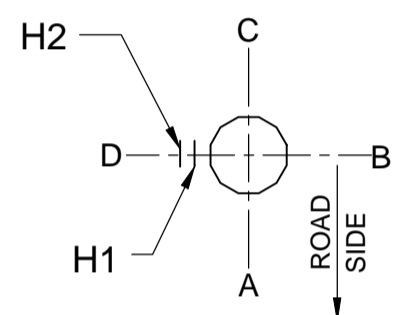
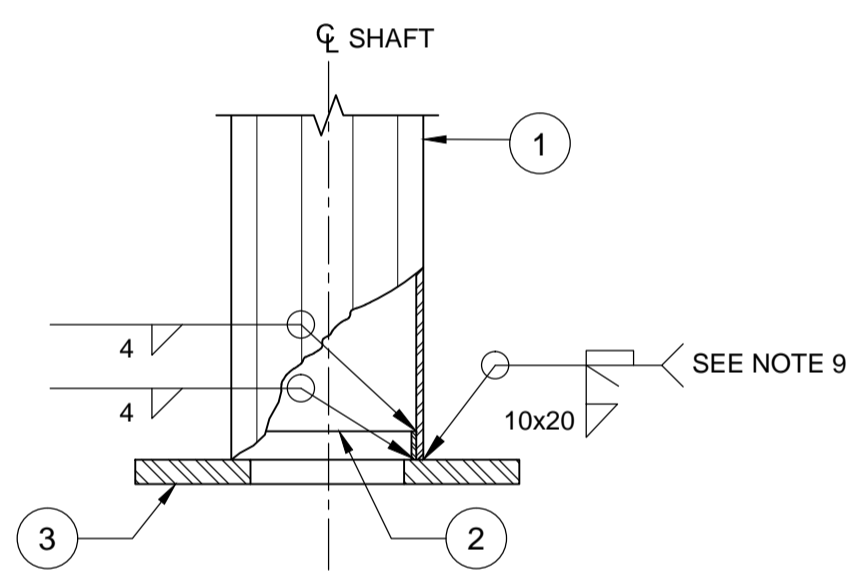


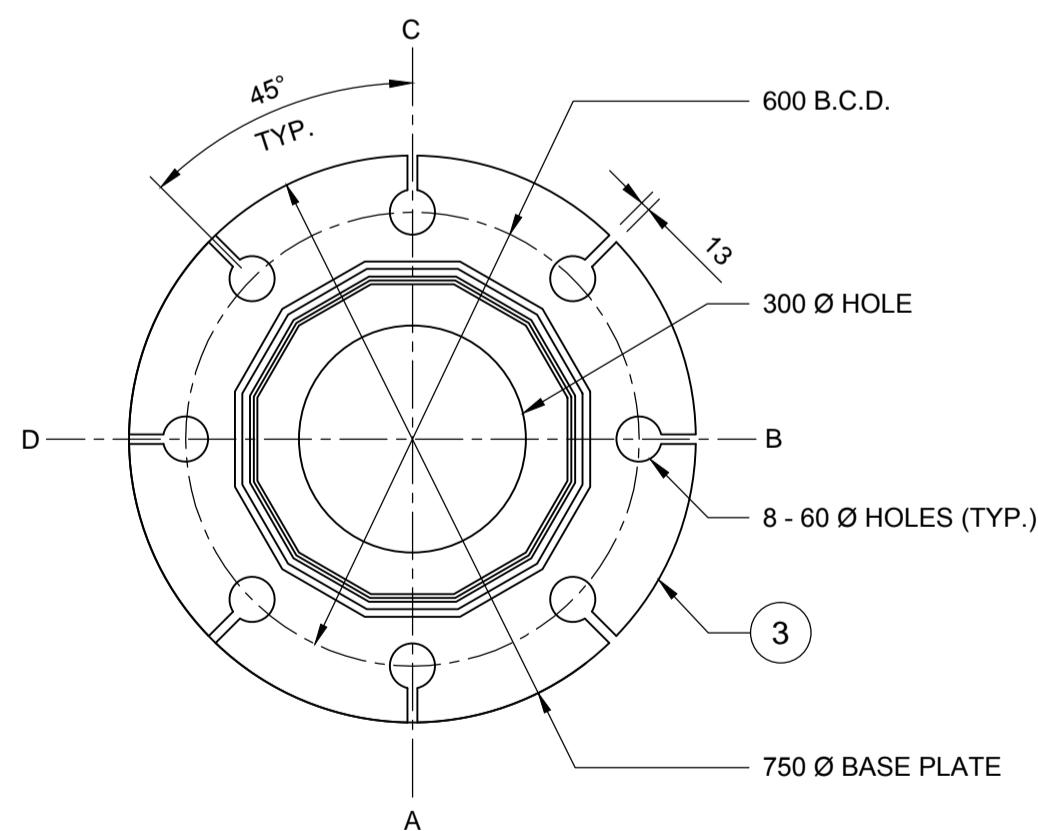
ELEVATION  
NTS



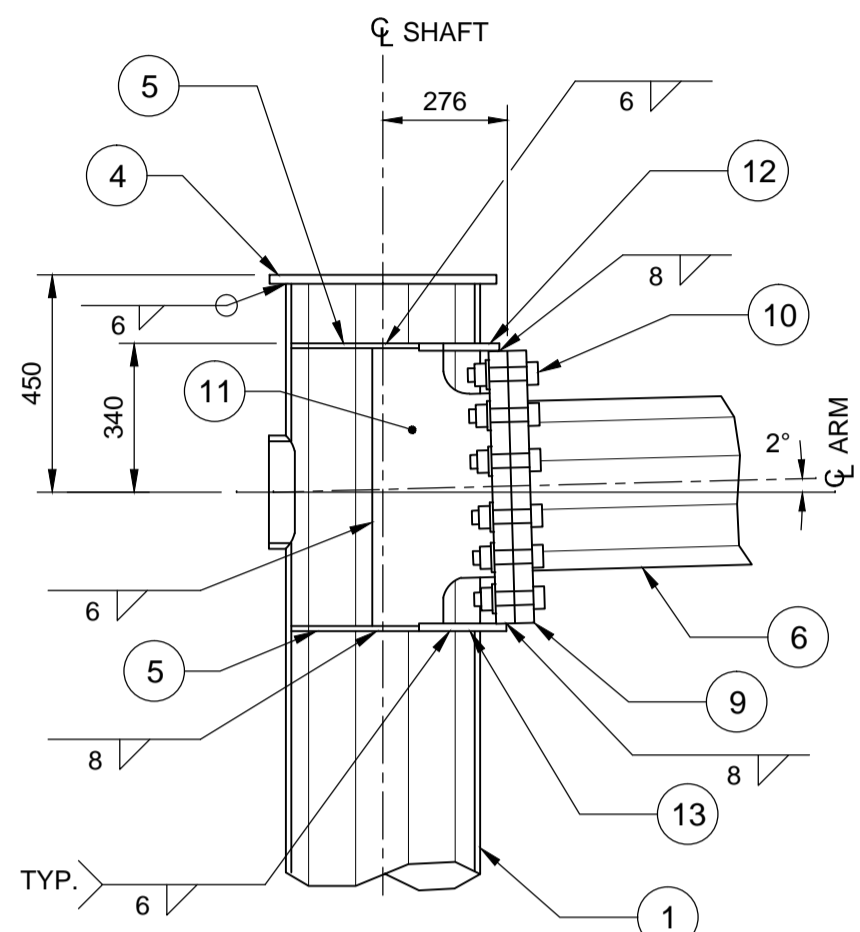
ORIENTATION  
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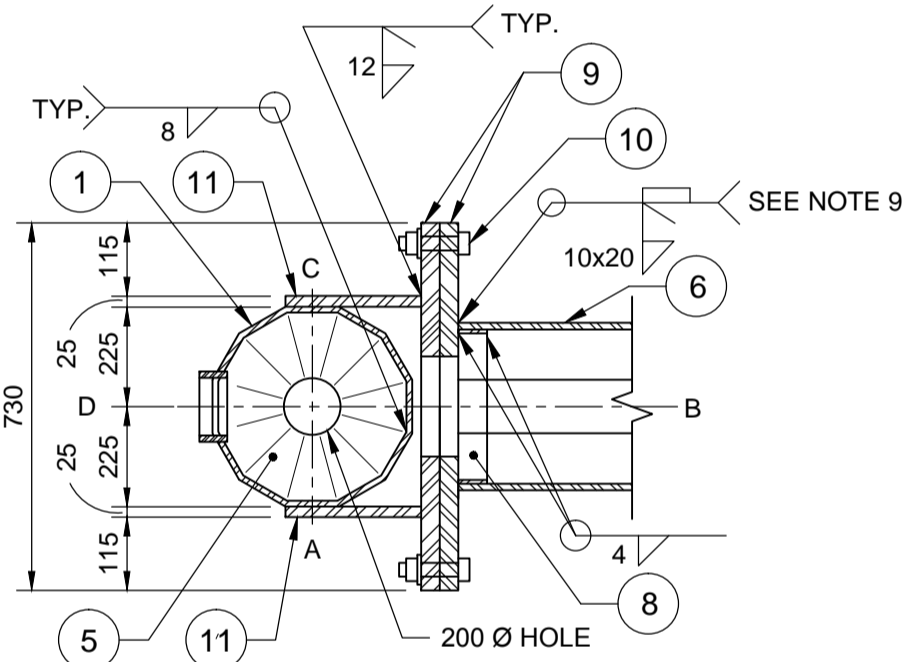
DETAIL B  
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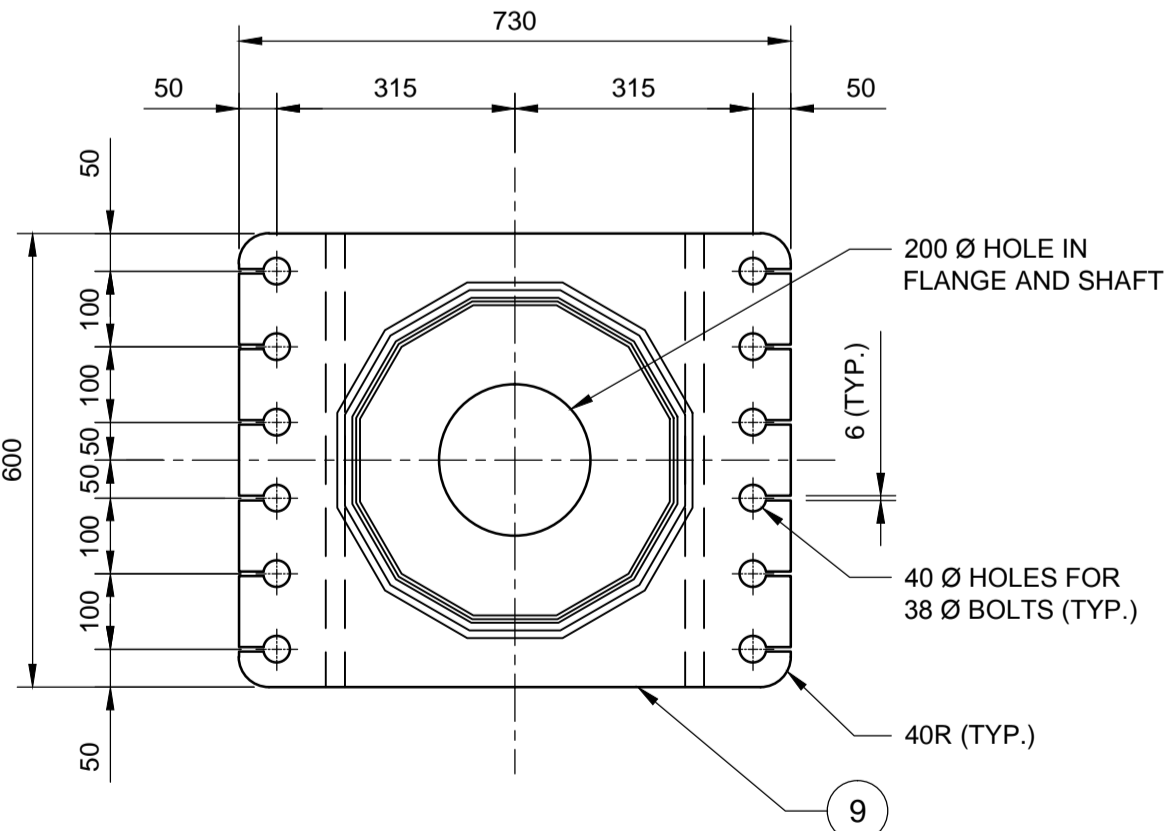
BASE PLATE DETAIL  
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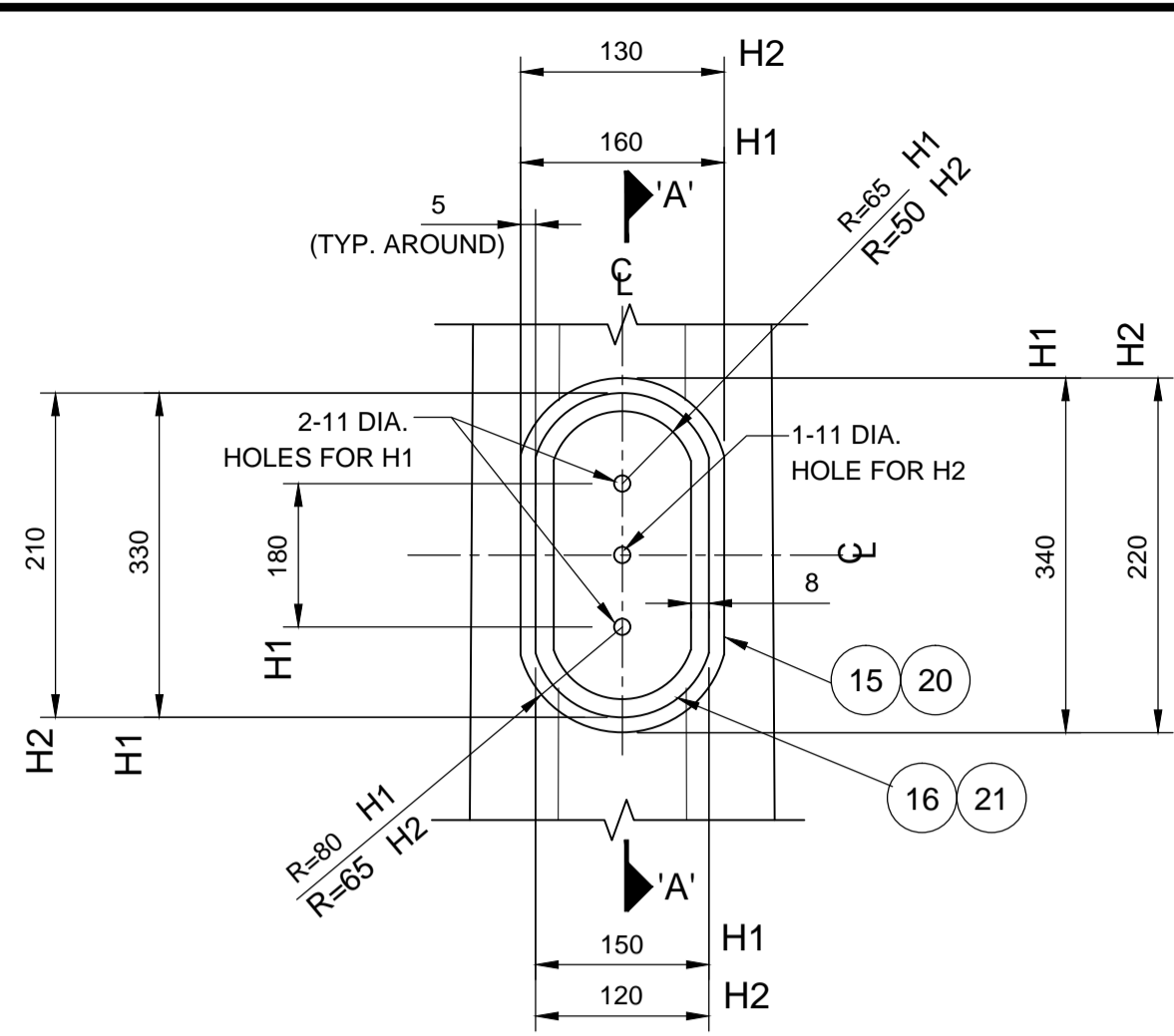
DETAIL A  
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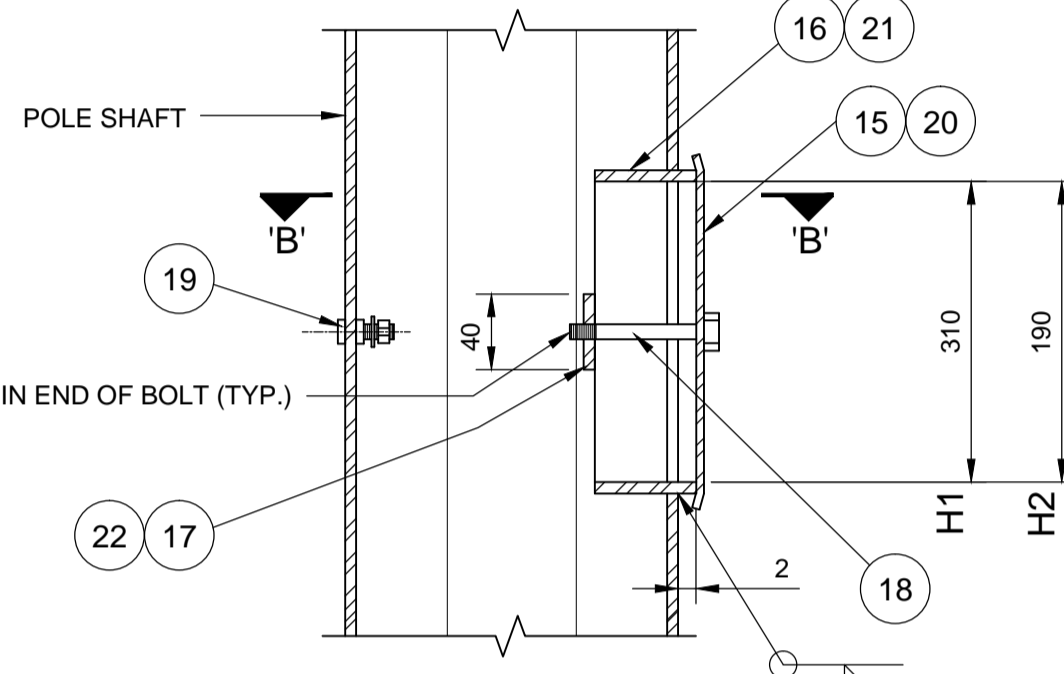
SECTION 1  
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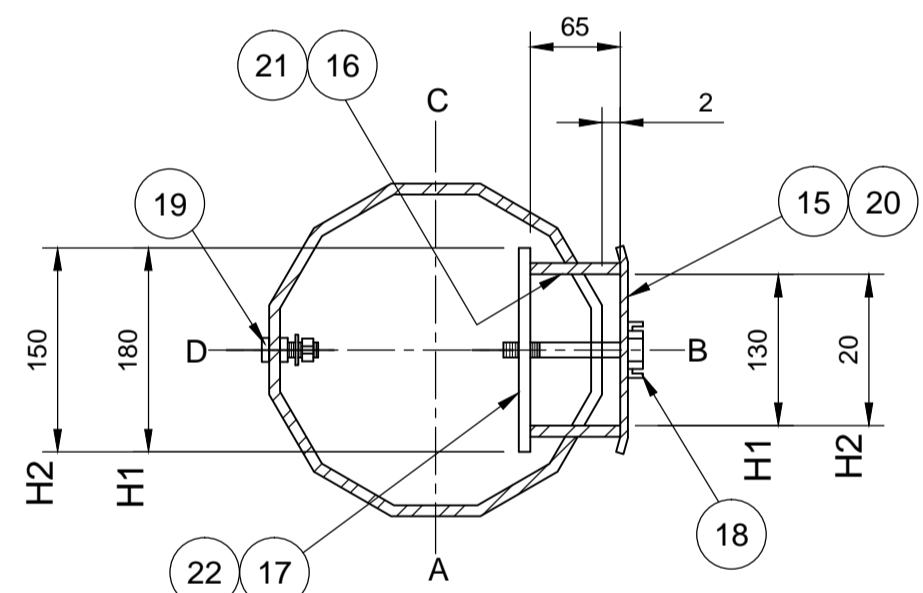
FLANGE PLATE DETAIL  
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FRONT ELEVATION  
NTS

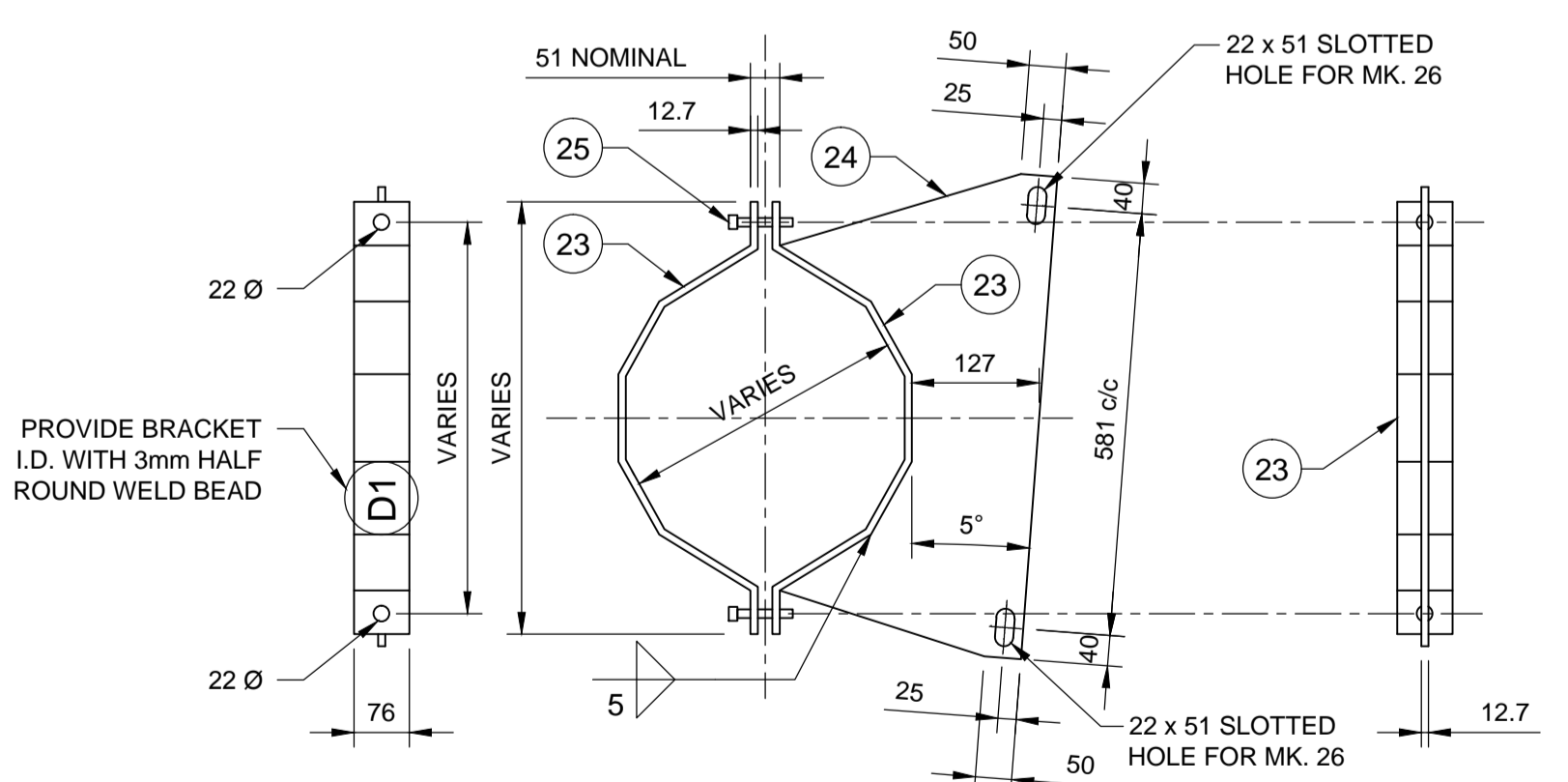


SECTION 'A-A'  
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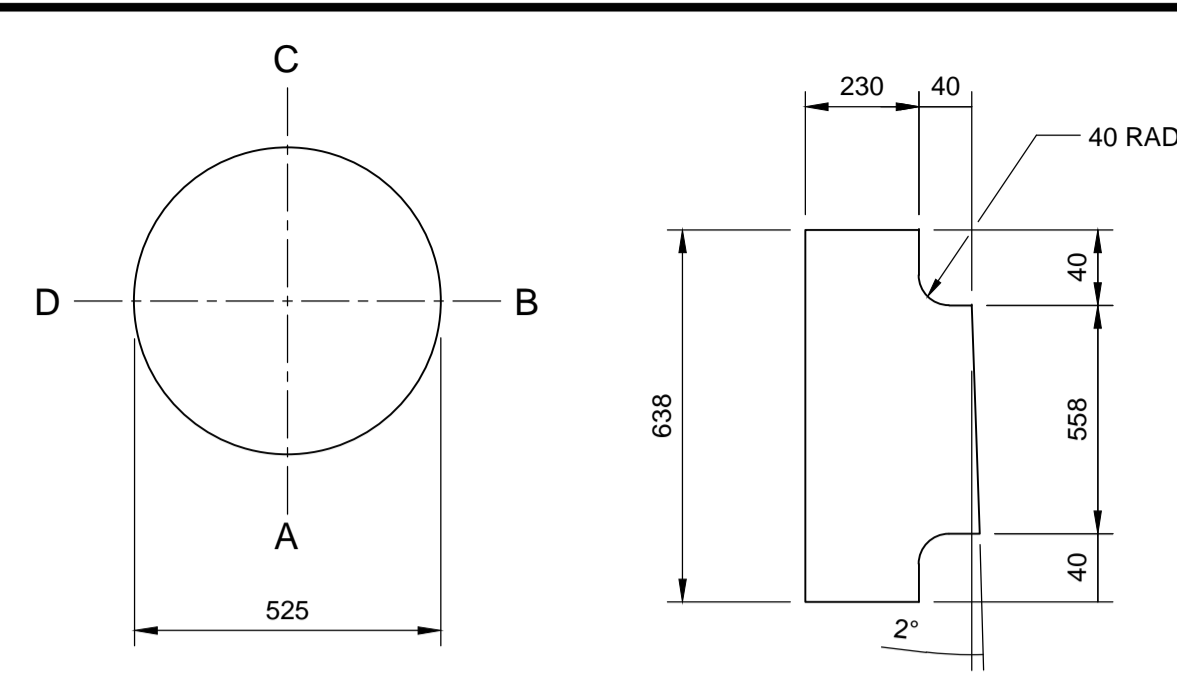


SECTION 'B-B'  
NTS

HANDHOLE - MARK H1 & H2  
NTS

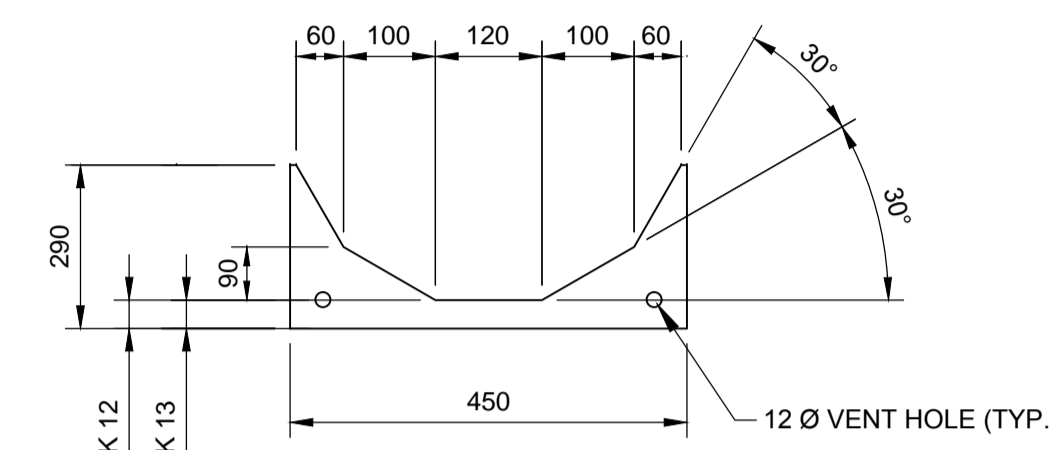


SIGN MOUNTING BRACKET DETAIL  
NTS

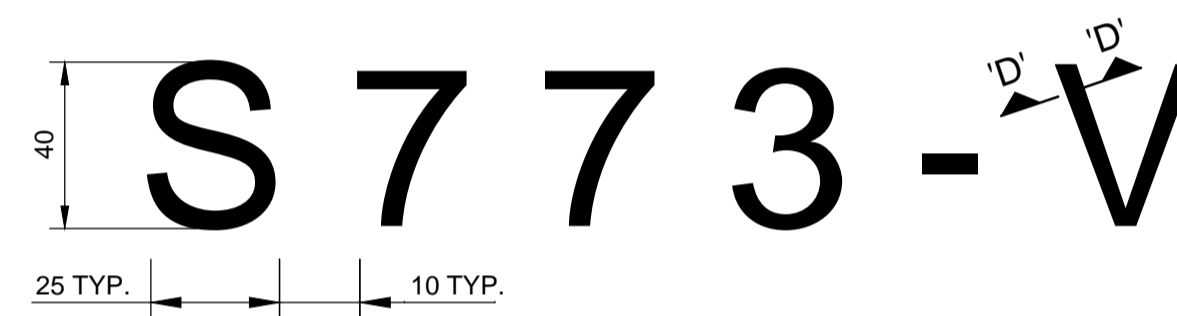


TOP PLATE - MARK 4  
NTS

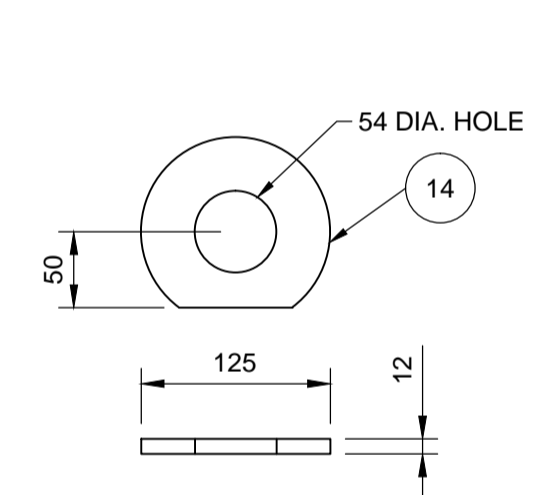
PLATE - MARK 11  
NTS



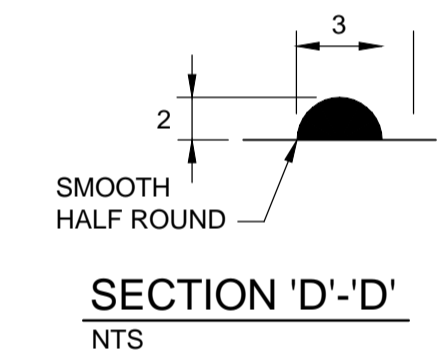
GUSSET PLATE - MARK 12 & 13  
NTS



STRUCTURE IDENTIFICATION NUMBER SIZE  
NTS



WASHER DETAIL  
NTS



SECTION 'D-D'  
NTS

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 gm<sup>2</sup>.
- ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED WITH SPRAY-ON COATING CALLED 'ZINGA'.
- SIGNS
  - 1 SIGN PANEL, MAXIMUM SIZE 3658 x 2134 mm. SUPPLIED AND INSTALLED BY THE CITY OF WINNIPEG TRAFFIC SERVICES BRANCH.
- 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.

BILL OF MATERIALS

MK.	QTY.	DESCRIPTION
1	1	DODECAGONAL SHAFT 450 A/F x 9.525 THICK PLATE
2	1	BACK-UP STRIP 40 x 4.763
3	1	BASE PLATE 750 DIA. x 51 THICK
4	1	TOP PLATE 12 THICK
5	2	DODECAGONAL GUSSET PLATE 12 THICK
6	1	DODECAGONAL ARM 400 A/F TO 200 A/F x 9.525 THICK PLATE
7	1	DODECAGONAL END PLATE 200 A/F x 4.763 THICK
8	1	BACK-UP STRIP 40 x 4.763
9	2	FLANGE PLATE 51 THICK
10	12	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	16	PLATE WASHER 12 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 12 x 76 (LENGTH TO SUIT)
24	1	BRACKET PLATE 12 THICK
25	2	19 DIA. BOLT C/W NUT & 2 WASHERS (ASTM A325)
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

- \* 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.

**APEGM**  
Certificate of Authorization  
Dillon Consulting Limited (MB)  
No. 1789 Date: 2013/08/08

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.
  - A MINIMUM VERTICAL SEPARATION OF 300 mm FROM GAS MAINS AND 100 mm FROM GAS SERVICE MUST BE MAINTAINED BETWEEN ANY MANITOBA HYDRO FACILITY AND ANY NEW INSTALLATIONS.
  - A MINIMUM 900 mm OF COVER SHALL BE MAINTAINED IN ALL AREAS WHERE EQUIPMENT WILL BE CROSSING, TRAVELING OR COMPACTING OVER THE HIGH PRESSURE GAS MAINS.
  - IF EQUIPMENT MUST CROSS, TRAVEL, OR COMPACT OVER THE GAS MAIN WITH LESS THAN THE MINIMUM DEPTH COVER, EARTH BRIDGING OR STEEL PLATES SHALL BE PLACED OVER THE MAIN AND EXTEND A MINIMUM OF 1.0 METRE ON EITHER SIDE AT EACH CROSSING LOCATION.

C:\CAD\126606\Contract\_2\Current\126606-CONTRACT\_2-0HSS-120.dwg

150 WM	WATERMAIN	150 WM	M.T.S.	M.T.S.	150 mm W.M.	WATERMAIN	150 mm W.M.
+	HYDRANT VALVE	+		+	+	HYDRANT VALVE	+
300 LDS	LAND DRAINAGE SEWER	300 LDS		300 mm L.D.S.	+	LAND DRAINAGE SEWER	300 mm L.D.S.
250 WWS	WASTE WATER SEWER	250 WWS		250 mm W.W.S.	+	WASTE WATER SEWER	250 mm W.W.S.
○	MANHOLE	●		○	○	MANHOLE	○
○	CATCH BASIN	■		○	○	CATCH BASIN	○
○	TEST HOLES	⊕		○	○	TEST HOLES	○
+	JUNCTIONS	+		+	+	JUNCTIONS	+
+	CULVERT	+		+	+	CULVERT	+
100 GAS	GAS	100 GAS		100 GAS	100 GAS	GAS	100 GAS
EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PLAN	PROPOSED	EXISTING	LEGEND-PROFILE

UNDERGROUND STRUCTURES  
DATE  
SUPV. U/G STRUCTURES COMMITTEE

NOTE:  
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 WITH CONSTRUCTION.

B.M.	654008	N: 5515764.610	E: 633359.697	654210	N: 5514436.957	E: 630550.534
ELEV.	232.463 m					

DESIGNED BY	CDW
DRAWN BY	LFY
CHECKED BY	SSR
APPROVED BY	DPK
HOR. SCALE	AS NOTED
VERTICAL	AS NOTED

DESIGN TEAM  
**DILLON CONSULTING**

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
C.D. WARD  
Member  
24456  
REGISTERED PROFESSIONAL ENGINEER

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT

Waverley West Arterial Roads Project (WWARP) PART 3 - CONTRACT 2  
ROUTE 90 TO ROUTE 165 OVERPASS (KENASTON BLVD.) AND ASSOCIATED WORKS

CITY DRAWING NUMBER  
B242-13-121

SHEET  
121 OF 128

CONSULTANT DRAWING NUMBER  
S773-2013-02

CONSULTANT PROJECT NUMBER  
12-6606

S773 - FABRICATION DETAILS