

Name of work - “Erection, Testing, Commissioning, Trial Operation of Balance Work of FGD Unit#1, Unit#2 and FGD Common Systems and its auxiliaries including Lining & Insulation, Supply of Paints and Touch-up Painting, Collection of Materials From BHEL/ Client’s Stores/ Storage Yard, transportation at Site and Handing over of the Packages to Customer at 3x800 MW PVUNL Project Patratu, Jharkhand, India”.

A) Some of the Bidders sought clarifications in regard to the published tender specification. The clarifications issued by BHEL are as below;

Sl. No.	Bidder’s Query	BHEL’s Clarification
1	Please share Drawing of FGD mechanical at Patratu, PVUNL PROJECT regarding Balance work of FGD Unit 1, Unit 2.	GA drawings of the Absorbers, attached as Annexure -A are issued for reference purpose. Bidders are requested to visit the site to assess the quantum of work.

B) Annexure -9 - DECLARATION REGARDING MINIMUM LOCAL CONTENT of Notice for Inviting Tender (NIT) has been revised and attached herewith as Annexure -B.

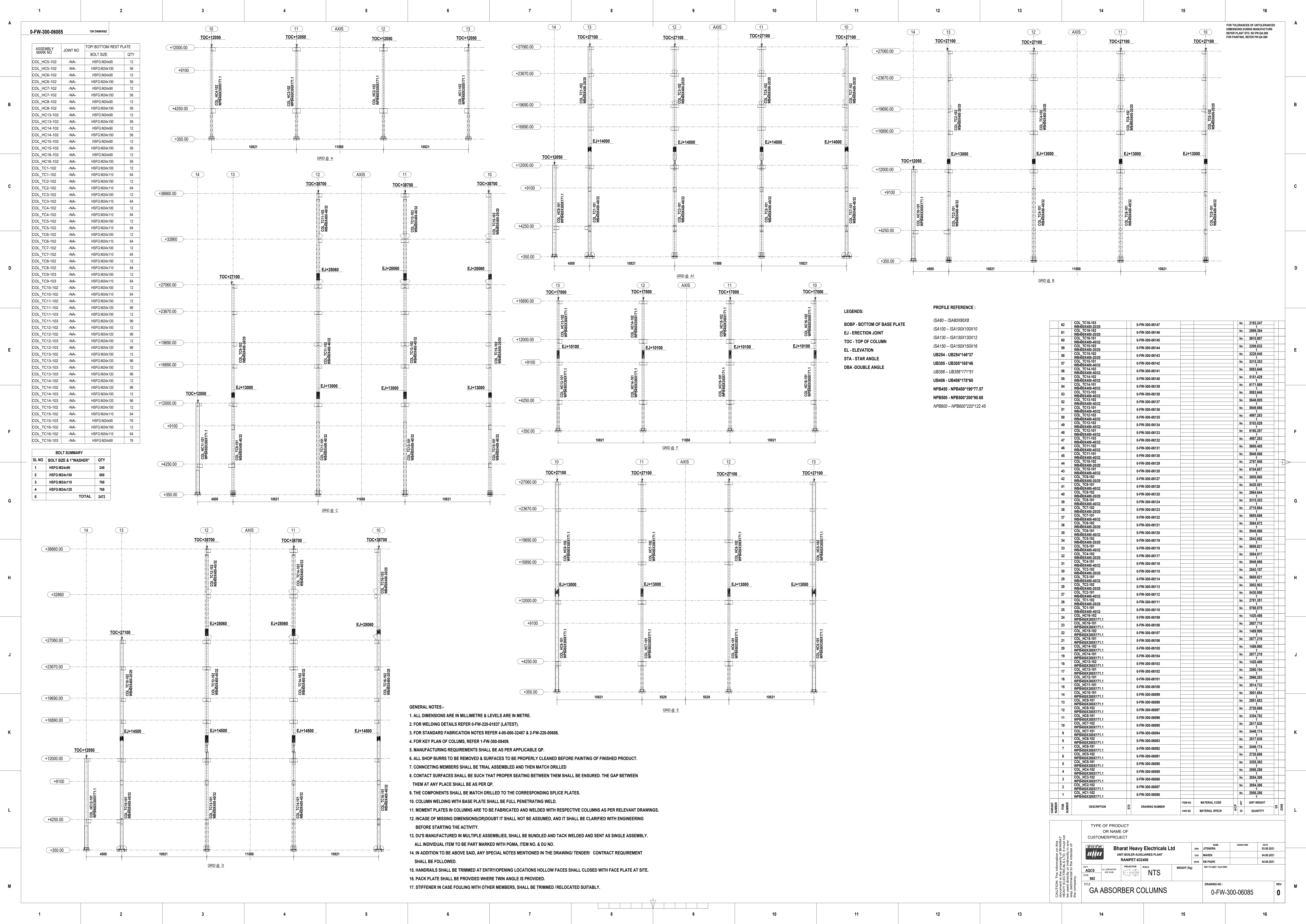
Note:

- 1) All other terms and conditions against this NIT shall remain unchanged.
- 2) This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part- I).

**for BHARAT HEAVY ELECTRICALS LTD
Manager/ SCT- CPC**

ANNEXURE – A

GA Drawings



O-FW-300-06085			
ASSEMBLY MARK NO	JOINT NO	TOP/BOTTOM REST PLATE BOLT SIZE	QTY
COL_HCS-102	-NA-	HSFG M24x90	12
COL_HCS-102	-NA-	HSFG M24x100	56
COL_HCS-102	-NA-	HSFG M24x90	12
COL_HC6-102	-NA-	HSFG M24x100	56
COL_HC7-102	-NA-	HSFG M24x90	12
COL_HC7-102	-NA-	HSFG M24x100	56
COL_HC8-102	-NA-	HSFG M24x90	12
COL_HC8-102	-NA-	HSFG M24x100	56
COL_HC13-102	-NA-	HSFG M24x90	12
COL_HC13-102	-NA-	HSFG M24x100	56
COL_HC14-102	-NA-	HSFG M24x90	12
COL_HC14-102	-NA-	HSFG M24x100	56
COL_HC15-102	-NA-	HSFG M24x90	12
COL_HC15-102	-NA-	HSFG M24x100	56
COL_HC16-102	-NA-	HSFG M24x90	12
COL_HC16-102	-NA-	HSFG M24x100	56
COL_TC1-102	-NA-	HSFG M24x100	12
COL_TC1-102	-NA-	HSFG M24x110	64
COL_TC2-102	-NA-	HSFG M24x100	12
COL_TC2-102	-NA-	HSFG M24x110	64
COL_TC3-102	-NA-	HSFG M24x100	12
COL_TC3-102	-NA-	HSFG M24x110	64
COL_TC4-102	-NA-	HSFG M24x100	12
COL_TC4-102	-NA-	HSFG M24x110	64
COL_TC5-102	-NA-	HSFG M24x100	12
COL_TC5-102	-NA-	HSFG M24x110	64
COL_TC6-102	-NA-	HSFG M24x100	12
COL_TC6-102	-NA-	HSFG M24x110	64
COL_TC7-102	-NA-	HSFG M24x100	12
COL_TC7-102	-NA-	HSFG M24x110	64
COL_TC8-102	-NA-	HSFG M24x100	12
COL_TC8-102	-NA-	HSFG M24x110	64
COL_TC9-103	-NA-	HSFG M24x100	12
COL_TC9-103	-NA-	HSFG M24x110	64
COL_TC10-102	-NA-	HSFG M24x100	12
COL_TC10-102	-NA-	HSFG M24x110	64
COL_TC11-102	-NA-	HSFG M24x100	12
COL_TC11-102	-NA-	HSFG M24x120	96
COL_TC11-103	-NA-	HSFG M24x100	12
COL_TC11-103	-NA-	HSFG M24x120	96
COL_TC12-102	-NA-	HSFG M24x100	12
COL_TC12-102	-NA-	HSFG M24x120	96
COL_TC12-103	-NA-	HSFG M24x100	12
COL_TC12-103	-NA-	HSFG M24x120	96
COL_TC13-102	-NA-	HSFG M24x100	12
COL_TC13-102	-NA-	HSFG M24x120	96
COL_TC13-103	-NA-	HSFG M24x100	12
COL_TC13-103	-NA-	HSFG M24x120	96
COL_TC14-102	-NA-	HSFG M24x100	12
COL_TC14-102	-NA-	HSFG M24x120	96
COL_TC14-103	-NA-	HSFG M24x100	12
COL_TC14-103	-NA-	HSFG M24x120	96
COL_TC15-102	-NA-	HSFG M24x100	12
COL_TC15-102	-NA-	HSFG M24x110	64
COL_TC15-103	-NA-	HSFG M24x90	76
COL_TC16-102	-NA-	HSFG M24x100	12
COL_TC16-102	-NA-	HSFG M24x110	64
COL_TC16-103	-NA-	HSFG M24x90	76

BOLT SUMMARY		
SL NO	BOLT SIZE & "WASHER"	QTY
1	HSFG M24x90	248
2	HSFG M24x100	688
3	HSFG M24x110	768
4	HSFG M24x120	768
5	TOTAL	2472

- GENERAL NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRE & LEVELS ARE IN METRE.
 2. FOR WELDING DETAILS REFER O-FW-220-01837 (LATEST).
 3. FOR STANDARD FABRICATION NOTES REFER 4-00-000-32487 & 2-FW-220-00686.
 4. FOR KEY PLAN OF COLUMNS, REFER 1-FW-300-08409.
 5. MANUFACTURING REQUIREMENTS SHALL BE AS PER APPLICABLE QP.
 6. ALL SHOP BURRS TO BE REMOVED & SURFACES TO BE PROPERLY CLEANED BEFORE PAINTING OF FINISHED PRODUCT.
 7. CONNECTING MEMBERS SHALL BE TRIAL ASSEMBLED AND THEN MATCH DRILLED
 8. CONTACT SURFACES SHALL BE SUCH THAT PROPER SEATING BETWEEN THEM SHALL BE ENSURED. THE GAP BETWEEN THEM AT ANY PLACE SHALL BE AS PER QP.
 9. THE COMPONENTS SHALL BE MATCH DRILLED TO THE CORRESPONDING SPICE PLATES.
 10. COLUMN WELDING WITH BASE PLATE SHALL BE FULL PENETRATING WELD.
 11. MOMENT PLATES IN COLUMNS ARE TO BE FABRICATED AND WELDED WITH RESPECTIVE COLUMNS AS PER RELEVANT DRAWINGS.
 12. IN CASE OF MISSING DIMENSIONS/ORDOUBT IT SHALL NOT BE ASSUMED, AND IT SHALL BE CLARIFIED WITH ENGINEERING BEFORE STARTING THE ACTIVITY.
 13. D/U'S MANUFACTURED IN MULTIPLE ASSEMBLIES, SHALL BE BUNDLED AND TACK WELDED AND SENT AS SINGLE ASSEMBLY. ALL INDIVIDUAL ITEM TO BE PART MARKED WITH PGMA, ITEM NO. & DU NO.
 14. IN ADDITION TO BE ABOVE SAID, ANY SPECIAL NOTES MENTIONED IN THE DRAWING/ TENDER/ CONTRACT REQUIREMENT SHALL BE FOLLOWED.
 15. HANDRAILS SHALL BE TRIMMED AT ENTRY/OPENING LOCATIONS HOLLOW FACES SHALL CLOSED WITH FACE PLATE AT SITE.
 16. PACK PLATE SHALL BE PROVIDED WHERE TWIN ANGLE IS PROVIDED.
 17. STIFFENER IN CASE FOULING WITH OTHER MEMBERS, SHALL BE TRIMMED /RELOCATED SUITABLY.

- LEGENDS:
- BOBP - BOTTOM OF BASE PLATE
 - EJ - ERECTION JOINT
 - TOC - TOP OF COLUMN
 - EL - ELEVATION
 - STA - STAR ANGLE
 - DBA DOUBLE ANGLE
- PROFILE REFERENCE :
- ISA80 - ISA80X80X8
 - ISA100 - ISA100X100X10
 - ISA130 - ISA130X130X12
 - ISA150 - ISA150X150X16
 - UB254 - UB254*146*37
 - UB305 - UB305*165*46
 - UB356 - UB356*171*51
 - UB406 - UB406*178*60
 - NPB450 - NPB450*190*77.57
 - NPB500 - NPB500*200*90.68
 - NPB600 - NPB600*220*122.45

62	COL TC16-103	0-FW-300-06147	No	2182,247
61	COL TC16-102	0-FW-300-06146	No	2999,394
60	COL TC16-101	0-FW-300-06145	No	5919,907
59	COL TC15-103	0-FW-300-06144	No	2206,832
58	COL TC15-102	0-FW-300-06143	No	3228,400
57	COL TC15-101	0-FW-300-06142	No	5315,353
56	COL TC14-103	0-FW-300-06141	No	5083,646
55	COL TC14-102	0-FW-300-06140	No	5191,429
54	COL TC14-101	0-FW-300-06139	No	6171,889
53	COL TC13-103	0-FW-300-06138	No	5083,646
52	COL TC13-102	0-FW-300-06137	No	5648,805
51	COL TC13-101	0-FW-300-06136	No	5949,866
50	COL TC12-103	0-FW-300-06135	No	4987,283
49	COL TC12-102	0-FW-300-06134	No	5103,029
48	COL TC12-101	0-FW-300-06133	No	6160,287
47	COL TC11-103	0-FW-300-06132	No	4987,283
46	COL TC11-102	0-FW-300-06131	No	5600,405
45	COL TC11-101	0-FW-300-06130	No	5949,866
44	COL TC10-103	0-FW-300-06129	No	2787,958
43	COL TC10-102	0-FW-300-06128	No	6104,687
42	COL TC10-101	0-FW-300-06127	No	3005,960
41	COL TC9-103	0-FW-300-06126	No	5430,581
40	COL TC9-102	0-FW-300-06125	No	2964,644
39	COL TC9-101	0-FW-300-06124	No	5315,353
38	COL TC8-103	0-FW-300-06123	No	2718,664
37	COL TC8-102	0-FW-300-06122	No	5685,686
36	COL TC8-101	0-FW-300-06121	No	3084,872
35	COL TC7-103	0-FW-300-06120	No	5949,866
34	COL TC7-102	0-FW-300-06119	No	2842,062
33	COL TC7-101	0-FW-300-06118	No	3084,917
32	COL TC6-103	0-FW-300-06117	No	5949,866
31	COL TC6-102	0-FW-300-06116	No	2842,107
30	COL TC6-101	0-FW-300-06115	No	5600,521
29	COL TC5-103	0-FW-300-06114	No	3002,903
28	COL TC5-102	0-FW-300-06113	No	5430,586
27	COL TC5-101	0-FW-300-06112	No	2781,351
26	COL TC4-103	0-FW-300-06111	No	5768,879
25	COL TC4-102	0-FW-300-06110	No	1420,486
24	COL TC4-101	0-FW-300-06109	No	2607,716
23	COL TC3-103	0-FW-300-06108	No	1489,990
22	COL TC3-102	0-FW-300-06107	No	2817,630
21	COL TC3-101	0-FW-300-06106	No	3446,174
20	COL TC2-103	0-FW-300-06105	No	2817,630
19	COL TC2-102	0-FW-300-06104	No	3446,174
18	COL TC2-101	0-FW-300-06103	No	2728,686
17	COL TC1-103	0-FW-300-06102	No	3554,382
16	COL TC1-102	0-FW-300-06101	No	2995,296
15	COL TC1-101	0-FW-300-06100	No	3054,386
14	COL TC1-100	0-FW-300-06099	No	2954,286
13	COL TC1-100	0-FW-300-06098	No	2851,653
12	COL TC1-100	0-FW-300-06097	No	2728,686
11	COL TC1-100	0-FW-300-06096	No	3354,782
10	COL TC1-100	0-FW-300-06095	No	2817,630
9	COL TC1-100	0-FW-300-06094	No	3446,174
8	COL TC1-100	0-FW-300-06093	No	2817,630
7	COL TC1-100	0-FW-300-06092	No	3446,174
6	COL TC1-100	0-FW-300-06091	No	2728,686
5	COL TC1-100	0-FW-300-06090	No	3554,382
4	COL TC1-100	0-FW-300-06089	No	2995,296
3	COL TC1-100	0-FW-300-06088	No	3054,386
2	COL TC1-100	0-FW-300-06087	No	3054,386
1	COL TC1-100	0-FW-300-06086	No	2954,286

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

Bharat Heavy Electricals Ltd
UNIT:ROLES AUXILIARIES PLANT
RANIPET-632406

DATE: 02.08.2021
SIGNATURE: [Signature]
DATE: 04.08.2021

SCALE: NTS
WEIGHT (KG): [Blank]
REF TO: 007-013-006

TITLE: GA ABSORBER COLUMNS
DRAWING NO: O-FW-300-06085
REV: 0

0-FW-301-06282

ON DRAWING

ASSEMBLY MARK NO	JOINT NO	TOP/ BOTTOM/ REST PLATE	BOLT SIZE	QTY
HB301-101	-NA-	HSFG M24x60	72	
HB301-102	-NA-	HSFG M24x70	68	
HB301-103	-NA-	HSFG M24x80	72	
HB301-104	-NA-	HSFG M24x90	68	
HB301-105	-NA-	HSFG M24x100	72	
HB301-106	-NA-	HSFG M24x70	68	
HB301-124	-NA-	HSFG M24x70	68	
HB301-125	-NA-	HSFG M24x70	68	
HB301-126	-NA-	HSFG M24x60	16	
HB301-129	-NA-	HSFG M24x70	68	
HB301-130	-NA-	HSFG M24x70	68	
HB301-131	-NA-	HSFG M24x60	16	
HB301-133	-NA-	HSFG M24x70	68	
HB301-134	-NA-	HSFG M24x70	68	
HB301-135	-NA-	HSFG M24x60	16	
HB301-138	-NA-	HSFG M24x70	68	
HB301-139	-NA-	HSFG M24x80	20	
HB301-139	-NA-	HSFG M24x100	60	
HB301-140	-NA-	HSFG M24x60	16	
HB301-140	-NA-	HSFG M24x70	48	
HB301-160	-NA-	HSFG M24x70	68	
HB301-162	-NA-	HSFG M24x60	16	
HB301-163	-NA-	HSFG M24x60	16	
HB301-166	-NA-	HSFG M24x70	68	
HB301-167	-NA-	HSFG M24x70	68	
HB301-175	-NA-	HSFG M24x60	16	
HB301-169	-NA-	HSFG M24x60	16	
HB301-170	-NA-	HSFG M24x60	16	
HB301-171	-NA-	HSFG M24x70	68	
HB301-172	-NA-	HSFG M24x80	16	
HB301-173	-NA-	HSFG M24x60	16	
HB301-174	-NA-	HSFG M24x60	60	
HB301-178	-NA-	HSFG M24x80	20	
HB301-178	-NA-	HSFG M24x100	80	
HB301-179	-NA-	HSFG M24x60	16	
HB301-181	-NA-	HSFG M24x70	48	
HB301-181	-NA-	HSFG M24x70	24	
HB301-182	-NA-	HSFG M24x70	8	
HB301-182	-NA-	HSFG M24x70	24	
HB301-185	-NA-	HSFG M24x70	68	
HB301-310	-NA-	HSFG M24x70	20	
HB301-310	-NA-	HSFG M24x80	64	
HB301-311	-NA-	HSFG M24x60	32	
HB301-311	-NA-	HSFG M24x70	60	
HB301-312	-NA-	HSFG M24x70	20	
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HB301-313	-NA-	HSFG M24x60	32	
HB301-313	-NA-	HSFG M24x70	128	
HB301-314	-NA-	HSFG M24x70	20	
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HB301-315	-NA-	HSFG M24x70	48	
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HB301-323	-NA-	HSFG M24x60	16	
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HB301-325	-NA-	HSFG M24x60	16	
HB301-326	-NA-	HSFG M24x60	16	
HB301-328	-NA-	HSFG M24x60	16	
VB301-101	-NA-	HSFG M24x70	12	
VB301-102	-NA-	HSFG M24x70	12	
VB301-103	-NA-	HSFG M24x70	48	
VB301-104	-NA-	HSFG M24x70	48	
VB301-105	-NA-	HSFG M24x70	36	
VB301-106	-NA-	HSFG M24x70	33	
VB301-106	-NA-	HSFG M24x80	3	
VB301-107	-NA-	HSFG M24x70	24	
VB301-108	-NA-	HSFG M24x70	12	
VB301-109	-NA-	HSFG M24x70	24	
VB301-110	-NA-	HSFG M24x70	12	
VB301-111	-NA-	HSFG M24x70	12	
VB301-112	-NA-	HSFG M24x70	12	

14

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TOC+27100

HB301-137

UB356*171*51

HB301-135

UB356*171*51

TOC+27100

HB301-131

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HB301-126

UB356*171*51

TOC+27100

HB301-125

UB356*171*51

HB301-124

UB356*171*51

TOC+27100

HB301-137

UB356*171*51

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TOC+27100

HB301-131

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UB356*171*51

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HB301-131

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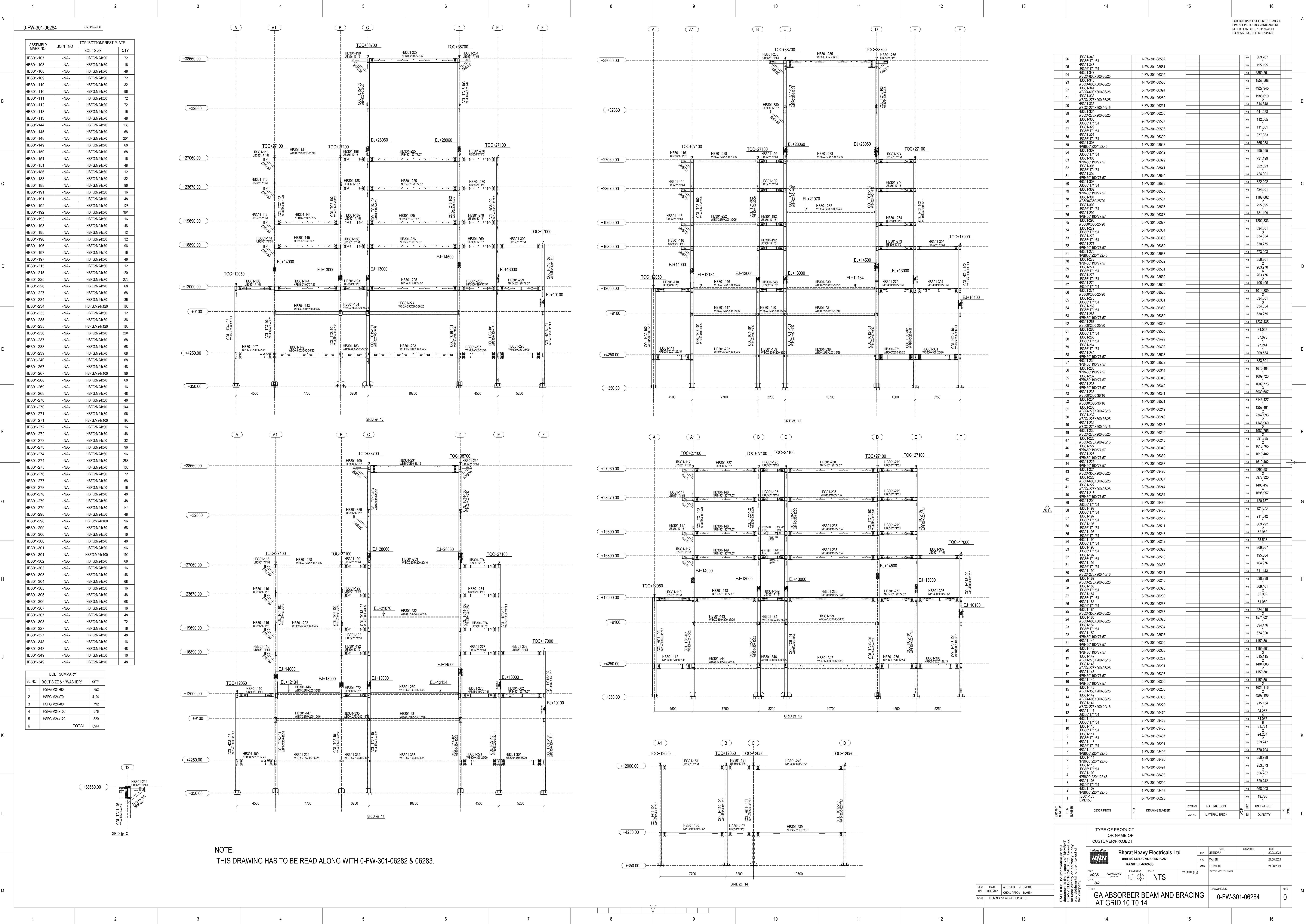
HB301-137

UB356*171*51

HB301-135

UB356

[illegible]



NOTE:
THIS DRAWING HAS TO BE READ ALONG WITH O-FW-301-06282 & 06283.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		ITEM NO	MATERIAL CODE	UNIT WEIGHT	QTY	ZONE
Bharat Heavy Electricals Ltd UNIT: RAJASTHAN PLANT RAJAPET-632406						
REV	DATE	ALTERED	JTENDRA			
01	30.08.2021	CHD & APPD	MAHEND			
ZONE	ITEM NO. 38	WEIGHT	UPDATED			
CAUTION: The information on this drawing is for reference only. It is not to be used for manufacturing or construction without the approval of the design engineer.		DRAWING NO		REV		
GA ABSORBER BEAM AND BRACING AT GRID 10 TO 14		O-FW-301-06284		0		

ASSEMBLY MARK NO	JOINT NO	TOP/BOTTOM REST PLATE	BOLT SIZE	QTY
FB302-101	-NA-	HSFG M20x45	12	
FB302-102	-NA-	HSFG M20x45	24	
FB302-125	-NA-	HSFG M20x45	64	
FB302-126	-NA-	HSFG M24x70	28	
FB302-127	-NA-	HSFG M24x70	28	
FB302-128	-NA-	HSFG M24x70	28	
FB302-130	-NA-	HSFG M20x45	8	
FB302-131	-NA-	HSFG M20x45	12	
FB302-132	-NA-	HSFG M24x60	6	
FB302-133	-NA-	HSFG M24x60	4	
FB302-134	-NA-	HSFG M20x50	24	
FB302-135	-NA-	HSFG M20x50	12	
FB302-137	-NA-	HSFG M20x50	24	
FB302-138	-NA-	HSFG M20x50	12	
FB302-139	-NA-	HSFG M24x60	4	
FB302-140	-NA-	HSFG M24x60	12	
FB302-141	-NA-	HSFG M20x45	4	
FB302-149	-NA-	HSFG M24x60	4	
HB302-101	-NA-	HSFG M24x60	6	
HB302-101	-NA-	HSFG M24x60	6	
HB302-102	-NA-	HSFG M24x60	6	
HB302-102	-NA-	HSFG M24x70	6	
HB302-103	-NA-	HSFG M24x60	6	
HB302-103	-NA-	HSFG M24x70	6	
HB302-104	-NA-	HSFG M24x60	6	
HB302-104	-NA-	HSFG M24x70	6	
HB302-105	-NA-	HSFG M24x60	6	
HB302-105	-NA-	HSFG M24x70	6	
HB302-106	-NA-	HSFG M24x60	6	
HB302-106	-NA-	HSFG M24x70	6	
HB302-107	-NA-	HSFG M24x70	12	
HB302-108	-NA-	HSFG M24x70	12	
HB302-109	-NA-	HSFG M24x70	12	
HB302-110	-NA-	HSFG M24x70	12	
HB302-111	-NA-	HSFG M24x70	12	
HB302-112	-NA-	HSFG M24x70	12	
HB302-113	-NA-	HSFG M24x70	12	
HB302-114	-NA-	HSFG M24x70	12	
HB302-115	-NA-	HSFG M24x60	6	
HB302-115	-NA-	HSFG M24x70	6	
HB302-116	-NA-	HSFG M24x70	12	
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HB302-124	-NA-	HSFG M24x60	6	
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HB302-138	-NA-	HSFG M24x60	6	
HB302-138	-NA-	HSFG M24x70	6	
HB302-139	-NA-	HSFG M24x60	6	
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HB302-141	-NA-	HSFG M24x60	6	
HB302-141	-NA-	HSFG M24x70	6	
HB302-142	-NA-	HSFG M24x60	6	
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HB302-143	-NA-	HSFG M24x60	12	
HB302-143	-NA-	HSFG M24x70	12	
HB302-144	-NA-	HSFG M24x60	12	
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HB302-147	-NA-	HSFG M24x60	12	
HB302-148	-NA-	HSFG M24x60	12	
HB302-149	-NA-	HSFG M24x60	12	
HB302-150	-NA-	HSFG M24x60	12	
HB302-151	-NA-	HSFG M24x60	12	
HB302-152	-NA-	HSFG M24x60	12	
HB302-153	-NA-	HSFG M24x60	12	
HB302-154	-NA-	HSFG M24x60	12	
HB302-155	-NA-	HSFG M24x60	12	
HB302-156	-NA-	HSFG M24x60	6	
HB302-156	-NA-	HSFG M24x70	6	
HB302-157	-NA-	HSFG M24x60	6	
HB302-158	-NA-	HSFG M24x60	6	
HB302-158	-NA-	HSFG M24x70	6	

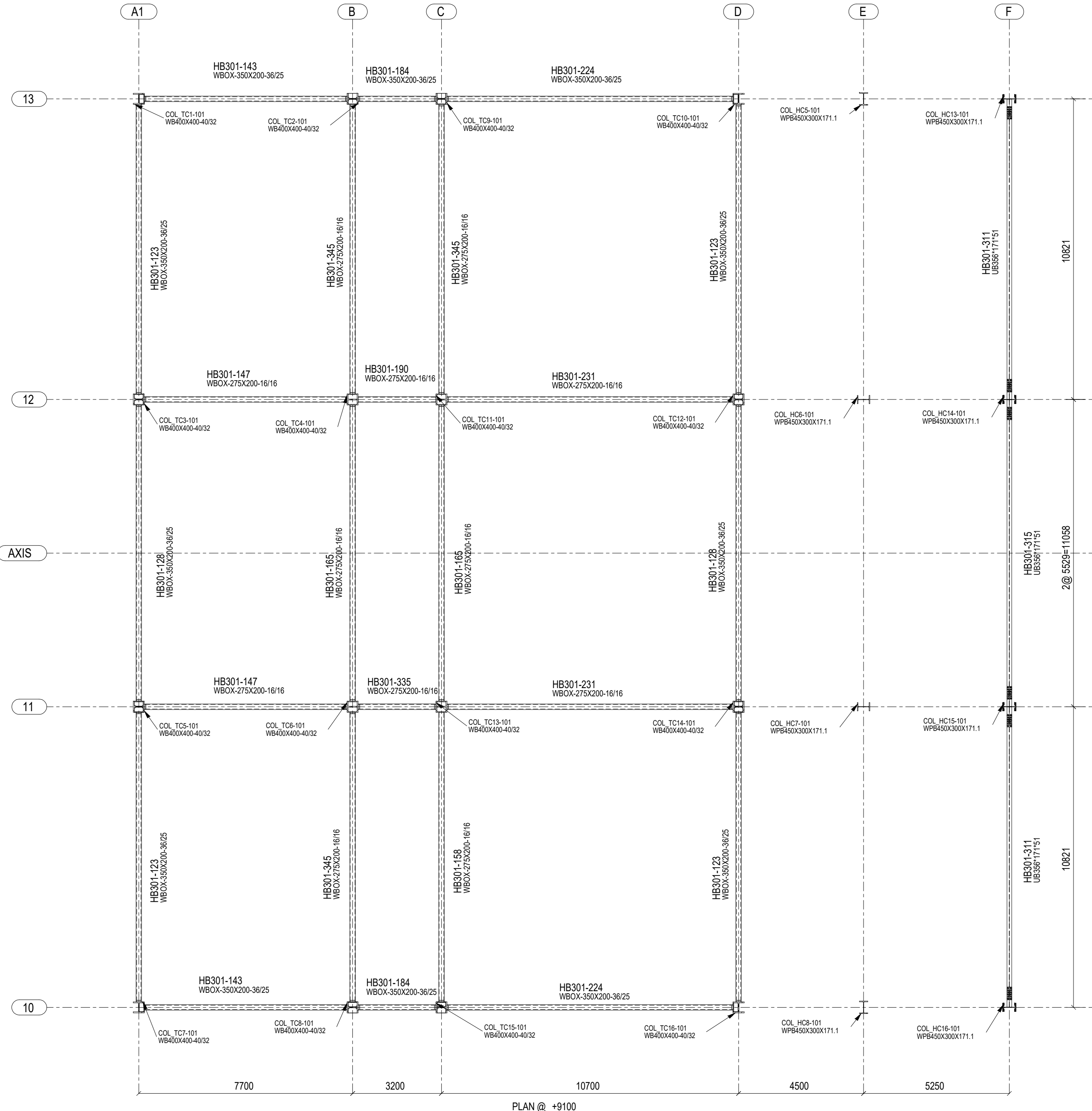
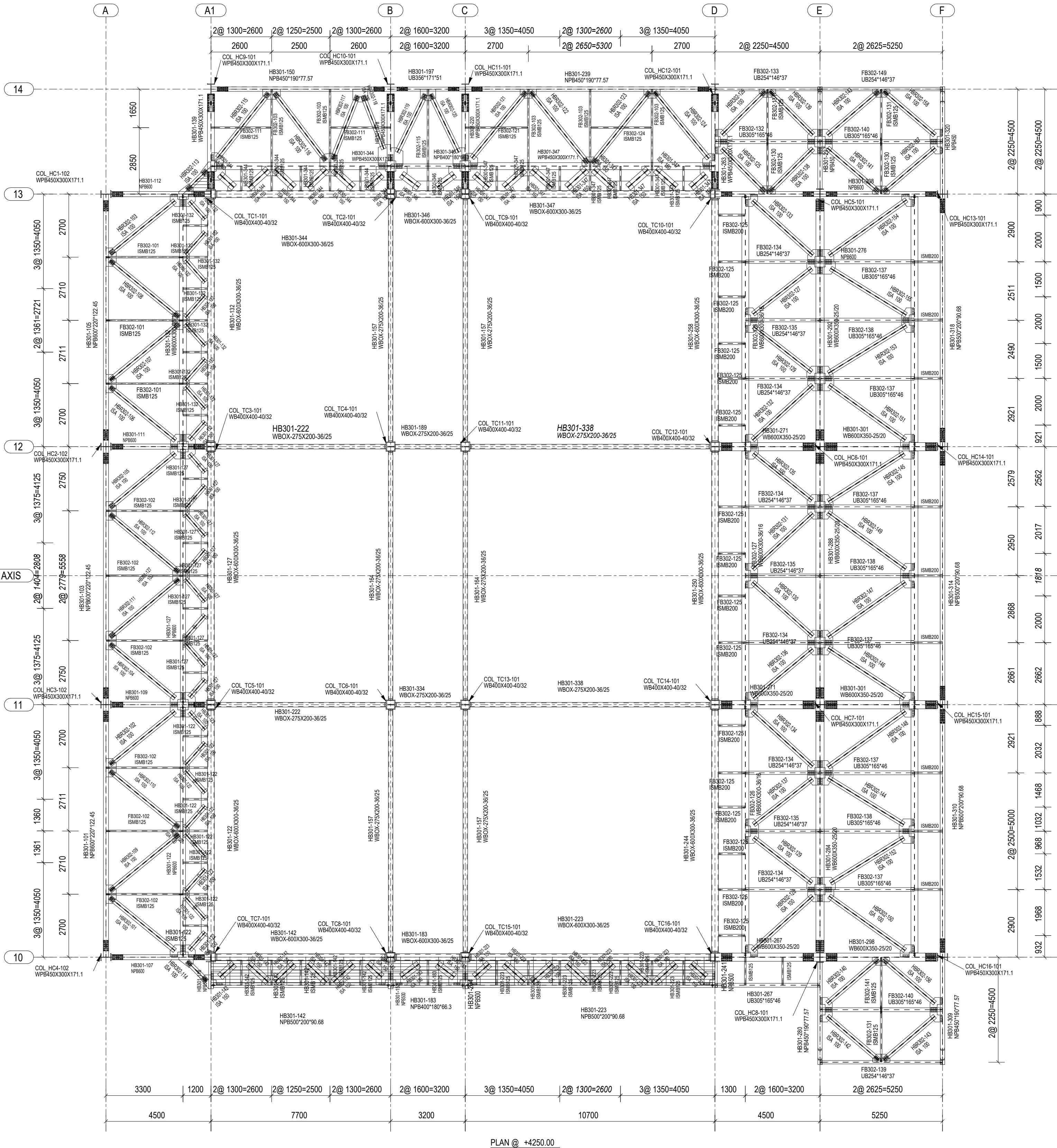
SL NO	BOLT SUMMARY	QTY
1	HSFG M20x45	134
2	HSFG M20x50	72
3	HSFG M24x60	462
4	HSFG M24x70	372
5	TOTAL	1030

LEGENDS:
BOBP - BOTTOM OF BASE PLATE
EJ - ERECTION JOINT
TOC - TOP OF COLUMN
EL - ELEVATION
STA - STAR ANGLE
DBA - DOUBLE ANGLE

PROFILE REFERENCE:
ISA80 - ISA80X80X8
ISA100 - ISA100X100X10
ISA130 - ISA130X130X12
ISA150 - ISA150X150X16
UB254 - UB254*146*37
UB305 - UB305*165*46
UB356 - UB356*171*51
UB406 - UB406*179*60
NPB450 - NPB450*190*77.57
NPB500 - NPB500*200*90.68
NPB600 - NPB600*220*122.45

- GENERAL NOTES:-
- ALL DIMENSIONS ARE IN MILLIMETRE.
 - FOR WELDING DETAILS REFER O-FW-220-01837 (LATEST) & KEY PLAN REFER 1-FW-300-08409.
 - MANUFACTURING REQUIREMENTS SHALL BE AS PER APPLICABLE QP.
 - ALL SHOP BURRS TO BE REMOVED & SURFACES TO BE PROPERLY CLEANED BEFORE PAINTING OF FINISHED PRODUCT.
 - CONNECTING MEMBERS SHALL BE TRIAL ASSEMBLED AND THEN MATCH DRILLED
 - CONTACT SURFACES SHALL BE SUCH THAT PROPER SEATING BETWEEN THEM SHALL BE ENSURED. THE GAP BETWEEN THEM AT ANY PLACE SHALL BE AS PER QP.
 - THE COMPONENTS SHALL BE MATCH DRILLED TO THE CORRESPONDING SPLICE PLATES.
 - COLUMN WELDING WITH BASE PLATE SHALL BE FULL PENETRATING WELD.
 - MOMENT PLATES IN COLUMNS ARE TO BE FABRICATED AND WELDED WITH RESPECTIVE COLUMNS AS PER RELEVANT DRAWINGS.
 - IN CASE OF MISSING DIMENSIONS/OR/DOUBT IT SHALL NOT BE ASSUMED, AND IT SHALL BE CLARIFIED WITH ENGINEERING BEFORE STARTING THE ACTIVITY.
 - D/S MANUFACTURED IN MULTIPLE ASSEMBLIES, SHALL BE BUNDLED AND TACK WELDED AND SENT AS SINGLE ASSEMBLY. ALL INDIVIDUAL ITEM TO BE PART MARKED WITH PGMA ITEM NO. & DU NO.
 - IN ADDITION TO BE ABOVE SAID, ANY SPECIAL NOTES MENTIONED IN THE DRAWING/ TENDER/ CONTRACT REQUIREMENT SHALL BE FOLLOWED.
 - FOR STANDARD FABRICATION NOTES REFER 4-00-000-32487 & 2-FW-220-00866.
 - HANDRAILS SHALL BE TRIMMED AT ENTRY/ OPENING LOCATIONS HOLLOW FACES SHALL CLOSED WITH FACE PLATE AT SITE.
 - PACK PLATE SHALL BE PROVIDED WHERE TWIN ANGLE IS PROVIDED.
 - STIFFENER IN CASE FOULING WITH OTHER MEMBERS, SHALL BE TRIMMED / RELOCATED SUITABLY.

NOTES :
THIS DRAWING HAS TO BE READ ALONG WITH O-FW-302-06509.

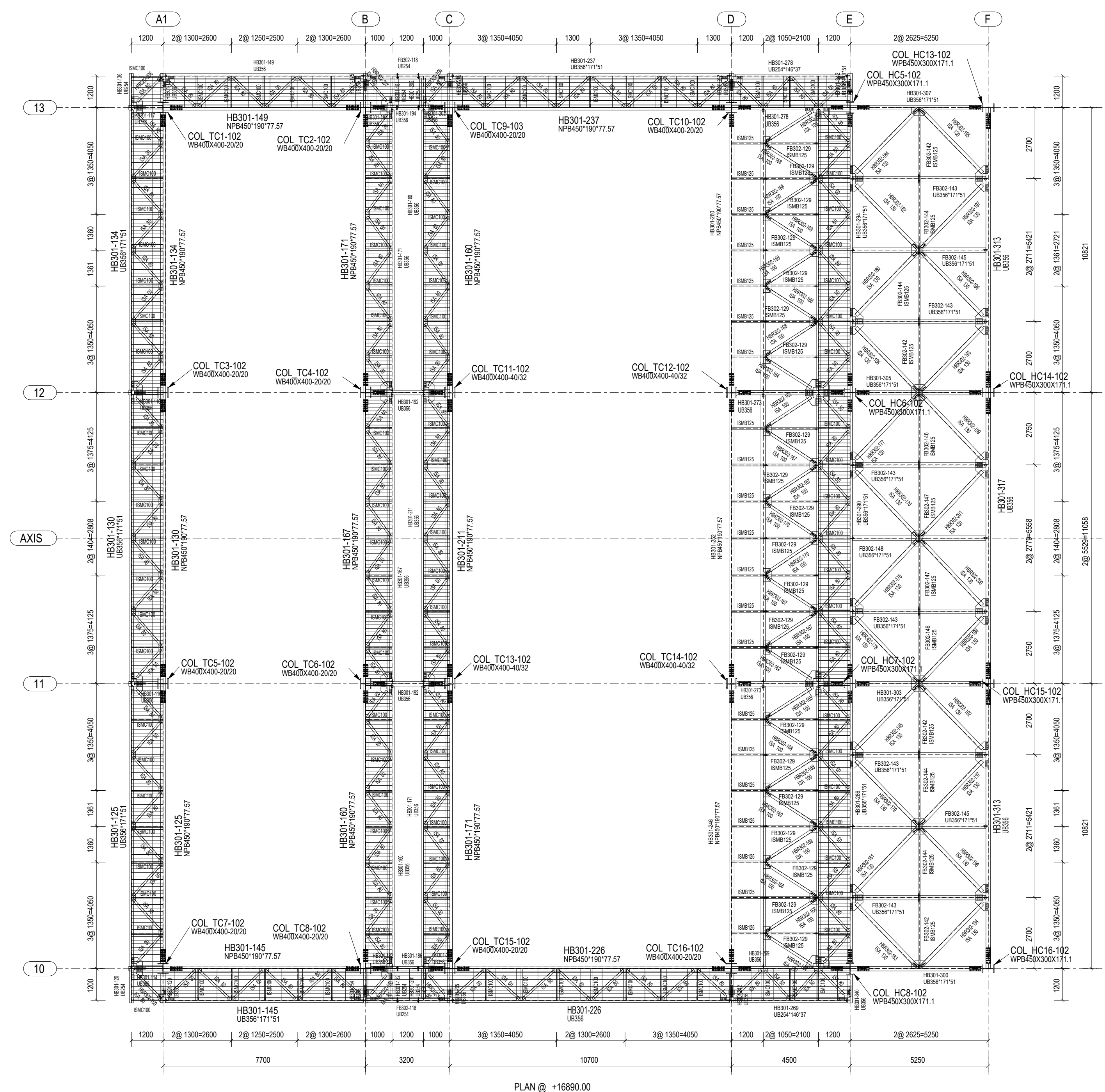
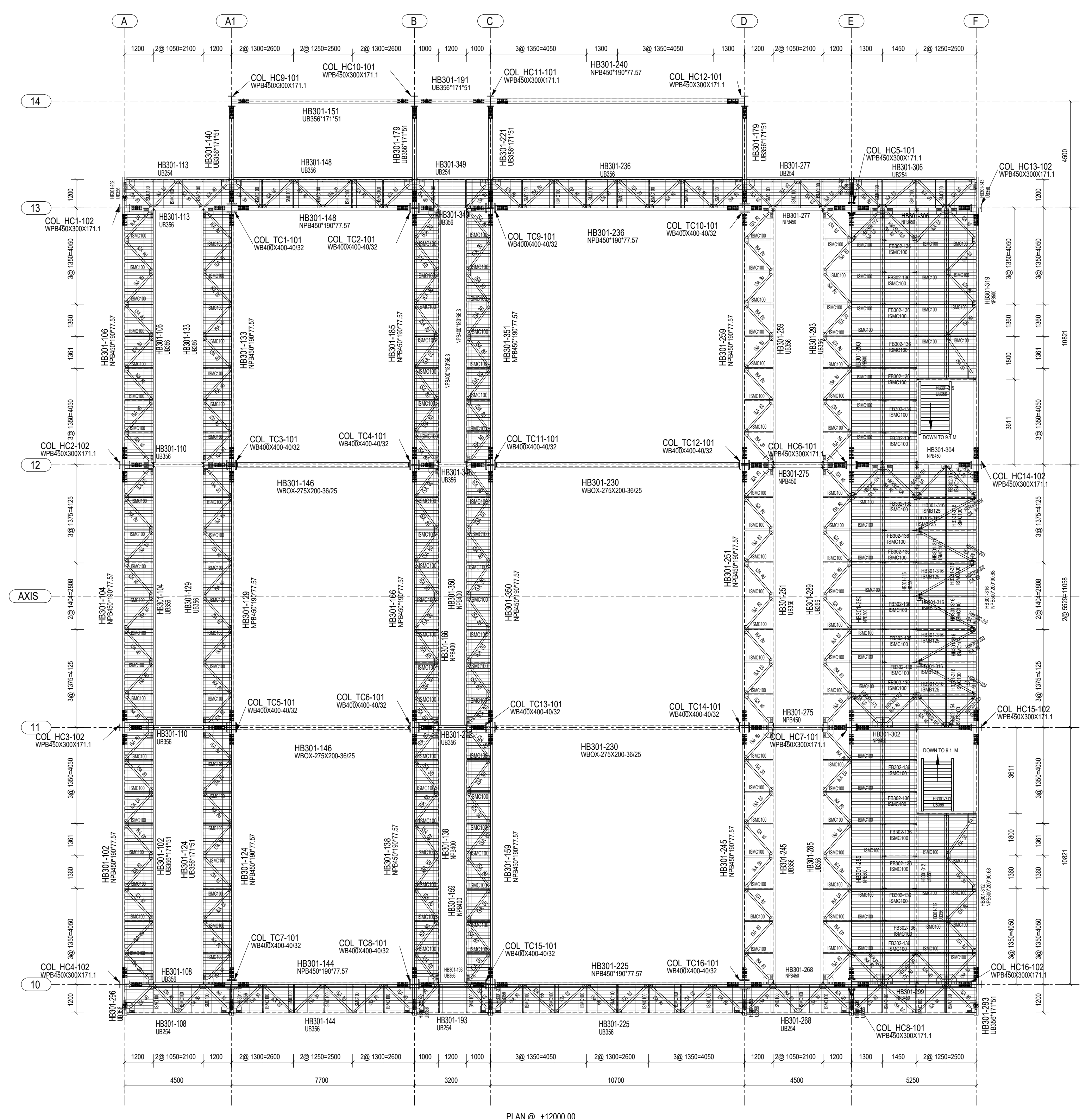


GRATING TABLE (PGMA-FW304)		
S No	Floor Width	Grating Combination
1	1200	995+305
2	2700	2X995+305+485
3	3000	3X995
4	4500	4X995+485

81	HB302-158	ISA100X100X10	2-FW-302-09917	No	106.301
80	HB302-157	ISA100X100X10	2-FW-302-09916	No	106.534
79	HB302-156	ISA100X100X10	2-FW-302-09915	No	106.654
78	HB302-155	ISA100X100X10	2-FW-302-09914	No	159.600
77	HB302-154	ISA100X100X10	2-FW-302-09913	No	164.210
76	HB302-153	ISA100X100X10	2-FW-302-09912	No	157.188
75	HB302-152	ISA100X100X10	2-FW-302-09911	No	162.002
74	HB302-151	ISA100X100X10	2-FW-302-09910	No	166.849
73	HB302-150	ISA100X100X10	2-FW-302-09909	No	166.722
72	HB302-149	ISA100X100X10	2-FW-302-09908	No	164.855
71	HB302-148	ISA100X100X10	2-FW-302-09907	No	164.806
70	HB302-147	ISA100X100X10	2-FW-302-09906	No	163.900
69	HB302-146	ISA100X100X10	2-FW-302-09905	No	161.478
68	HB302-145	ISA100X100X10	2-FW-302-09904	No	160.815
67	HB302-144	ISA100X100X10	2-FW-302-09903	No	159.589
66	HB302-143	ISA100X100X10	2-FW-302-09902	No	106.301
65	HB302-142	ISA100X100X10	2-FW-302-09901	No	106.043
64	HB302-141	ISA100X100X10	2-FW-302-09900	No	105.997
63	HB302-140	ISA100X100X10	2-FW-302-09899	No	105.853
62	HB302-139	ISA100X100X10	2-FW-302-09898	No	98.117
61	HB302-138	ISA100X100X10	2-FW-302-09897	No	98.386
60	HB302-137	ISA100X100X10	2-FW-302-09896	No	135.281
59	HB302-136	ISA100X100X10	2-FW-302-09895	No	137.268
58	HB302-135	ISA100X100X10	2-FW-302-09894	No	136.772
57	HB302-134	ISA100X100X10	2-FW-302-09893	No	142.022
56	HB302-133	ISA100X100X10	2-FW-302-09892	No	141.607
55	HB302-132	ISA100X100X10	2-FW-302-09891	No	142.013
54	HB302-131	ISA100X100X10	2-FW-302-09890	No	142.609
53	HB302-130	ISA100X100X10	2-FW-302-09889	No	140.979
52	HB302-129	ISA100X100X10	2-FW-302-09888	No	135.819
51	HB302-128	ISA100X100X10	2-FW-302-09887	No	141.596
50	HB302-127	ISA100X100X10	2-FW-302-09886	No	135.049
49	HB302-126	ISA100X100X10	2-FW-302-09885	No	98.111
48	HB302-125	ISA100X100X10	2-FW-302-09884	No	97.843
47	HB302-124	ISA100X100X10	2-FW-302-09883	No	130.360
46	HB302-123	ISA100X100X10	2-FW-302-09882	No	119.668
45	HB302-122	ISA100X100X10	2-FW-302-09881	No	119.668
44	HB302-121	ISA100X100X10	2-FW-302-09880	No	130.877
43	HB302-120	ISA100X100X10	2-FW-302-09879	No	115.319
42	HB302-119	ISA100X100X10	2-FW-302-09878	No	115.319
41	HB302-118	ISA100X100X10	2-FW-302-09877	No	113.041
40	HB302-117	ISA100X100X10	2-FW-302-09876	No	89.720
39	HB302-116	ISA100X100X10	2-FW-302-09875	No	110.855
38	HB302-115	ISA100X100X10	2-FW-302-09874	No	127.699
37	HB302-114	ISA100X100X10	2-FW-302-09873	No	36.124
36	HB302-113	ISA100X100X10	2-FW-302-09872	No	36.044
35	HB302-112	ISA100X100X10	2-FW-302-09871	No	117.862
34	HB302-111	ISA100X100X10	2-FW-302-09870	No	117.862
33	HB302-110	ISA100X100X10	2-FW-302-09869	No	116.778
32	HB302-109	ISA100X100X10	2-FW-302-09868	No	116.778
31	HB302-108	ISA100X100X10	2-FW-302-09867	No	116.685
30	HB302-107	ISA100X100X10	2-FW-302-09866	No	116.701
29	HB302-106	ISA100X100X10	2-FW-302-09865	No	128.336
28	HB302-105	ISA100X100X10	2-FW-302-09864	No	129.719
27	HB302-104	ISA100X100X10	2-FW-302-09863	No	129.719
26	HB302-103	ISA100X100X10	2-FW-302-09862	No	128.853
25	HB302-102	ISA100X100X10	2-FW-302-09861	No	128.862
24	HB302-101	ISA100X100X10	2-FW-302-09860	No	128.862
23	FB302-149	UB305*165*46	2-FW-302-09859	No	226.294
22	FB302-148	UB305*165*46	2-FW-302-09858	No	29.703
21	FB302-147	UB305*165*46	2-FW-302-09857	No	226.294
20	FB302-146	UB305*165*46	2-FW-302-09856	No	192.403
19	FB302-145	UB305*165*46	2-FW-302-09855	No	192.403
18	FB302-144	UB305*165*46	2-FW-302-09854	No	124.444
17	FB302-143	UB305*165*46	2-FW-302-09853	No	124.444
16	FB302-142	UB305*165*46	2-FW-302-09852	No	200.034
15	FB302-141	UB305*165*46	2-FW-302-09851	No	29.795
14	FB302-140	UB305*165*46	2-FW-302-09850	No	223.131
13	FB302-139	UB305*165*46	2-FW-302-09849	No	29.795
12	FB302-138	UB305*165*46	2-FW-302-09848	No	29.743
11	FB302-137	UB305*165*46	2-FW-302-09847	No	2523.113
10	FB302-136	UB305*165*46	2-FW-302-09846	No	2564.415
9	FB302-135	UB305*165*46	2-FW-302-09845	No	2511.206
8	FB302-134	UB305*165*46	2-FW-302-09844	No	27.128
7	FB302-133	UB305*165*46	2-FW-302-09843	No	35.024
6	FB302-132	UB305*165*46	2-FW-302-09842	No	36.030
5	FB302-131	UB305*165*46	2-FW-302-09841	No	44.086
4	FB302-130	UB305*165*46	2-FW-302-09840	No	44.086
3	FB302-129	UB305*165*46	2-FW-302-09839	No	43.791
2	FB302-128	UB305*165*46	2-FW-302-09838	No	43.794
1	FB302-127	UB305*165*46	2-FW-302-09837	No	3

O-FW-302-06509		ON SHIMADZU	
ASSEMBLY MARK	JOINT NO	TOP/ BOTTOM REST PLATE	QTY
		BOLT SIZE	
FB302-129	-NA-	HSPG-M20x5	84
FB302-136	-NA-	HSPG-M20x5	84
FB302-142	-NA-	HSPG-M20x5	16
FB302-143	-NA-	HSPG-M20x5	40
FB302-144	-NA-	HSPG-M20x5	16
FB302-145	-NA-	HSPG-M20x5	16
FB302-146	-NA-	HSPG-M20x5	8
FB302-147	-NA-	HSPG-M20x5	8
FB302-148	-NA-	HSPG-M20x8	8
FB302-154	-NA-	HSPG-M20x5	4
FB302-157	-NA-	HSPG-M20x5	4
HB302-159	-NA-	HSPG-M20x0	4
HB302-159	-NA-	HSPG-M20x70	2
HB302-160	-NA-	HSPG-M20x8	8
HB302-161	-NA-	HSPG-M20x8	8
HB302-162	-NA-	HSPG-M20x0	6
HB302-162	-NA-	HSPG-M20x70	3
HB302-163	-NA-	HSPG-M20x0	6
HB302-163	-NA-	HSPG-M20x70	3
HB302-164	-NA-	HSPG-M20x0	12
HB302-164	-NA-	HSPG-M20x70	6
HB302-165	-NA-	HSPG-M20x0	6
HB302-165	-NA-	HSPG-M20x70	3
HB302-166	-NA-	HSPG-M20x0	6
HB302-166	-NA-	HSPG-M20x70	3
HB302-167	-NA-	HSPG-M20x70	24
HB302-168	-NA-	HSPG-M20x70	48
HB302-169	-NA-	HSPG-M20x70	24
HB302-170	-NA-	HSPG-M20x70	12
HB302-171	-NA-	HSPG-M20x0	6
HB302-171	-NA-	HSPG-M20x70	3
HB302-172	-NA-	HSPG-M20x0	6
HB302-173	-NA-	HSPG-M20x0	4
HB302-173	-NA-	HSPG-M20x70	2
HB302-174	-NA-	HSPG-M20x0	4
HB302-174	-NA-	HSPG-M20x70	2
HB302-175	-NA-	HSPG-M20x0	6
HB302-175	-NA-	HSPG-M20x70	3
HB302-176	-NA-	HSPG-M20x0	6
HB302-176	-NA-	HSPG-M20x70	3
HB302-177	-NA-	HSPG-M20x0	6
HB302-177	-NA-	HSPG-M20x70	3
HB302-178	-NA-	HSPG-M20x0	6
HB302-178	-NA-	HSPG-M20x70	3
HB302-179	-NA-	HSPG-M20x0	6
HB302-179	-NA-	HSPG-M20x70	3
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HB302-180	-NA-	HSPG-M20x70	3
HB302-181	-NA-	HSPG-M20x0	6
HB302-181	-NA-	HSPG-M20x70	3
HB302-182	-NA-	HSPG-M20x0	6
HB302-182	-NA-	HSPG-M20x70	3
HB302-183	-NA-	HSPG-M20x0	6
HB302-183	-NA-	HSPG-M20x70	3
HB302-184	-NA-	HSPG-M20x0	6
HB302-184	-NA-	HSPG-M20x70	3
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HB302-185	-NA-	HSPG-M20x70	3
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HB302-187	-NA-	HSPG-M20x70	2
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HB302-188	-NA-	HSPG-M20x70	2
HB302-189	-NA-	HSPG-M20x0	4
HB302-189	-NA-	HSPG-M20x70	2
HB302-190	-NA-	HSPG-M20x0	6
HB302-190	-NA-	HSPG-M20x70	3
HB302-191	-NA-	HSPG-M20x0	6
HB302-191	-NA-	HSPG-M20x70	3
HB302-192	-NA-	HSPG-M20x0	6
HB302-192	-NA-	HSPG-M20x70	3
HB302-193	-NA-	HSPG-M20x0	6
HB302-193	-NA-	HSPG-M20x70	3
HB302-194	-NA-	HSPG-M20x0	6
HB302-194	-NA-	HSPG-M20x70	3
HB302-195	-NA-	HSPG-M20x0	6
HB302-195	-NA-	HSPG-M20x70	3
HB302-196	-NA-	HSPG-M20x0	12
HB302-196	-NA-	HSPG-M20x70	6
HB302-197	-NA-	HSPG-M20x0	12
HB302-197	-NA-	HSPG-M20x70	6
HB302-198	-NA-	HSPG-M20x0	6
HB302-198	-NA-	HSPG-M20x70	3
HB302-199	-NA-	HSPG-M20x0	6
HB302-199	-NA-	HSPG-M20x70	3
HB302-200	-NA-	HSPG-M20x0	6
HB302-200	-NA-	HSPG-M20x70	3
HB302-201	-NA-	HSPG-M20x0	6
HB302-201	-NA-	HSPG-M20x70	3
HB302-202	-NA-	HSPG-M20x70	8
HB302-203	-NA-	HSPG-M20x70	8
HB302-204	-NA-	HSPG-M20x70	8
HB302-205	-NA-	HSPG-M20x70	8
HB302-206	-NA-	HSPG-M20x0	6
HB302-206	-NA-	HSPG-M20x70	2
HB302-207	-NA-	HSPG-M20x0	8
HB302-208	-NA-	HSPG-M20x0	8

BOLT SUMMARY		
SL NO	BOLT SIZE & 1"WASHER"	QTY
1	HSFG:M20x45	224
2	HSFG:M24x60	330
3	HSFG:M24x70	252
4	TOTAL	806

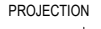


62	HRR302-308 ISA50X90X8	2-FW-302-09981				No	30.946					
61	HRR302-207 ISA50X90X8	2-FW-302-09980				No	30.810					
60	HRR302-208 ISA50X90X8	2-FW-302-09959				No	23.985					
59	HRR302-205 ISA50X90X8	3-FW-302-06312				No	16.253					
58	HRR302-204 ISA50X90X8	3-FW-302-06311				No	25.867					
57	HRR302-203 ISA50X90X8	3-FW-302-06310				No	25.435					
56	HRR302-202 ISA50X90X8	3-FW-302-06309				No	25.587					
55	HRR302-201 ISA100X100X12	2-FW-302-09955				No	83.701					
54	HRR302-200 ISA100X100X12	2-FW-302-09954				No	83.701					
53	HRR302-199 ISA100X100X12	2-FW-302-09953				No	83.239					
52	HRR302-198 ISA100X100X12	2-FW-302-09952				No	83.207					
51	HRR302-197 ISA100X100X12	2-FW-302-09951				No	92.967					
50	HRR302-196 ISA100X100X12	2-FW-302-09950				No	92.584					
49	HRR302-195 ISA100X100X12	2-FW-302-09949				No	92.454					
48	HRR302-194 ISA100X100X12	2-FW-302-09948				No	92.404					
47	HRR302-193 ISA100X100X12	2-FW-302-09947				No	92.388					
46	HRR302-192 ISA100X100X12	2-FW-302-09946				No	92.388					
45	HRR302-191 ISA50X90X8	3-FW-302-06308				No	16.273					
44	HRR302-190 ISA50X90X8	2-FW-302-09945				No	26.366					
43	HRR302-189 ISA50X90X8	2-FW-302-09944				No	26.301					
42	HRR302-188 ISA50X90X8	2-FW-302-09943				No	26.453					
41	HRR302-187 ISA50X90X8	2-FW-302-09942				No	26.453					
40	HRR302-186 ISA100X100X12	2-FW-302-09941				No	92.361					
39	HRR302-185 ISA100X100X12	2-FW-302-09940				No	92.361					
38	HRR302-184 ISA100X100X12	2-FW-302-09939				No	92.404					
37	HRR302-183 ISA100X100X12	2-FW-302-09938				No	92.404					
36	HRR302-182 ISA100X100X12	2-FW-302-09937				No	92.567					
35	HRR302-181 ISA100X100X12	2-FW-302-09936				No	92.567					
34	HRR302-180 ISA100X100X12	2-FW-302-09935				No	92.580					
33	HRR302-179 ISA100X100X12	2-FW-302-09934				No	92.580					
32	HRR302-178 ISA100X100X12	2-FW-302-09933				No	83.207					
31	HRR302-177 ISA100X100X12	2-FW-302-09932				No	83.239					
30	HRR302-176 ISA100X100X12	2-FW-302-09931				No	83.701					
29	HRR302-175 ISA100X100X12	2-FW-302-09930				No	83.701					
28	HRR302-174 ISA50X90X8	2-FW-302-09929				No	25.351					
27	HRR302-173 ISA50X90X8	2-FW-302-09928				No	25.351					
26	HRR302-172 ISA50X90X8	2-FW-302-09927				No	25.257					
25	HRR302-171 ISA50X90X8	2-FW-302-09926				No	25.257					
24	HRR302-170 ISA100X100X10	3-FW-302-06307				No	34.591					
23	HRR302-169 ISA100X100X10	3-FW-302-06306				No	34.166					
22	HRR302-168 ISA100X100X10	3-FW-302-06305				No	34.066					
21	HRR302-167 ISA100X100X10	3-FW-302-06304				No	34.006					
20	HRR302-166 ISA100X100X10	2-FW-302-09925				No	44.743					
19	HRR302-165 ISA100X100X10	2-FW-302-09924				No	44.731					
18	HRR302-164 ISA100X100X10	2-FW-302-09923				No	44.743					
17	HRR302-163 ISA100X100X10	2-FW-302-09922				No	44.939					
16	HRR302-162 ISA100X100X10	2-FW-302-09921				No	44.952					
15	HRR302-161 ISA50X90X8	2-FW-302-09920				No	30.946					
14	HRR302-160 ISA50X90X8	2-FW-302-09919				No	30.810					
13	HRR302-159 ISA50X90X8	2-FW-302-09918				No	23.985					
12	HRR302-157 ISM6-100	3-FW-302-06303				No	12.888					
11	PS302-154 ISM6-100	3-FW-302-06302				No	12.888					
10	PS302-146 ISM6-127*151	2-FW-302-06858				No	317.451					
9	PS302-147 ISM6-25	3-FW-302-06301				No	36.871					
8	PS302-145 ISM6-25	3-FW-302-06300				No	36.483					
7	PS302-145 PS302-17151	1-FW-302-06865				No	317.226					
6	PS302-144 ISM6-25	3-FW-302-06299				No	35.560					
5	PS302-143 PS302-17151	2-FW-302-06857				No	281.369					
4	PS302-142 ISM6-25	3-FW-302-06298				No	35.813					
3	PS302-136 ISM6-100	3-FW-302-06296				No	13.600					
2	PS302-129 ISM6-25	3-FW-302-06293				No	27.773					
1	PS302-118 UB254*166*37	2-FW-302-06848				No	36.358					
							2					
VARIANT NUMBER	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	ITEM NAME	UNIT	QTY	UNIT WEIGHT	QTY	ZONE
					VAR NO	MATERIAL SPECN						

NOTES :

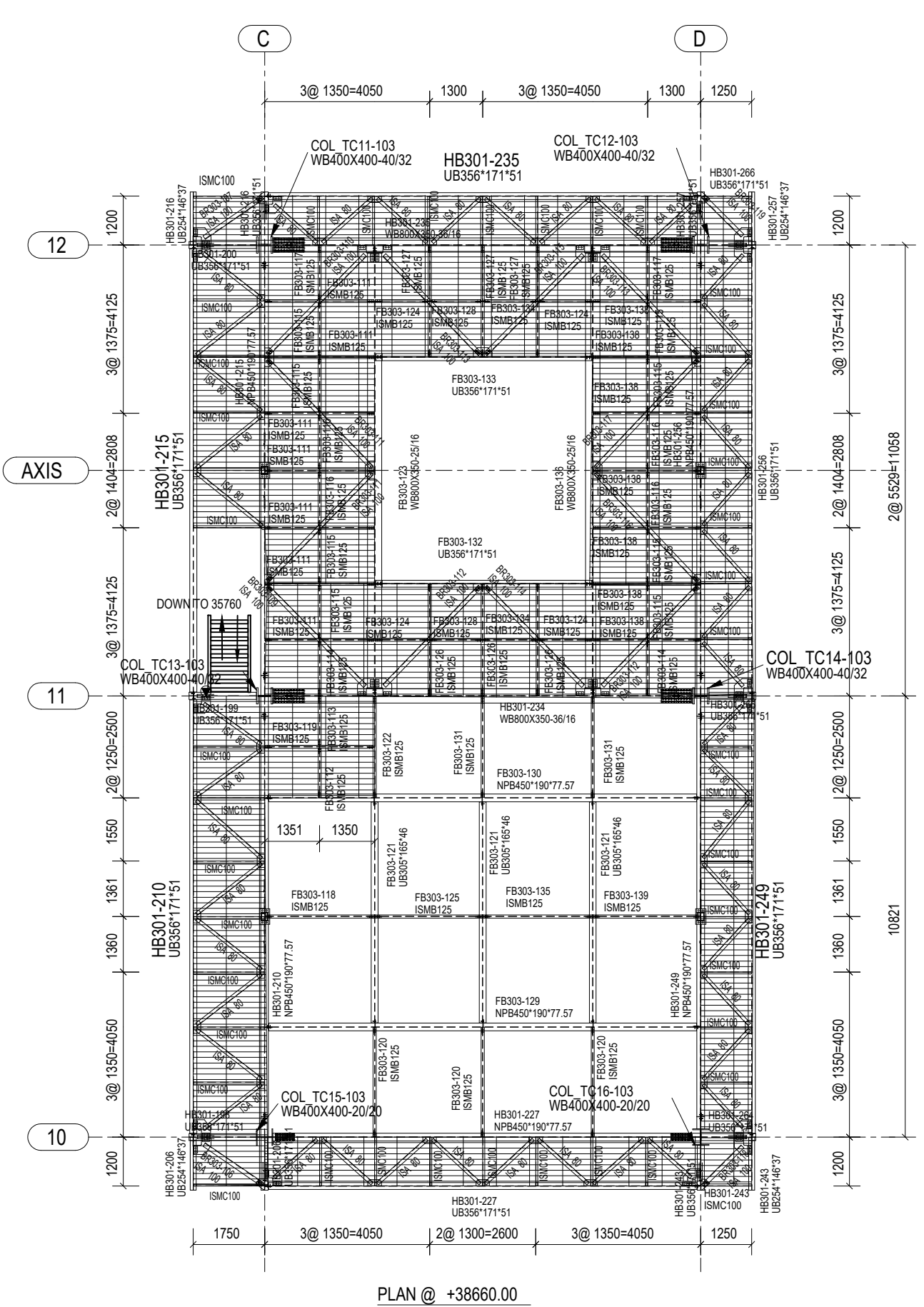
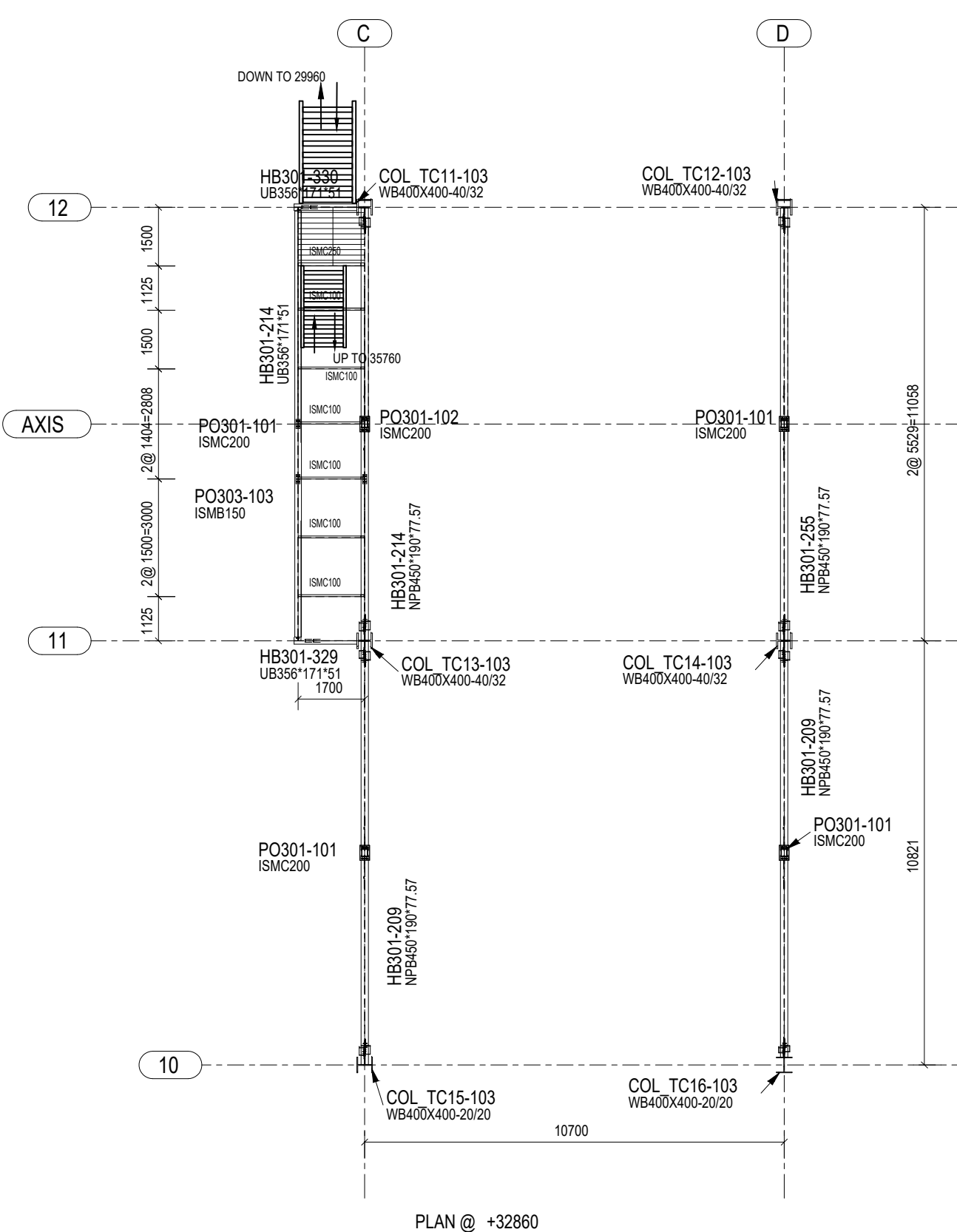
THIS DRAWING HAS TO BE READ ALONG WITH 0-FW-302-06508.

GRATING TABLE (PGMA-FW304)		
S No	Floor Width	Grating Combination
1	1200	995+305
2	2700	2X995+305+485
3	3000	3X995
4	4500	4X995+485

CAUTION: The information on this drawing was prepared by HEAVY ELECTRICAL LTD. If used for any other purpose, the user will be held responsible for any damage or loss.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME JETERDA		SIGNATURE	DATE 27.08.2021
	Bharat Heavy Electricals Ltd UNIT-ROUNDER SUBSTATION RANIPET-434505		CHD MANNIN	DATE 28.08.2021		CHD KB PAPA
	UNIT A.DCS		PROTECTION 	SCALE NTS	WEIGHT Kgs	REV 01 - 27.08.2021
	SECT 882	10 TERMINALS AND 100	TYPE 	DRAWING NO. 0-FW-302-06509		
TITLE 882		DESCRIPTION GA ABSORBER LOWER FLOOR 12.0 M TO 16.89 M				REV 0

DRAWING NO:

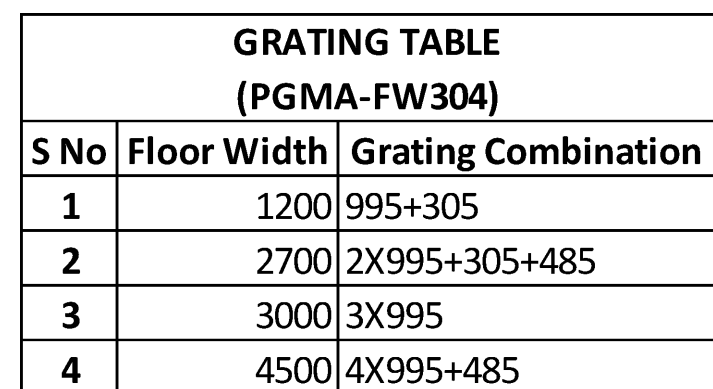
BOLT SUMMARY		
SL NO	BOLT SIZE & 1"WASHER"	QTY
1	HSFG.M20x45	668
2	HSFG.M24x60	294
3	HSFG.M24x70	464
4	TOTAL	1426



BOBP - BOTTOM OF BASE PLATE
EJ - ERECTION JOINT
TOC - TOP OF COLUMN
EL - ELEVATION
STA - STAR ANGLE
DBA - DOUBLE ANGLE

ISA80 – ISA80X80X8
ISA100 – ISA100X100X10
ISA130 – ISA130X130X12
ISA150 – ISA150X150X16
UB254 – UB254*146*37
UB305 – UB305*165*46
UB356 – UB356*171*51
UB406 – UB406*178*60
NPB450 – NPB450*190*77.57
NPB500 – NPB500*200*90.66
NPB600 – NPB600*220*122.2

1. ALL DIMENSIONS ARE IN MILLIMETRE.
2. FOR WELDING DETAILS REFER Q-FW-220-01837 (LATEST) & KEY PLAN REFER 1-FW-300-08409.
3. MANUFACTURING REQUIREMENTS SHALL BE AS PER APPLICABLE OP.
4. ALL SHOP BURRS TO BE REMOVED & SURFACES TO BE PROPERLY CLEANED BEFORE PAINTING OF FINISHED PRODUCT.
5. CONNECTING MEMBERS SHALL BE TRIAL ASSEMBLED AND THEN MATCH DRILLED
6. CONTACT SURFACES SHALL BE SUCH THAT PROPER SEATING BETWEEN THEM SHALL BE ENSURED. THE GAP BETWEEN THEM AT ANY PLACE SHALL BE AS PER OP.
7. THE COMPONENTS SHALL BE MATCH DRILLED TO THE CORRESPONDING SPLICE PLATES.
8. COLUMN WELDING WITH BASE PLATE SHALL BE FULL PENETRATING WELD.
9. MOMENT PLATES IN COLUMNS ARE TO BE FABRICATED AND WELDED WITH RESPECTIVE COLUMNS AS PER RELEVANT DRAWINGS.
10. IN CASE OF MISSING DIMENSIONS/DOUBT IT SHALL NOT BE ASSUMED, AND IT SHALL BE CLARIFIED WITH ENGINEERING BEFORE STARTING THE ACTIVITY.
11. DU'S MANUFACTURED IN MULTIPLE ASSEMBLIES, SHALL BE BUNDLED AND TACK WELDED AND SENT AS SINGLE ASSEMBLY. ALL INDIVIDUAL ITEM TO BE PART MARKED WITH PGMA, ITEM NO. & DU NO.
12. IN ADDITION TO BE ABOVE SAID, ANY SPECIAL NOTES MENTIONED IN THE DRAWING/ TENDER/ CONTRACT REQUIREMENT SHALL BE FOLLOWED.
13. FOR STANDARD FABRICATION NOTES REFER 4-00-000-32487 & 2-FW-220-00686.
14. HANDRAILS SHALL BE TRIMMED AT ENTRY/ OPENING LOCATIONS HOLLOW FACES SHALL CLOSED WITH FACE PLATE AT SITE.
15. PACE PLATE SHALL BE PROVIDED WHERE TWIN ANGLE IS PROVIDED.
16. STIFFENER IN CASE FOULING WITH OTHER MEMBERS, SHALL BE TRIMMED / RELOCATED SUITABLY.

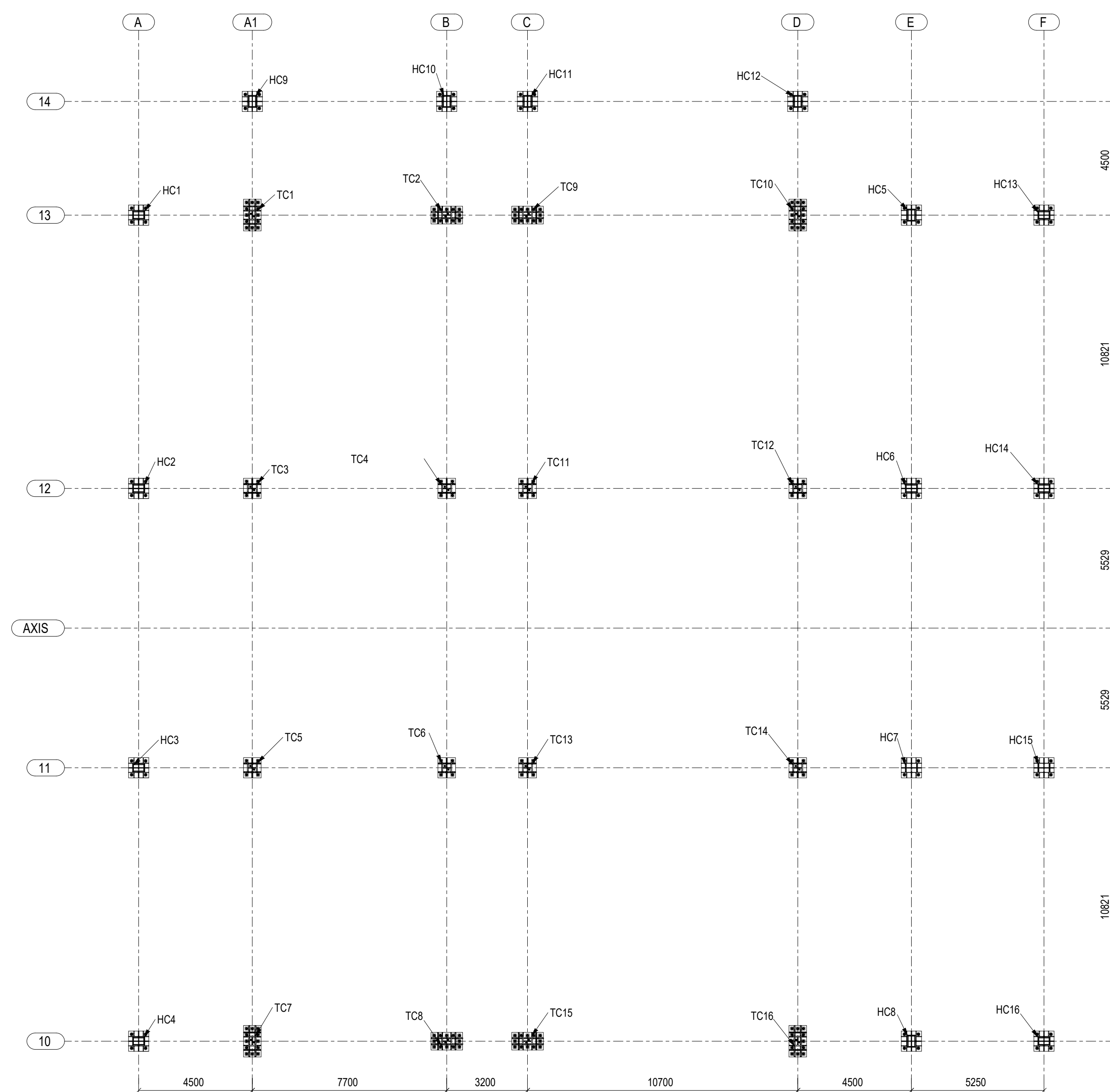


67	P0303-105	ISMR150	1-FW-303-08755							173.718
68	P0303-104	ISMR150	1-FW-303-08754							173.718
65	P0303-103	ISMR150	1-FW-303-08753							114.699
64	P0303-142	ISMR161	2-FW-303-10145							38.696
63	P0303-141	ISMR125	3-FW-303-06405							27.773
62	P0303-139	ISMR125	3-FW-303-06404							35.734
61	P0303-138	ISMR125	2-FW-303-10144							37.314
60	P0303-136	WEB000-350-2516	1-FW-303-08752							2546.315
59	P0303-135	ISMR125	3-FW-303-06403							35.822
58	P0303-134	ISMR125	3-FW-303-06402							17.763
57	P0303-133	UB302-11751	2-FW-303-10143							287.561
56	P0303-132	UB302-11751	2-FW-303-10142							287.561
55	P0303-131	ISMR125	3-FW-303-06401							33.048
54	P0303-130	NP4500-100777-57	2-FW-303-10141							845.513
53	P0303-129	NP4500-100777-57	2-FW-303-10140							842.392
52	P0303-128	ISMR125	3-FW-303-06400							17.093
51	P0303-126	ISMR125	2-FW-303-10139							35.654
50	P0303-125	ISMR125	2-FW-303-10138							35.392
49	P0303-124	ISMR125	3-FW-303-06399							17.685
48	P0303-123	ISMR125	3-FW-303-06398							2546.464
47	P0303-122	WEB000-350-2516	1-FW-303-08751							34.168
46	P0303-121	ISMR125	2-FW-303-10137							251.889
45	P0303-120	UB302-10546	2-FW-303-10136							35.766
44	P0303-119	ISMR125	3-FW-303-06397							35.766
43	P0303-118	ISMR125	2-FW-303-10135							35.801
42	P0303-117	ISMR125	3-FW-303-06396							35.804
41	P0303-117	ISMR125	3-FW-303-06395							18.007
40	P0303-116	ISMR125	3-FW-303-06394							18.487
39	P0303-115	ISMR125	3-FW-303-06393							18.068
38	P0303-114	ISMR125	3-FW-303-06392							18.034
37	P0303-113	ISMR125	3-FW-303-06391							16.332
36	P0303-112	ISMR125	3-FW-303-06390							16.390
35	P0303-111	ISMR125	3-FW-303-10134							37.984
34	P0303-110	ISMR125	3-FW-303-06389							57.292
33	P0303-109	ISMR125	3-FW-303-06388							54.715
32	P0303-107	ISMR125	3-FW-303-06387							17.697
31	P0303-106	ISMR125	2-FW-303-10133							31.390
30	P0303-105	ISMR125	2-FW-303-06386							18.032
29	P0303-103	ISMR125	3-FW-303-06385							11.210
28	P0303-102	UB302-14527	2-FW-303-10132							38.358
27	P0303-101	ISMR125	2-FW-303-10131							38.696
26	BR003-128	ISMR125	3-FW-303-06384							34.591
25	BR003-127	ISMR125	3-FW-303-06383							34.166
24	BR003-126	ISMR125	3-FW-303-06382							34.066
23	BR003-125	ISMR125	3-FW-303-06381							34.312
22	BR003-124	ISMR125	2-FW-303-10130							44.743
21	BR003-123	ISMR125	2-FW-303-10129							44.743
20	BR003-122	ISMR125	2-FW-303-10128							44.743
19	BR003-121	ISMR125	2-FW-303-10127							44.539
18	BR003-120	ISMR125	2-FW-303-10126							44.852
17	BR003-119	ISMR125	2-FW-303-10125							31.382
16	BR003-118	ISMR125	2-FW-303-10124							31.382
15	BR003-117	ISMR125	3-FW-303-06380							54.308
14	BR003-116	ISMR125	3-FW-303-06379							54.258
13	BR003-115	ISMR125	2-FW-303-10123							61.865
12	BR003-114	ISMR125	2-FW-303-10122							62.062
11	BR003-113	ISMR125	2-FW-303-10121							61.368
10	BR003-112	ISMR125	2-FW-303-10120							61.599
9	BR003-111	ISMR125	3-FW-303-06378							54.790
8	BR003-110	ISMR125	2-FW-303-10119							61.903
7	BR003-109	ISMR125	2-FW-303-10118							62.130
6	BR003-108	ISMR125	2-FW-303-10117							37.292
5	BR003-107	ISMR125	2-FW-303-10116							37.292
4	BR003-106	ISMR125	2-FW-303-10115							31.082
3	BR003-103	ISMR125	2-FW-303-10114							31.082
2	BR003-102	ISMR125	2-FW-303-10113							23.595
1	BR003-101	ISMR125	2-FW-303-10112							23.595
ITEM NO	ITEM NAME	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL CODE	ITEM NO	UNIT WEIGHT	ITEM NO
ITEM NO	ITEM NAME	ITEM NUMBER	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL SPEC	ITEM NO	UNIT WEIGHT	ITEM NO

CAUTION: The information on this drawing is the property of BH&AT. It is to be used for the project only and not be used directly or indirectly in any other project without the written consent of the company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT							
			Bharat Heavy Electricals Ltd UNIT-SOLAR AUXILIARIES PLANT RANAPET-432008		DATE 27.08.2011		SIGNATURE	
	DEPT ADCS		PRODUCTION		CHK MAMEN		DATE 28.08.2011	
	CODE 862		SCALE NTS		CHK KBF/CHIEF		DATE 28.08.2011	
	TITLE		WEIGHT (Kg)		REV TO DATE (04-05-2012)		REV	
GA ABSORBER UPPER FLOOR ABOVE 19.69 M				DRAWING NO: 0-FW-303-06517		REV 0		



FOR TOLERANCES OF UNTOLERANCED
DIMENSIONS DURING MANUFACTURE
REFER PLANT STD. NO PR-QA:500
FOR PAINTING, REFER PR-QA:590



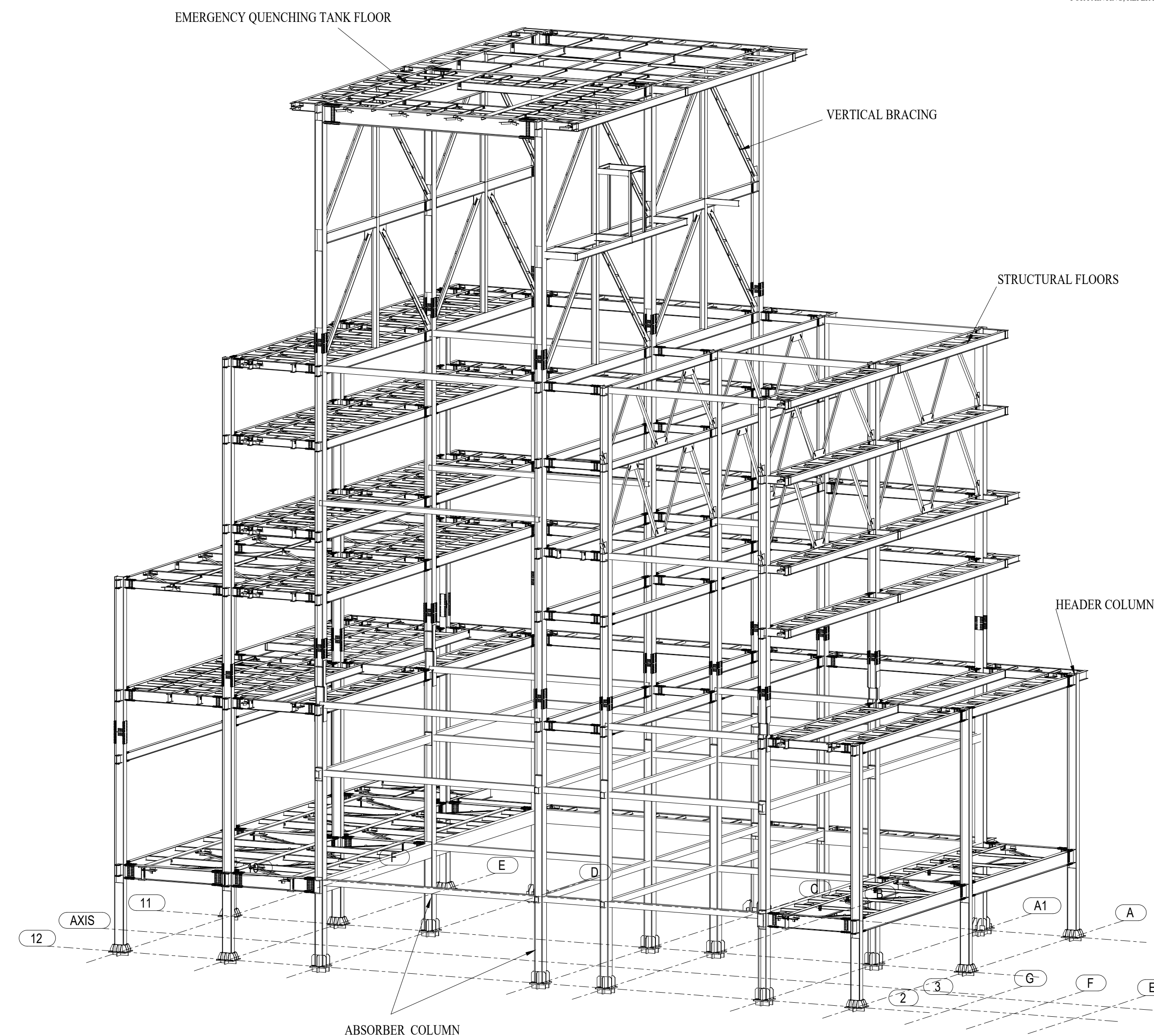
KEY PLAN OF ABSORBER

GENERAL NOTES:-

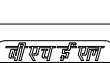
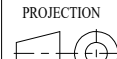
1. ALL DIMENSIONS ARE IN MILLIMETRE & LEVELS ARE IN METRE.
2. FOR WELDING DETAILS REFER 0-FW-220-01837 (LATEST).
3. MANUFACTURING REQUIREMENTS SHALL BE AS PER APPLICABLE QP.
4. ALL SHOP BURRS TO BE REMOVED & SURFACES TO BE PROPERLY CLEANED BEFORE PAINTING OF FINISHED PRODUCT.
5. CONNECTING MEMBERS SHALL BE TRIAL ASSEMBLED AND THEN MATCH DRILLED
6. CONTACT SURFACES SHALL BE SUCH THAT PROPER SEATING BETWEEN THEM SHALL BE ENSURED. THE GAP BETWEEN THEM AT ANY PLACE SHALL BE AS PER QP.
7. THE COMPONENTS SHALL BE MATCH DRILLED TO THE CORRESPONDING SPLICE PLATES.
8. COLUMN WELDING WITH BASE PLATE SHALL BE FULL PENETRATING WELD.
9. MOMENT PLATES IN COLUMNS ARE TO BE FABRICATED AND WELDED WITH RESPECTIVE COLUMNS AS PER RELEVANT DRAWINGS.
10. IN CASE OF MISSING DIMENSIONS(OR)DOUBT IT SHALL NOT BE ASSUMED, AND IT SHALL BE CLARIFIED WITH ENGINEERING BEFORE STARTING THE ACTIVITY.
11. DU'S MANUFACTURED IN MULTIPLE ASSEMBLIES, SHALL BE BUNDLED AND TACK WELDED AND SENT AS SINGLE ASSEMBLY. ALL INDIVIDUAL ITEM TO BE PART MARKED WITH PGMA, ITEM NO. & DU NO.
12. IN ADDITION TO BE ABOVE SAID, ANY SPECIAL NOTES MENTIONED IN THE DRAWING/ TENDER/ CONTRACT REQUIREMENT SHALL BE FOLLOWED.
13. FOR STANDARD FABRICATION NOTES REFER 4-00-000-32487 & 2-FW-220-00686.
14. HANDRAILS SHALL BE TRIMMED AT ENTRY/ OPENING LOCATIONS HOLLOW FACES SHALL BE CLOSED WITH FACE PLATE AT SITE.
15. PACK PLATE SHALL BE PROVIDED WHERE TWIN ANGLE IS PROVIDED.
16. STIFFENER IN CASE FOULING WITH OTHER MEMBERS, SHALL BE TRIMMED / RELOCATED SUITABLY.

SCOPE OF RELEASE

S NO	PGMA	DESCRIPTION	SCOPE COVERED
1	FW300	Absorber System-Structures	Columns
2	FW301	Absorber Beams & Bracings	Column Connecting Beams & Bracings
3	FW302	Absorber Lower Floors	Lower Floors upto 16.89 meter
4	FW303	Absorber Upper Floors	Upper floors above 16.89 meter
5	FW304	Absorber Floor Grills	Floor Gratings
6	FW305	Absorber Stairs & Handrails	Stairs & Handrails
7	FW306	Absorber HSG Fasteners	Fasteners
8	FW307	Absorber Miscellaneous	Misc floors & Supports



ISOMETRIC VIEW FOR ABSORBER

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. and must not be used directly or indirectly in any way detrimental to the interest of the company.	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT				DATE			
	 Bharat Heavy Electricals Ltd UNIT:BOILER AUXILIARIES PLANT RANIPET-632406				DIN	NAME JITENDRA KUMAR	SIGNATURE	DATE 05.08.2021
					CHD	MAHEN NAHAK		05.08.2021
					APPD	KB PADHI		06.08.2021
	DEPT A/QCS	ALL DIMENSIONS ARE IN MM	PROJECTION 	SCALE NTS	WEIGHT (Kg)	REF TO ASSY. OLD DWG		
CODE 862								
TITLE	KEY PLAN OF ABSORBER COLUMNS				DRAWING NO : 1-FW-300-08409			

ANNEXURE – B

Revised Annexure – 9

DECLARATION REGARDING MINIMUM LOCAL CONTENT

Annexure-9

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED
19TH JULY, 2024 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

_____ (Write Name and Designation of Officer of BHEL inviting the Tender);

**Bharat Heavy Electricals Limited,
Central Procurement Cell (CPC), 8th Floor, BHEL SADAN,
Plot No. 25, Sector-16A, Noida, U.P.-201301**

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 19th July, 2024 and subsequent order(s).

Ref : 1) NIT/Tender Specification No: _____,
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 19.07.2024 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | | |
|----------|----------|----------|
| 1. _____ | 2. _____ | 5. _____ |
| 3. _____ | 4. _____ | 6. _____ |

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. The Bidder to submit self-certification for the local content in the above format along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the contractor shall be required to give local content certification duly certified by statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies) at the time of execution of project.
3. In case the contractor/supplier does not meet the stipulated requirement and the category of the supplier changes from Class -I to Class-II/Non-local or from Class-II to Non-local, a penalty up to 10% of the contract value shall be imposed.
4. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.