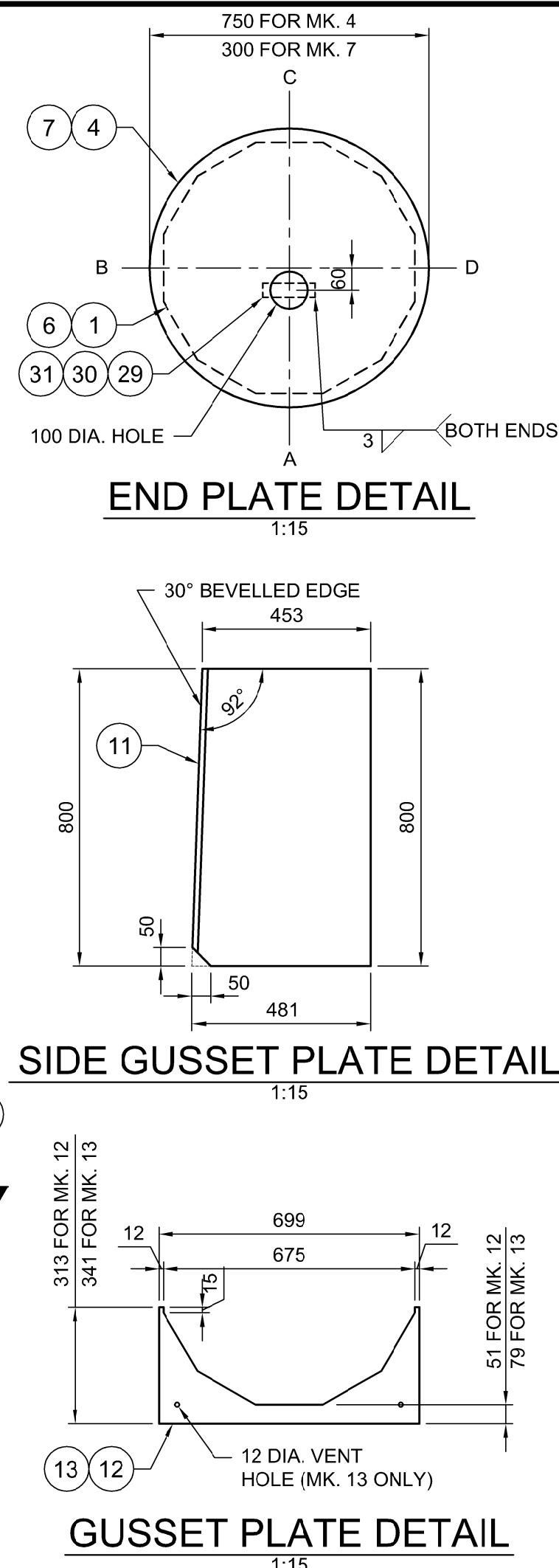
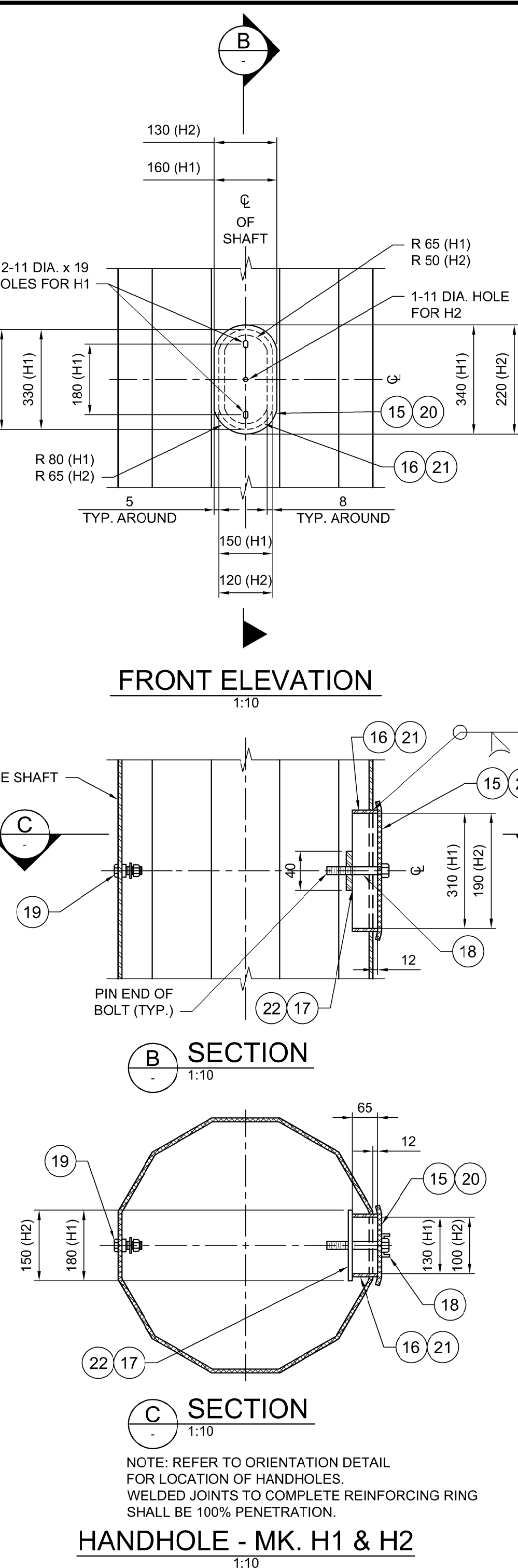
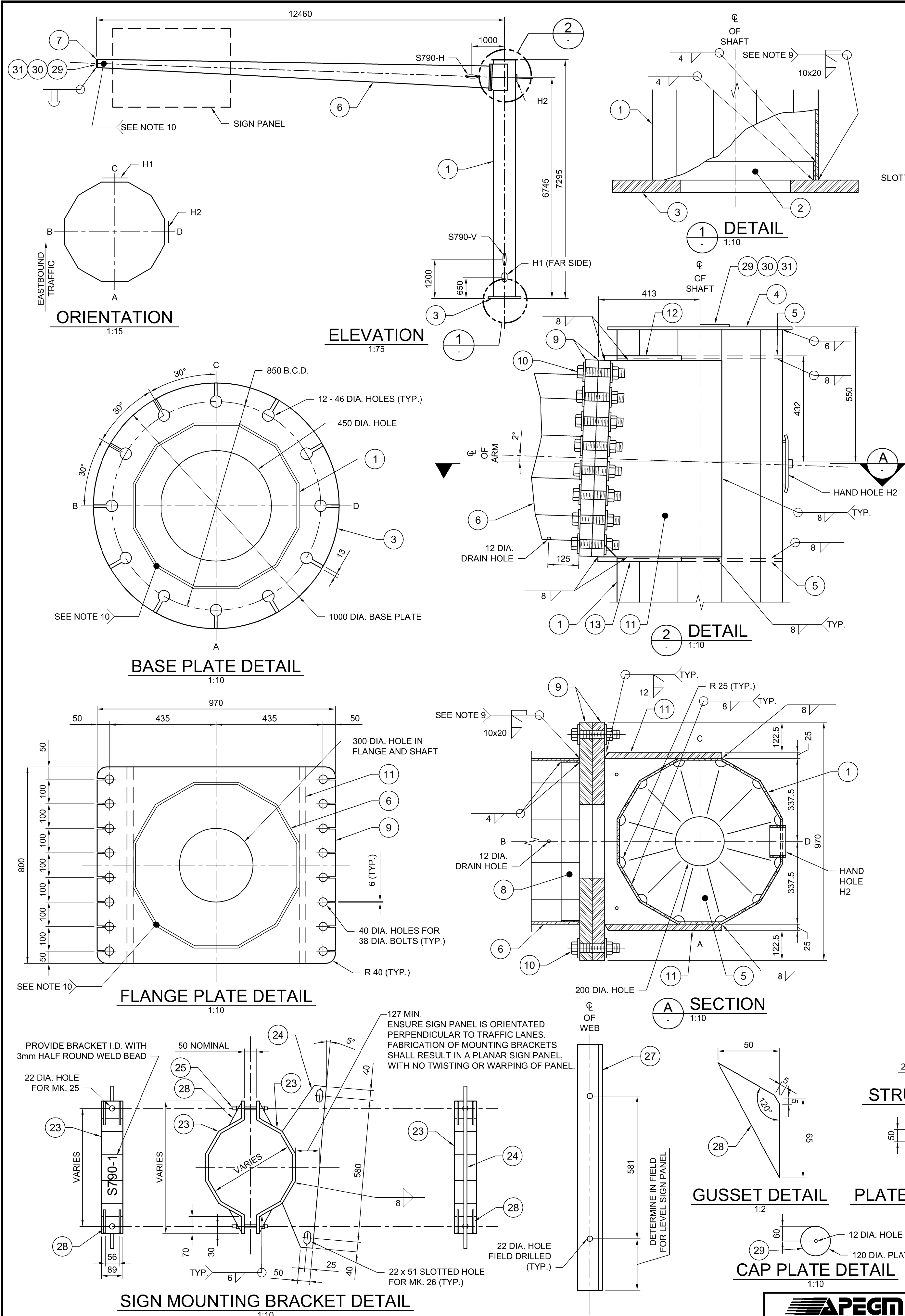


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#### GENERAL NOTES

- DESIGN DATA**
  - AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 5TH EDITION, 2009, PLUS INTERIMS.
  - DESIGN WIND LOAD = 1.5 kPa
  - DESIGN ICE LOAD = 0.15 kPa
  - FATIGUE CATEGORY I CONSIDERING NATURAL WIND GUSTS AND TRUCK INDUCED GUSTS. FATIGUE CATEGORY II FOR GALLOPING.
- ALL PLATE MATERIALS SHALL BE CSA G40.21 - 300W STRUCTURAL STEEL.
- ALL MATERIALS EXCEPT STAINLESS STEEL AND ALUMINUM SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 TO A MIN. NET RETENTION OF 610 g/m<sup>2</sup> UNLESS INDICATED OTHERWISE.
- ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED WITH GALVALLOY OR APPROVED EQUIVALENT, HAVING A MINIMUM 96% ZINC CONTENT IN THE DRY FILM.
- ALUMINUM T-BARS & SIGNS**
  - CONTRACTOR SHALL SUPPLY AND DELIVER ALUMINUM T-BARS TO THE CITY OF WINNIPEG TRAFFIC SERVICES SIGN SHOP A MINIMUM OF 3 WEEKS IN ADVANCE OF INTENDED DATE FOR PICKUP. CITY WILL INSTALL SIGN PLATES ON SUPPLIED T-BARS.
  - 1 SIGN PANEL, MAXIMUM SIZE 3600 x 2400 mm AS SHOWN ON SHEET 098. SUPPLIED BY THE CITY OF WINNIPEG TRAFFIC SERVICES BRANCH. PICK UP AND INSTALLATION BY CONTRACTOR.
  - SIGN PANELS SHALL BE INSTALLED ON THE SIGN SUPPORT STRUCTURE IMMEDIATELY FOLLOWING ERECTION OF THE SUPPORT STRUCTURE (SAME DAY).
- INSTALL HOLES IN THE GUSSET PLATES FOR DRAINAGE DURING GALVANIZING AS DETAILED.
- PROVIDE "RAISED" IDENTIFICATION NO. WITH WELDING ELECTRODE FOR THE SIGN STRUCTURE.
- GRIND ALL SHARP POINTS AND EDGES.
- EXTERIOR WELD JOINING SHAFT TO TRANSVERSE PLATE SHALL BE AN UNEQUAL LEG COMPLETE PENETRATION WELD WITH THE LONG LEG OF THE WELD ALONG THE SHAFT TERMINATING AT 30° FROM THE SHAFT SURFACE.
- SEAM WELDS SHALL BE 100% PENETRATION WITHIN 200mm OF BOTH ENDS OF THE VERTICAL AND ARM SHAFTS.

#### BILL OF MATERIALS

MK.	QTY.	DESCRIPTION
1	1	DODECAGONAL SHAFT 675 A/F x 9.525 THICK PLATE
2	1	BACK-UP STRIP 75 x 4.763 (FOR SHAFT)
3	1	BASE PLATE 1000 DIA. x 51 THICK
4	1	SHAFT END PLATE 750 DIA. x 12 THICK
5	2	DODECAGONAL GUSSET PLATE 12 THICK
6	1	DODECAGONAL ARM 675 A/F TO 250 A/F x 9.525 THICK PLATE
7	1	ARM END PLATE 300 DIA. x 4.763 THICK
8	1	BACK-UP STRIP 75 x 4.763 (FOR ARM)
9	2	FLANGE PLATE 51 THICK
10	16	38 DIA. BOLTS C/W NUT & 2 WASHERS (ASTM A325, TYPE 1, GALV.)
11	2	SIDE GUSSET PLATE 25 THICK
12	1	GUSSET PLATE 19 THICK
13	1	GUSSET PLATE 19 THICK
14	12	PLATE WASHER 13 THICK
		HANDHOLE MARK H1
15	1	COVER PLATE 11 GA. x 160x 340 (ASTM A569)
16	1	REINFORCING RING 8 x 65 x 830
17	2	CLAMP BAR 6 x 40 x 180
18	2	10 DIA. x 140 BOLT S/S (TYPE 316)
19	1	GROUND STUD ASSEMBLY 10 DIA. x 40
		HANDHOLE MARK H2
20	1	COVER PLATE 11 GA. x 130 x 220 (ASTM A569)
21	1	REINFORCING RING 8 x 65 x 555
22	1	CLAMP BAR 6 x 40 x 150
18	1	10 DIA. x 140 BOLT S/S (TYPE 316)
19	1	GROUND STUD ASSEMBLY 10 DIA. x 40
		SIGN MOUNTING BRACKET (4 REQUIRED)
23	2	CLAMP BAR 89 x 13 THICK (LENGTH TO SUIT)
24	1	BRACKET PLATE 12 THICK
25	2	19 DIA. ASTM F1554 GRADE 55 THREADED ROD C/W 2 A563 GRADE A NUTS & F436 WASHER AND LOCK WASHER (ALL GALVANIZED)
26	2	19 DIA. S/S BOLT C/W NUT, 2 WASHERS & 1 LOCK WASHER (ASTM A193 GRADE B8)
27	1	ALUMINUM T-BAR 6061-T6 ASTM B221 102 x 76 x 8 LENGTH TO SUIT SIGN PANEL HEIGHT
28	32	GUSSET PLATE 6 THICK
29	2	CAP PLATE, 120 DIA. x 3 THICK
30	2	CAP RETAINER BACKING BAR 140 x 38 x 6, C/W THREADED HOLE AT CENTER FOR MK. 31
31	2	10 DIA S/S BOLT C/W FLAT S/S WASHER

#### NOTES:

- MARK NO. 17 & 22 C/W 8-DIA. PUNCHED 10 N.C. TAPPED AT THE CENTER OF PLATE.
- MARK NO. 18 C/W CUP WASHER.
- MARK NO. 19 C/W 2-10 DIA. HEX NUT, 2-TERMINAL WASHER & 1-LOCKWASHER.

#### METRIC

WHOLE NUMBERS INDICATE MILLIMETRES  
DECIMALIZED NUMBERS INDICATE METRES

#### WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

- NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
- OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.



NO.	REVISIONS	DATE	BY
0	ISSUED FOR TENDER	18/02/09	DRA

DESIGNED BY	DRA	CHECKED BY	SSR
DRAWN BY	MDG	APPROVED BY	MBL
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
DATE	2018/02/09	DATE	

ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.R.C. AMORIM
Member 33215
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT PROJECT NUMBER
17-5932

<b>THE CITY OF WINNIPEG</b> PUBLIC WORKS DEPARTMENT
<b>FERMOR AVENUE BRIDGE OVER SEINE RIVER</b> BRIDGE REHABILITATION, PEDESTRIAN-CYCLIST UNDERPASS STRUCTURE AND ROADWORKS FROM ST. ANNE'S ROAD TO ARCHIBALD STREET
CITY DRAWING NUMBER P-3489-2017-CS-099
SHEET 099 OF 100
CONSULTANT DRAWING NUMBER CS-099