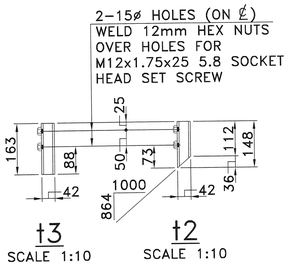
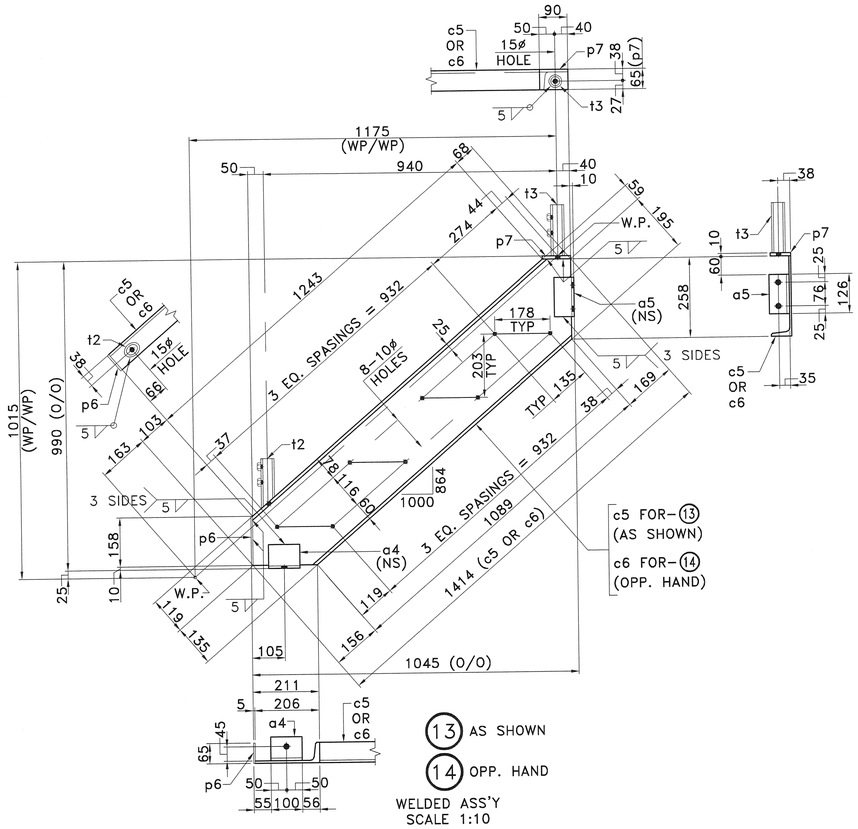


D3
SCALE 1:10



t3
SCALE 1:10

t2
SCALE 1:10



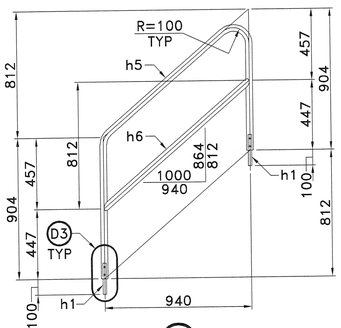
13 AS SHOWN

14 OPP. HAND

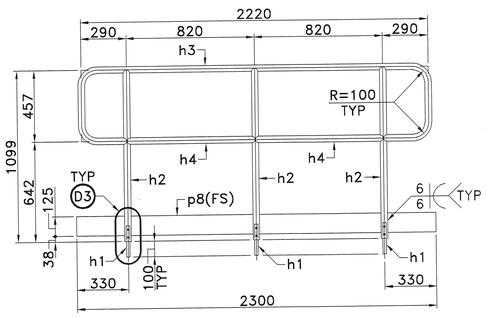
WELDED ASS'Y
SCALE 1:10

BILL OF MATERIAL				
MARK	No. REQ'D	DESCRIPTION	REMARKS	WT. kgs
13	1	1–c5–C250 X 23 X 1414 LG. 1–a4–L76 X 76 X 6.4 X 100 LG. 1–a5–L64 X 64 X 6.4 X 126 LG. 1–p6–PL 5 X 65 X 158 LG. 1–p7–PL 10 X 65 X 90 LG. 1–t2–NPS 1¼ SCH. 40 STD. PIPE X 148 LG. C/W 2–HEX. NUTS FOR M12 X 1.75 SCREWS 1–t3–NPS 1¼ SCH. 40 STD. PIPE X 163 LG. C/W 2–HEX. NUTS FOR M12 X 1.75 SCREWS	WELDED ASS'Y	35.9
14	1	OPP. HAND TO 13	WELDED ASS'Y	35.9
15	2	2–h1–NPS 1 SCH. 80 XS PIPE X 200 LG. 1–h5–NPS 1¼ SCH. 40 STD PIPE X 2902 LG. 1–h6–NPS 1¼ SCH. 40 STD PIPE X 1242 LG.	WELDED ASS'Y	30.7
16	1	3–h1–NPS 1 SCH. 80 XS PIPE X 200 LG. 3–h2–NPS 1¼ SCH. 40 STD PIPE X 1099 LG. 1–h3–NPS 1¼ SCH. 40 STD PIPE X 3714 LG. 2–h4–NPS 1¼ SCH. 40 STD PIPE X 820 LG. 1–p8–PL 6 X 125 X 2300 LG.	WELDED ASS'Y	44.8
18	2	2–h1–NPS 1 SCH. 80 XS PIPE X 200 LG. 2–h2–NPS 1¼ SCH. 40 STD PIPE X 1099 LG. 1–h9–NPS 1¼ SCH. 40 STD PIPE X 1724 LG. 1–h10–NPS 1¼ SCH. 40 STD PIPE X 250 LG. 1–p10–PL 6 X 125 X 660 LG.	WELDED ASS'Y	56.8
19	2	2–h1–NPS 1 SCH. 80 XS PIPE X 200 LG. 1–h5a–NPS 1¼ SCH. 40 STD PIPE X 4262 LG. 1–h6–NPS 1¼ SCH. 40 STD PIPE X 1242 LG.	WELDED ASS'Y	45.1
20	4	260 X 1000 LG. SERRATED GALV. GRATING TYPE 30–102, 32x4.8mm BEARING BAR C/W ABRASIVE STD NOSING, END PLATES AND EXTRA GRIP ON BEARING BAR	BY FISHER & LUDLOW	45.0
21	1	1171 X 2344 LG. SERRATED GALV. GRATING TYPE 30–102 , 32x4.8mm BEARING BAR C/W ABRASIVE STD NOSING AND EXTRA GRIP ON BEARING BAR	BY FISHER & LUDLOW	118.9
22	1	1141 X 2288 LG. SERRATED GALV. GRATING TYPE 30–102 , 32x4.8mm BEARING BAR C/W EXTRA GRIP ON BEARING BAR	BY FISHER & LUDLOW	113.0
23	2	L 127 X 89 X 13 X 120 LG.		4.9
24	2	PL 10 X 120 X 340 LG.	BENT	6.4
	2	⅝"ø KWIK BOLT 3 EXP. HILTI ANCH. SET W/MIN. EMB. 102mm		
	16	⅜"ø BOLTS X 1½" LG. C/W HEX. NUTS		
	16	LOCK WASHERS FOR ⅜"ø BOLTS		
	8	M12x1.75 BOLTS X 25LG. (NO NUTS)		
		EST. WT. OF STEEL INCL. 3.5 % GALV.		= 556 kg

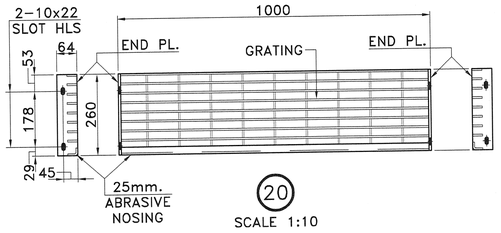
ALL BOLTS SHALL BE SUPPLIED BY STEEL MANUFACTURER
BOM FOR REFERENCE ONLY



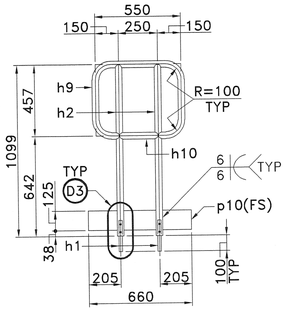
15
WELDED ASS'Y



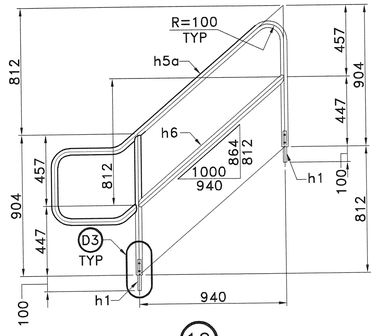
16
WELDED ASS'Y



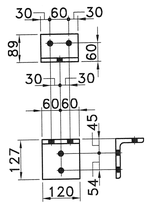
20
SCALE 1:10



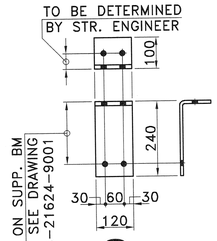
18
WELDED ASS'Y



19
WELDED ASS'Y



23
SCALE 1:10



24
SCALE 1:10

GENERAL NOTES:

REFER TO DWG. F1731664–200–S005

REFERENCE DRAWINGS:

1. 115/ 13.8kV STATION
   STEEL KEY PLAN & LIST
   STRUCTURE F1731664–200–S001
2. 115/13.8kV STATION
   ELEVATIONS
   ELECTRICAL ARRANGEMENT F1731664–300–EA009
3. 115/13.8kV STATION
   MAIN GROUNDING GRID
   PLAN & DETAILS
   ELECTRICAL ARRANGEMENT F1731664–300–EA014

THIS DRAWING MUST BE READ IN CONJUNCTION WITH:
- F1731664–200–S010
- F1731664–200–S011

LEGEND:

T.O.C.: TOP OF CONCRETE
T.O.S.: TOP OF STEEL
L.L.V.: LONG LEG VERTICAL
INSUL.: INSULATOR

PROFESSIONALS:

NO	DATE	TRANSMISSION	BY ENG
00	2018/09/27	RELEASED FOR CONSTRUCTION	SYW

SMi THE S.M. GROUP INTERNATIONAL INC.
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STAMP:

LICENSED PROFESSIONAL ENGINEER
S.Y. WANG
100139367
2018/09/27
PROVINCE OF ONTARIO

CLIENT:

PROJECT:

MCMASTER UNIVERSITY–NF91

TITLE:

115/13.8kV AREA
STEEL STAIRS & PLATF. AT FRONT DR FOR E–HOUSE BLDG (1.0m ABOVE GRADE)
STEEL DETAILS, STRUCTURE

PREPARED BY: S.Y. WANG	DATE: 2018/09/27
DRAWN BY: D. LECONTE–CHEVALIER	SCALE: AS SHOWN
VERIFIED BY: Z.WANG	DISCIPLINE: STRUCTURE
APPROVED BY: S.Y.WANG	CAD FILE NAME: F1731664–200–S012.dwg

PROJECT No.	LOT	DWG. #	REV:	PAGE:
F1731664	200	S012	00	

A1