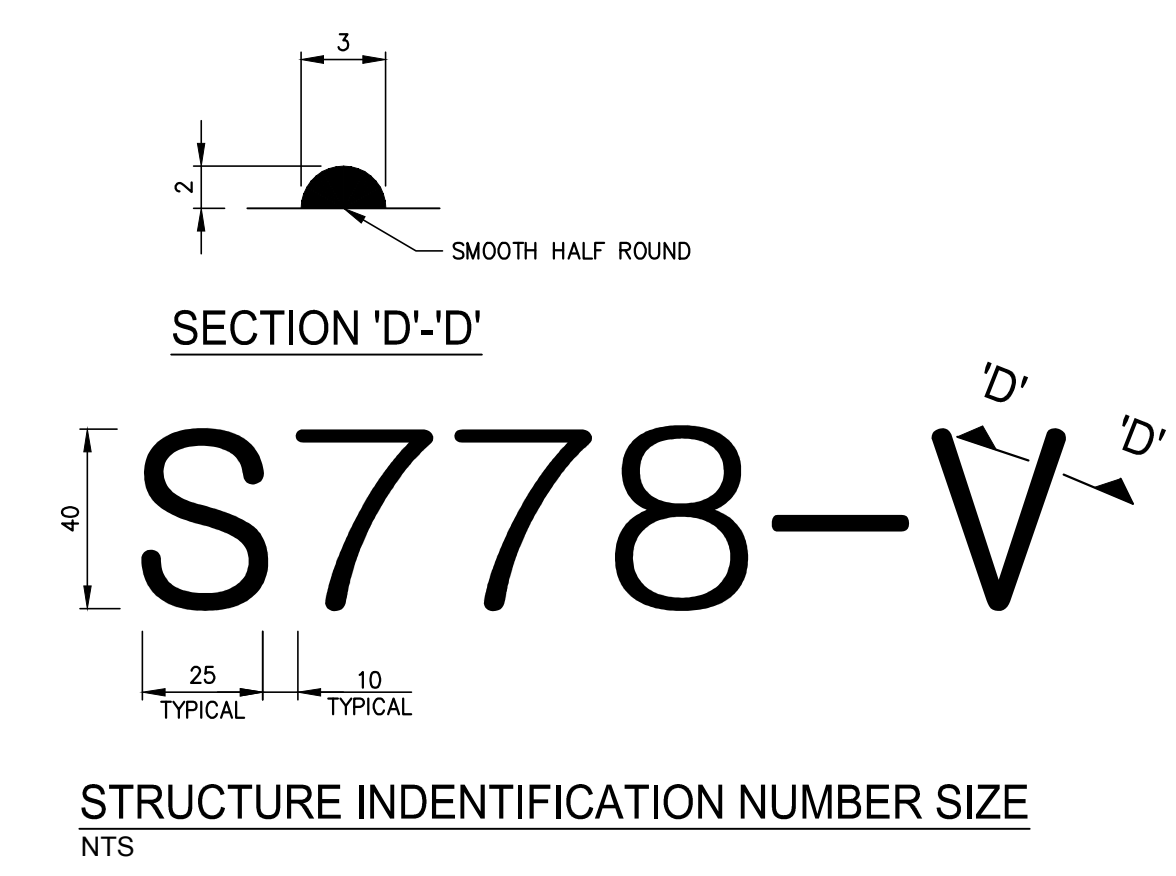
Winnipeg

PEMBINA HIGHWAY
FROM CARTER AVENUE TO OSBORNE STREET

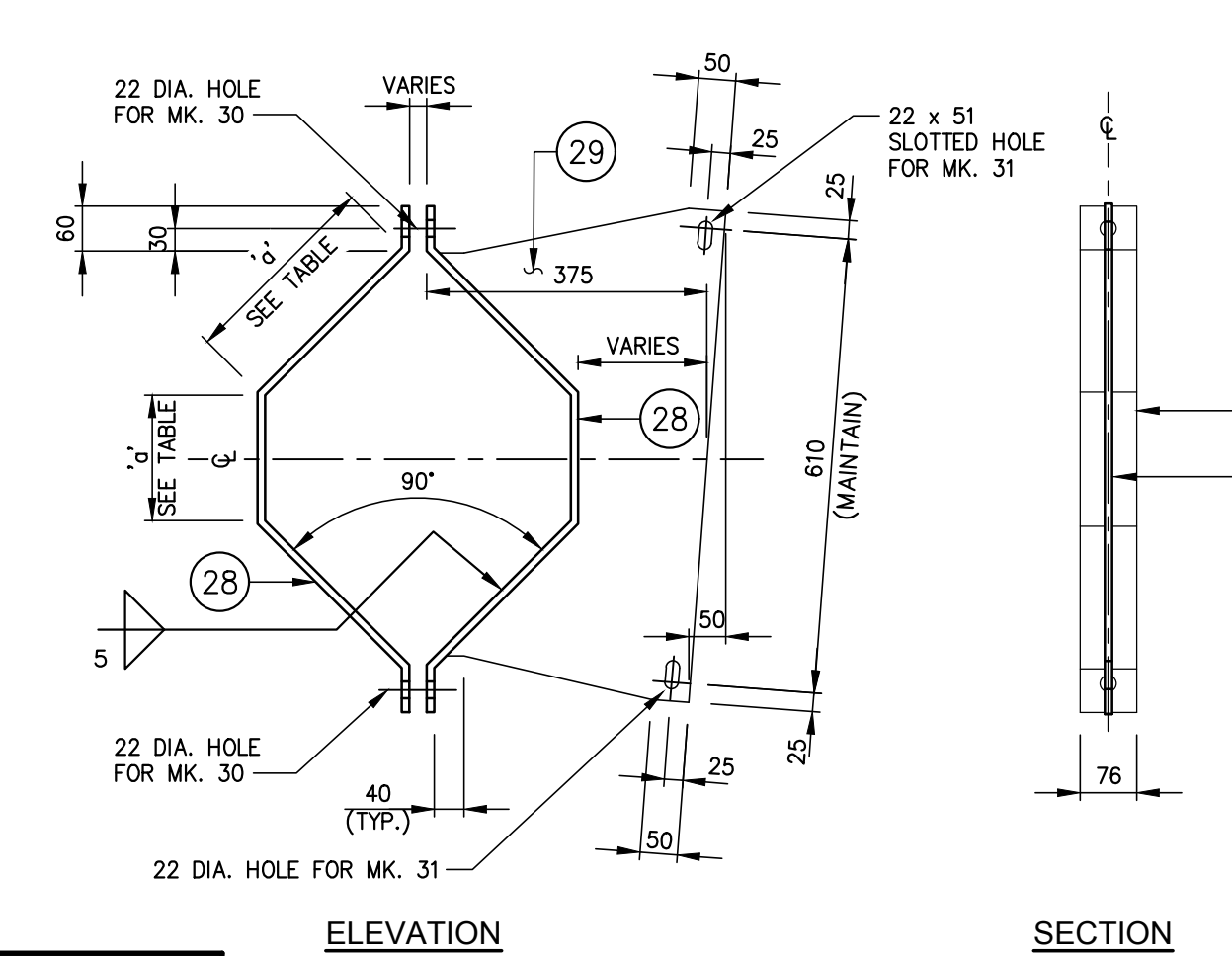
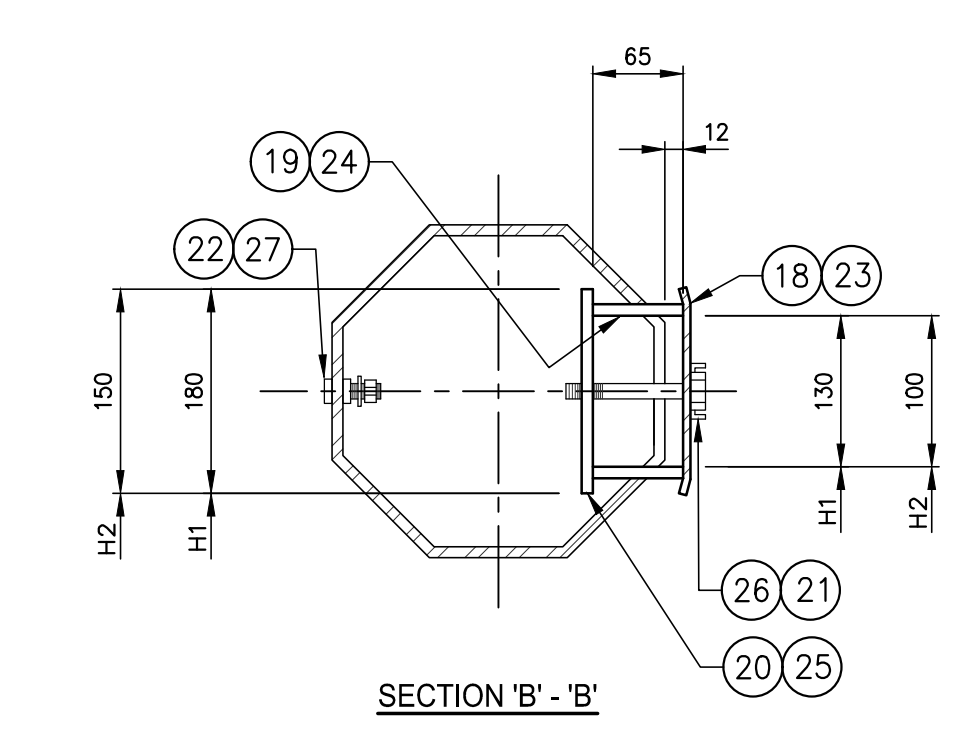
OVERHEAD SIGN STRUCTURES
S778 - FABRICATION DETAILS (2 OF 2)

CITY DRAWING NUMBER
SHEET 24 OF 27

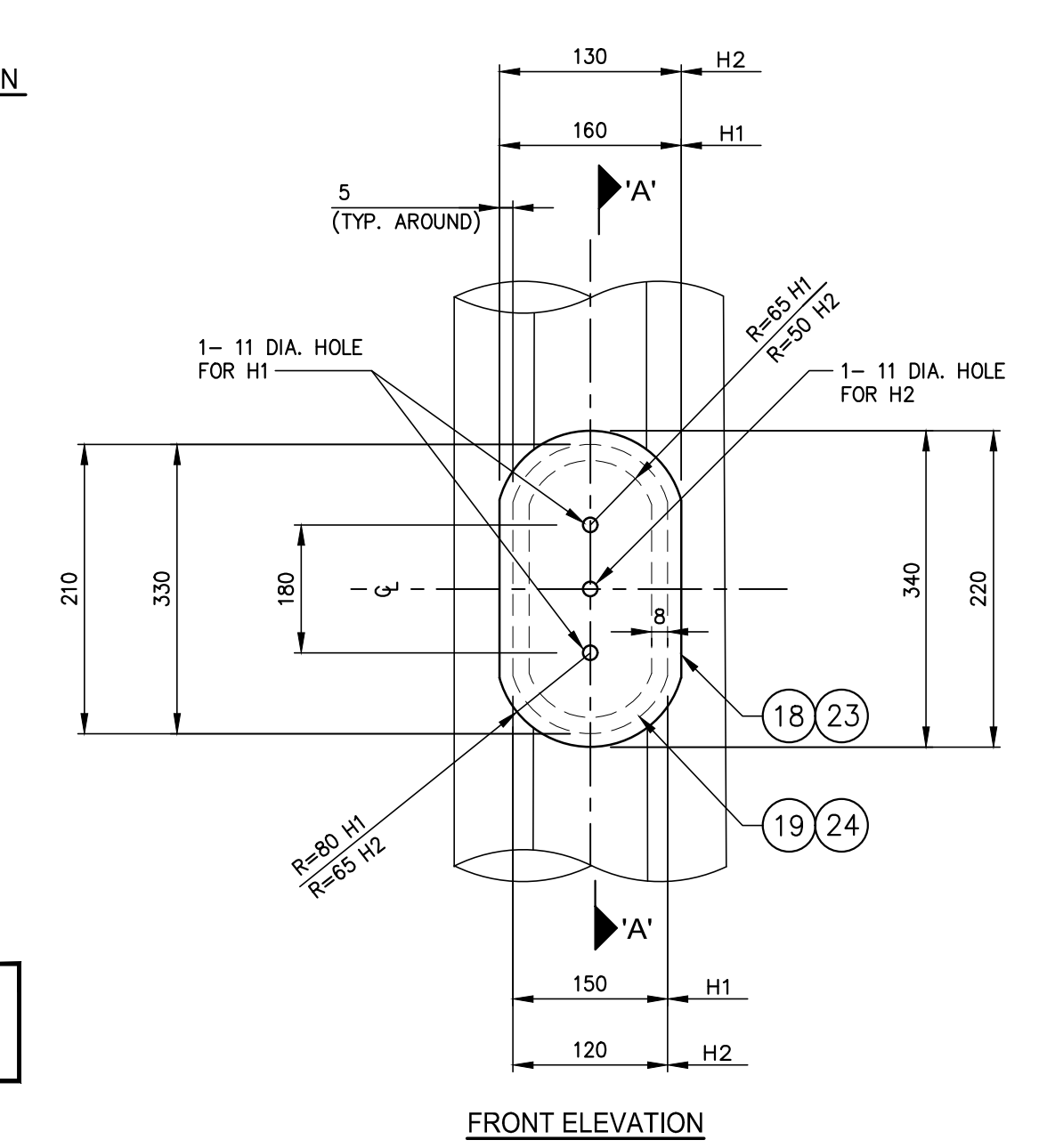
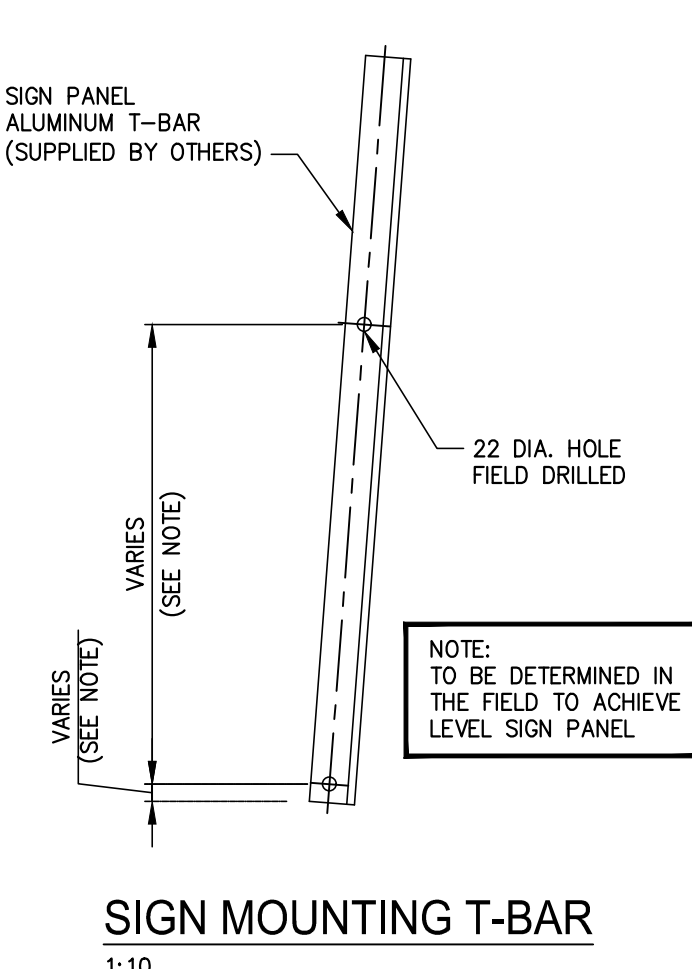
BID NO.
386-2016



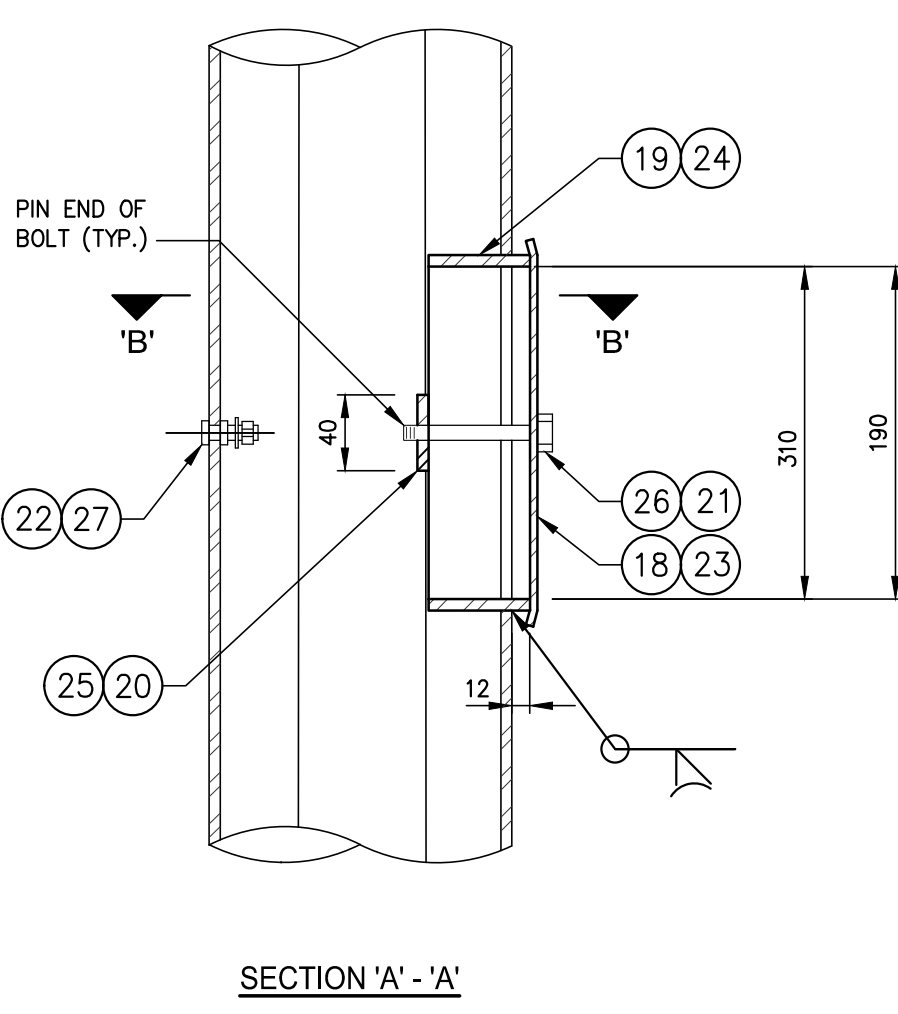
WEDGE PLATE DETAIL
1:10



SIGN MOUNTING BRACKET MK. 'BR1' DETAIL
1:10



HANDHOLE MK. 'H1' & 'H2'
1:10



'BR1' BRACKETS

No.	QTY.	a
1	1	162
2	1	169
3	1	176
4	1	193
5	1	200
6	1	206
7	1	209
8	1	203

NOTE: These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

LOCATIONS APPROVED UNDERGROUND STRUCTURES SIGNED BY: _____ DATE: _____ SUPV UG STRUCTURES		BENCHMARK LOCATION LOCATED ON "O" OF OPEN ON HYDRANT, SOUTHEAST CORNER OF PEMBINA HIGHWAY AND DALY STREET NORTH ELEV. 232.929		MMM Group Limited Suite 111 - 93 Lombard Ave Winnipeg, MB R3B 3B1 t. 204.943.3178 f. 204.943.4948 www.mmgrouplimited.com		ENGINEER'S SEAL J. P. LUKASHENKO REGISTERED PROFESSIONAL ENGINEER	
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		DESIGNED BY: MGM CHECKED BY: TR/EH DRAWN BY: KD APPROVED BY: JPL		HOR. SCALE: AS NOTED VERTICAL: AS NOTED		CONSULTANT ACAD DWG. NO. 5516006-S-03	
NO. REVISIONS 5 ADDENDUM 2 27.MAY.16 VM 4 ADDENDUM 1 26.MAY.16 VM 3 ISSUED FOR TENDER 16.MAY.16 VM 2 ISSUED TO UNDERGROUND STRUCTURES 16.MAY.16 VM 1 ISSUED FOR CLIENT REVIEW 28.APR.16 VM		DATE BY DATE MAY 16 2016		RELEASED FOR CONSTRUCTION DATE		CITY DRAWING NUMBER SHEET 24 OF 27	

May 26, 2016 - 3:32pm
 P:\5516006-5516006-5516006 - Pembina Hwy Pavement Renewal & Blue Lane\MMG Drawings\Overhead Structures\5516006_Pembina Hwy On sign_S01-S06.dwg - tab.S-03