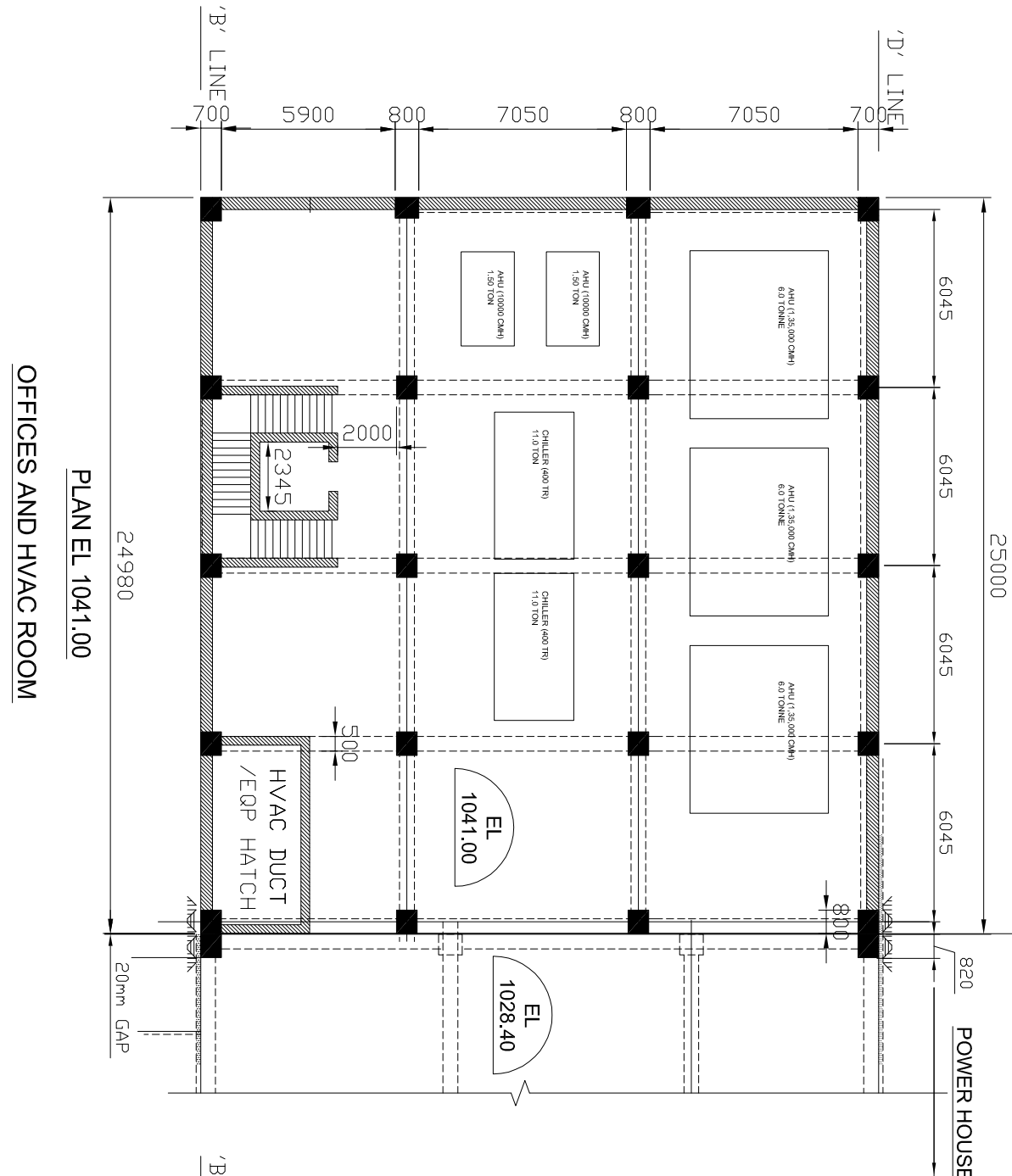
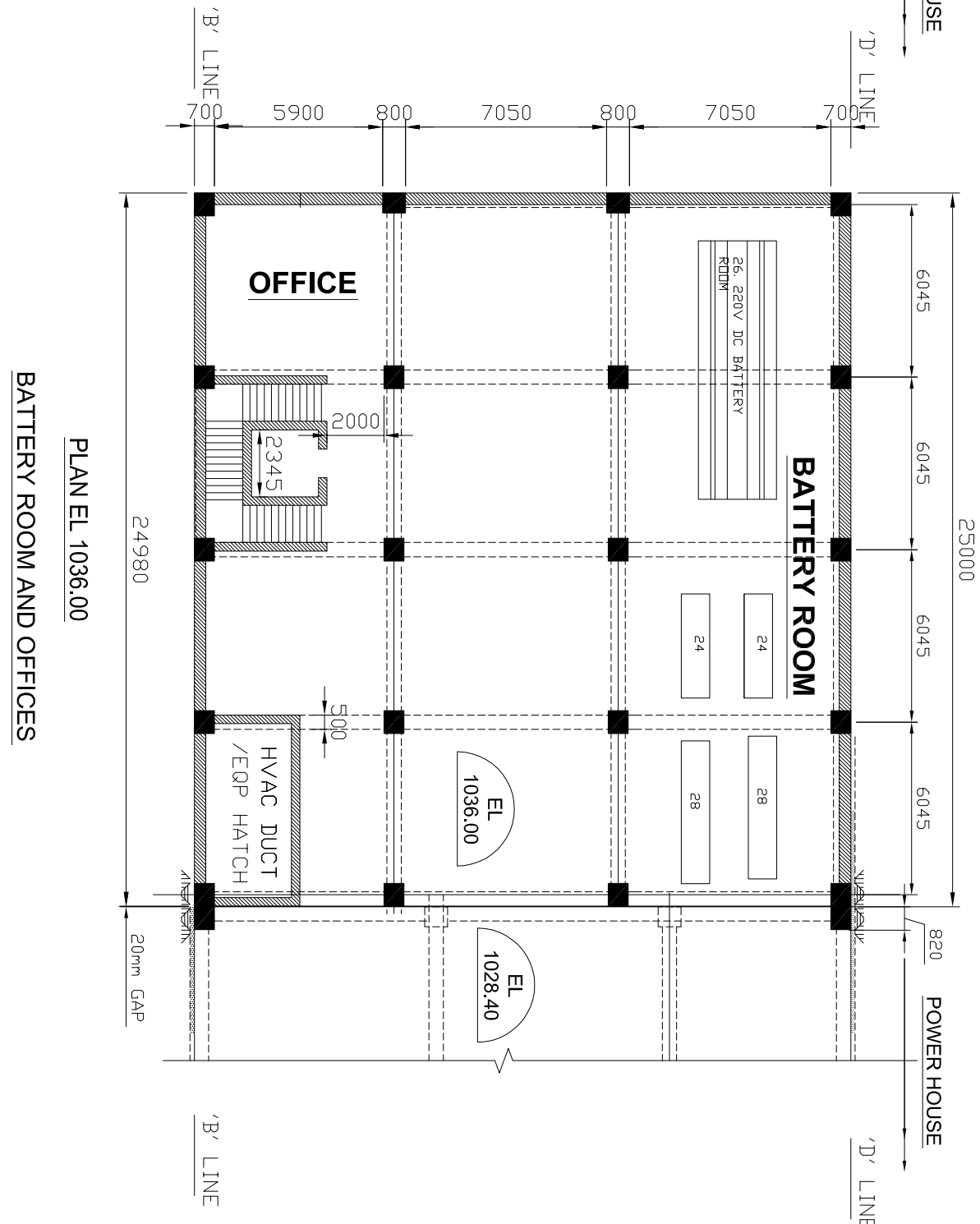


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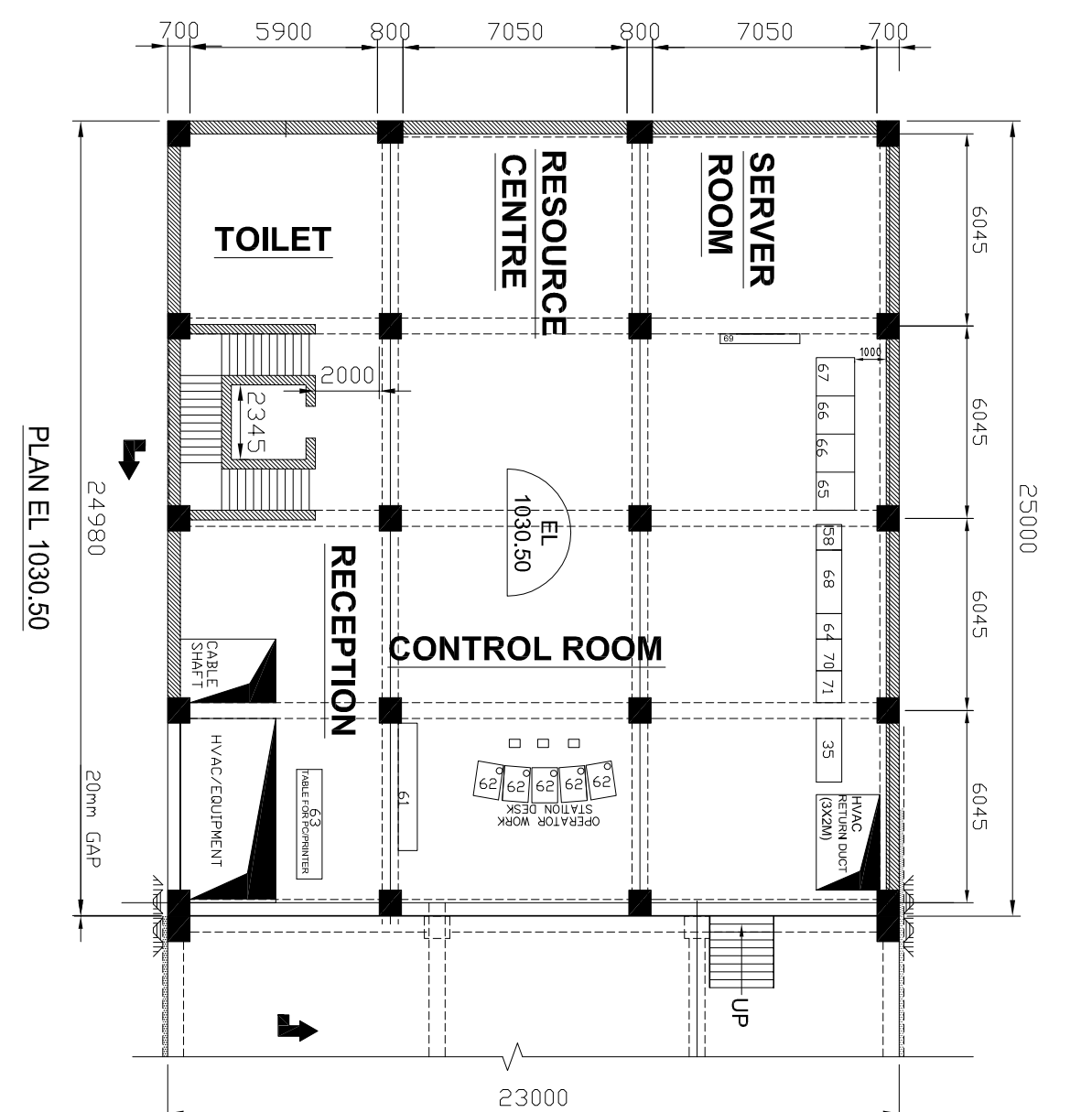


PLAN EL 1041.00

OFFICES AND HVAC ROOM

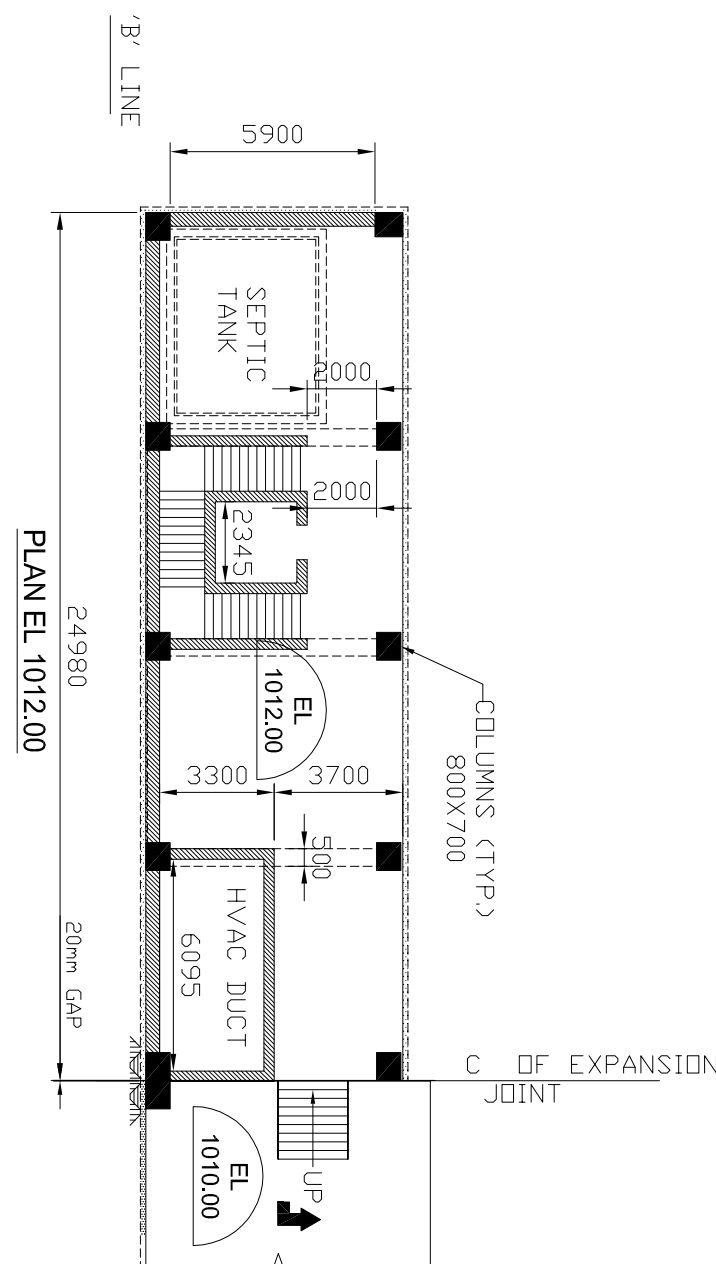


PLANEL 1036.00



PLANEL 1030.50

CONTROL ROOM



PLAN EL 1012.00

S/N	DESCRIPTION	APPROX. SIZE (mm)	WEIGHT (kg)	QUANTITY/TOTAL PER UNIT QUANTITY	REMARKS		
24	AU1 (133000 OHM)	5700	4700	3100	6600	3	HP-E
26	AU1 (10000 OHM)	3200	1800	1500	1500	2	HP-E
28	CHILLER (400 TR)	5000	2700	2600	11000	2	HP-E

TABLE FOR DIMENSIONS OF EQUIPMENTS AT EL 1041.0M:-

S.No	DESCRIPTION	APPROX. SIZE (mm)	LOCAL WEIGHT (Lb/Kg)	QUANTITY TOTAL	REMARKS
		LENGTH	HEIGHT	PER UNIT QUANTITY	
24	CHARGER CABLE (220V)	2000	1000	2	HSC
26	BATTERY (220V)	10500	2800	2	HSC
28	DC DISTRIBUTION BOARD (220V)	5000	1000	1	HSC

TABLE FOR DIMENSIONS OF EQUIPMENTS AT EL. 1036.0M:-

5	No	DESCRIPTION	ESTIMATED QUANTITY	UNIT	ESTIMATED PER UNIT PRICE	PER UNIT AMOUNT
5	1	FREE PROTECTION PANEL	2000	800	2300	103.53
6	1	ESTIMATED QUANTITY	2000	800	2300	103.53
7	1	ESTIMATED QUANTITY	2000	800	2300	103.53
8	1	ESTIMATED QUANTITY	2000	800	2300	103.53
9	1	ESTIMATED QUANTITY	2000	800	2300	103.53
10	1	ESTIMATED QUANTITY	2000	800	2300	103.53
11	1	ESTIMATED QUANTITY	2000	800	2300	103.53
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13	1	ESTIMATED QUANTITY	2000	800	2300	103.53
14	1	ESTIMATED QUANTITY	2000	800	2300	103.53
15	1	ESTIMATED QUANTITY	2000	800	2300	103.53
16	1	ESTIMATED QUANTITY	2000	800	2300	103.53
17	1	ESTIMATED QUANTITY	2000	800	2300	103.53
18	1	ESTIMATED QUANTITY	2000	800	2300	103.53
19	1	ESTIMATED QUANTITY	2000	800	2300	103.53
20	1	ESTIMATED QUANTITY	2000	800	2300	103.53
21	1	ESTIMATED QUANTITY	2000	800	2300	103.53
22	1	ESTIMATED QUANTITY	2000	800	2300	103.53
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85	1	ESTIMATED QUANTITY	2000	800	2300	103.53
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96	1	ESTIMATED QUANTITY	2000	800	2300	103.53
97	1	ESTIMATED QUANTITY	2000	800	2300	103.53
98	1	ESTIMATED QUANTITY	2000	800	2300	103.53
99	1	ESTIMATED QUANTITY	2000	800	2300	103.53
100	1	ESTIMATED QUANTITY	2000	800	2300	103.53

TABLE FOR DIMENSIONS OF EQUIPMENTS AT 1030.5M:-

S.NO	DRAWING NO	DRAWING DESCRIPTION
1	0-200-00-19251	CROSS SECTION OF POWER HOUSE
2	0-200-00-19252	PLAN AT EL. 1005.0M
3	0-200-00-19253	PLAN AT EL. 1010.0M
4	0-200-00-19254	PLAN AT EL. 1017.0M
5	0-200-00-19255	PLAN AT EL. 1021.5M
6	0-200-00-19256	PLAN AT EL. 1028.4M
7	0-200-00-19258	L-SECTION OF POWER HOUSE
8	0-200-00-19259	GIS CUM TRANSFORMER CAVEN
9	0-200-00-19260	LONGITUDINAL AND CROSS SECTIONS OF CUM TRANSFORMER CAVEN
10		PLANS AT EL.1028.4,1026.4,1040.5M
11		

REFERENCE DRAWINGS:

NOTES:- 1) LAYOUT SHOWS THE OVERALL DIMENSIONS OF POWER HOUSE FOR ELECTRO MECHANICAL EQUIPMENT

2) ALL CIVIL DESIGN INCLUDING CONCRETE THICKNESSES OF TURBINE GENERATOR, WALLS, BEAMS, FLOORS TO BE DEVELOPED BY CIVIL.

3) OTHER DESIGNS LIKE SUPER STRUCTURE, STAIRWAY, RAILINGS ALSO TO BE DESIGNED BY CIVIL.

4) ASSESS IDENTIFIED FOR EQUIPMENT ARE TENTATIVE AND MAY CHANGE DURING DETAIL DESIGN.

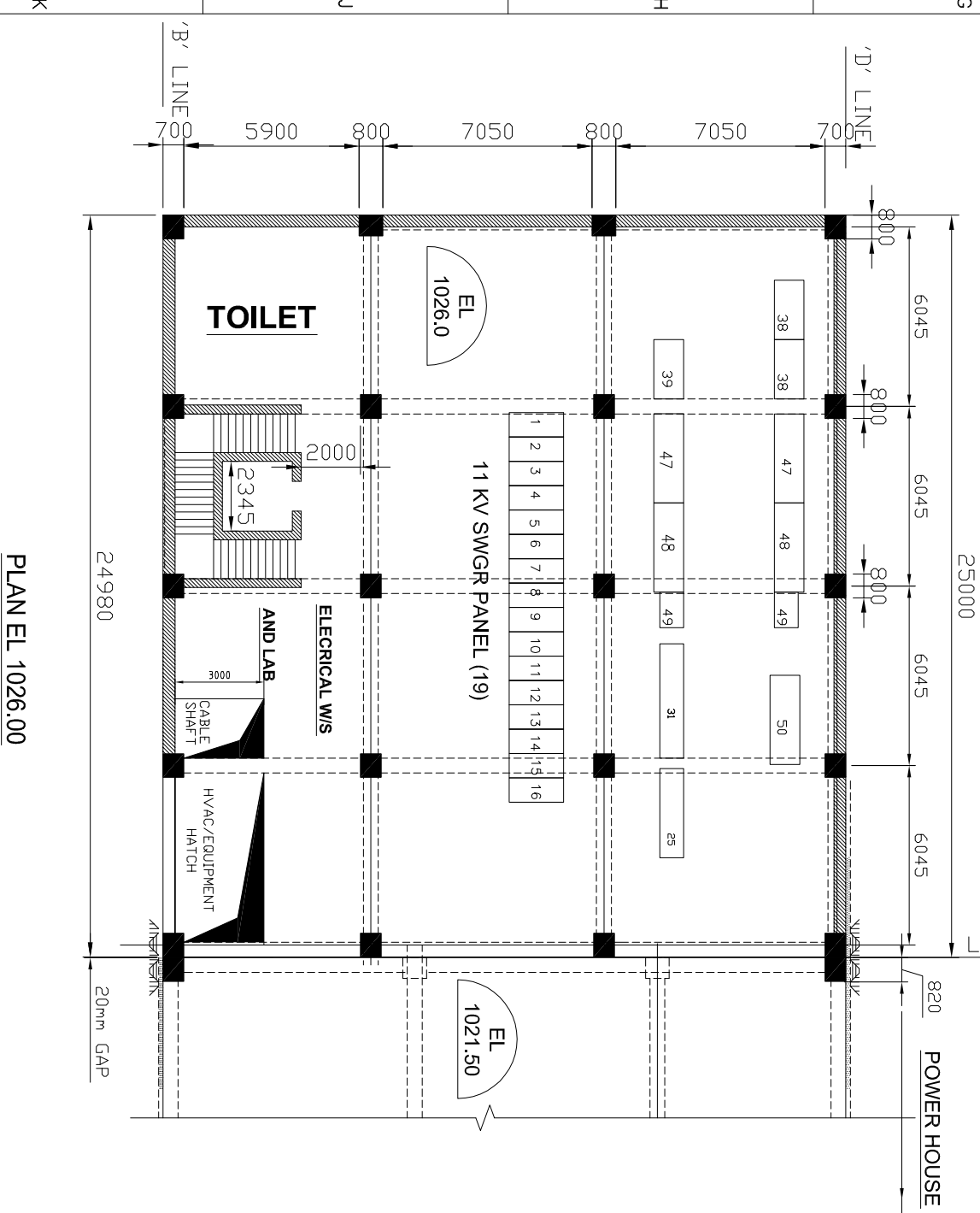
5) ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METRES.

LEGEND :-

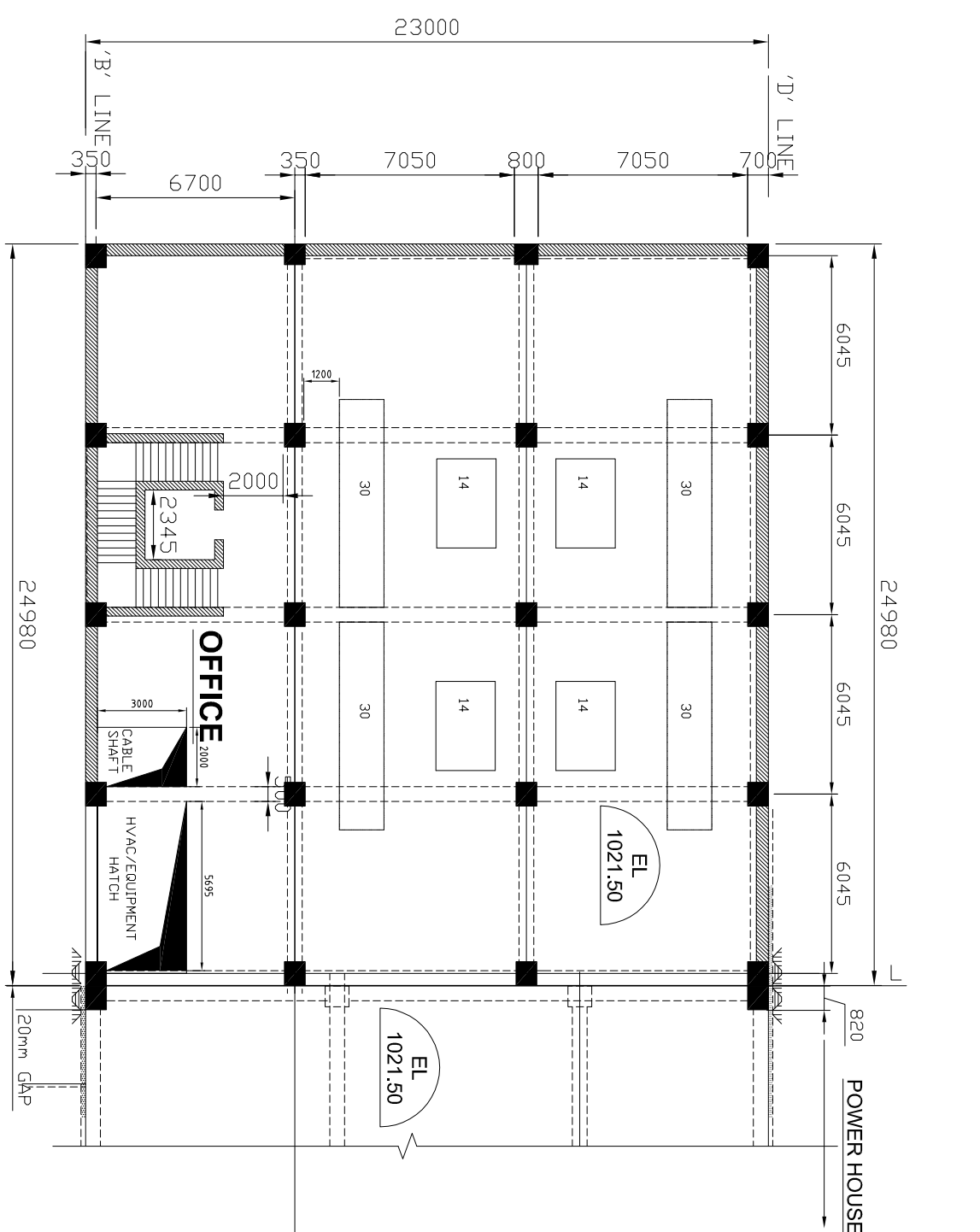
	FIRST STAGE CONCRETE
	SECOND STAGE CONCRETE
	THIRD STAGE CONCRETE

S.No	DESCRIPTION	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	REMARKS
1	MAN. LUBRICATOR	3000	1000	2000	1 HSE
2	MAN. LUBRICATOR	3000	1000	2000	2 HSE
3	MAN. LUBRICATOR	3000	1000	2000	2 HSE
4	MAN. LUBRICATOR	3000	1000	2000	2 HSE
5	MAN. LUBRICATOR	3000	1000	2000	2 HSE
6	MAN. LUBRICATOR	3000	1000	2000	2 HSE
7	MAN. LUBRICATOR	3000	1000	2000	2 HSE
8	MAN. LUBRICATOR	3000	1000	2000	2 HSE
9	MAN. LUBRICATOR	3000	1000	2000	2 HSE
10	MAN. LUBRICATOR	3000	1000	2000	2 HSE
11	MAN. LUBRICATOR	3000	1000	2000	2 HSE
12	MAN. LUBRICATOR	3000	1000	2000	2 HSE
13	MAN. LUBRICATOR	3000	1000	2000	2 HSE
14	MAN. LUBRICATOR	3000	1000	2000	2 HSE
15	MAN. LUBRICATOR	3000	1000	2000	2 HSE
16	MAN. LUBRICATOR	3000	1000	2000	2 HSE
17	MAN. LUBRICATOR	3000	1000	2000	2 HSE
18	MAN. LUBRICATOR	3000	1000	2000	2 HSE
19	MAN. LUBRICATOR	3000	1000	2000	2 HSE
20	MAN. LUBRICATOR	3000	1000	2000	2 HSE
21	MAN. LUBRICATOR	3000	1000	2000	2 HSE
22	MAN. LUBRICATOR	3000	1000	2000	2 HSE
23	MAN. LUBRICATOR	3000	1000	2000	2 HSE
24	MAN. LUBRICATOR	3000	1000	2000	2 HSE
25	MAN. LUBRICATOR	3000	1000	2000	2 HSE
26	MAN. LUBRICATOR	3000	1000	2000	2 HSE
27	MAN. LUBRICATOR	3000	1000	2000	2 HSE
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29	MAN. LUBRICATOR	3000	1000	2000	2 HSE
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35	MAN. LUBRICATOR	3000	1000	2000	2 HSE
36	MAN. LUBRICATOR	3000	1000	2000	2 HSE
37	MAN. LUBRICATOR	3000	1000	2000	2 HSE
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41	MAN. LUBRICATOR	3000	1000	2000	2 HSE
42	MAN. LUBRICATOR	3000	1000	2000	2 HSE
43	MAN. LUBRICATOR	3000	1000	2000	2 HSE
44	MAN. LUBRICATOR	3000	1000	2000	2 HSE
45	MAN. LUBRICATOR	3000	1000	2000	2 HSE
46	MAN. LUBRICATOR	3000	1000	2000	2 HSE
47	MAN. LUBRICATOR	3000	1000	2000	2 HSE
48	MAN. LUBRICATOR	3000	1000	2000	2 HSE
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53	MAN. LUBRICATOR	3000	1000	2000	2 HSE
54	MAN. LUBRICATOR	3000	1000	2000	2 HSE
55	MAN. LUBRICATOR	3000	1000	2000	2 HSE
56	MAN. LUBRICATOR	3000	1000	2000	2 HSE
57	MAN. LUBRICATOR	3000	1000	2000	2 HSE
58	MAN. LUBRICATOR	3000	1000	2000	2 HSE
59	MAN. LUBRICATOR	3000	1000	2000	2 HSE
60	MAN. LUBRICATOR	3000	1000	2000	2 HSE
61	MAN. LUBRICATOR	3000	1000	2000	2 HSE
62	MAN. LUBRICATOR	3000	1000	2000	2 HSE
63	MAN. LUBRICATOR	3000	1000	2000	2 HSE
64	MAN. LUBRICATOR	3000	1000	2000	2 HSE
65	MAN. LUBRICATOR	3000	1000	2000	2 HSE
66	MAN. LUBRICATOR	3000	1000	2000	2 HSE
67	MAN. LUBRICATOR	3000	1000	2000	2 HSE
68	MAN. LUBRICATOR	3000	1000	2000	2 HSE

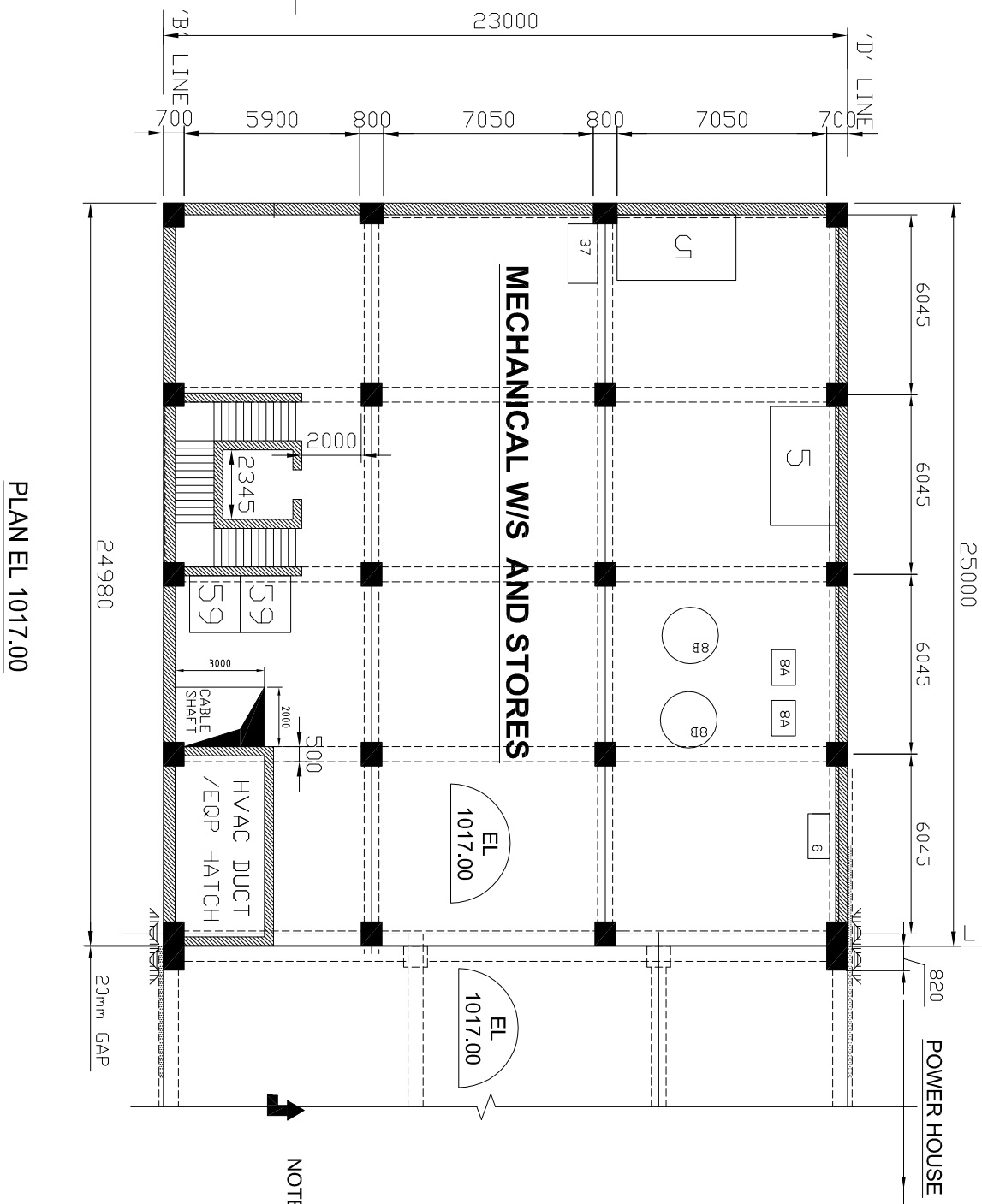
TABLE FOR DIMENSIONS OF EQUIPMENTS AT EL. 1026.0M:-



PLAN EL 1026.00
ELECTRICAL SERVICE FLOOR



PLAN EL 1021.50



PLAN EL 1017.00
MECHANICAL SERVICE FLOOR

S.No	DESCRIPTION	APPROX. SIZE (mm)	LOCATED WEIGHT AT ELEM.(KGS.)	QUANTITY TOTAL PER UNIT/QUANTITY	REMARK
14	STATION AUXILIARY TRANSFORMER	3000	1021.5	4	JMS
20	STATION AUXILIARY BOARD (SAB)	10500	2450	4	HSE

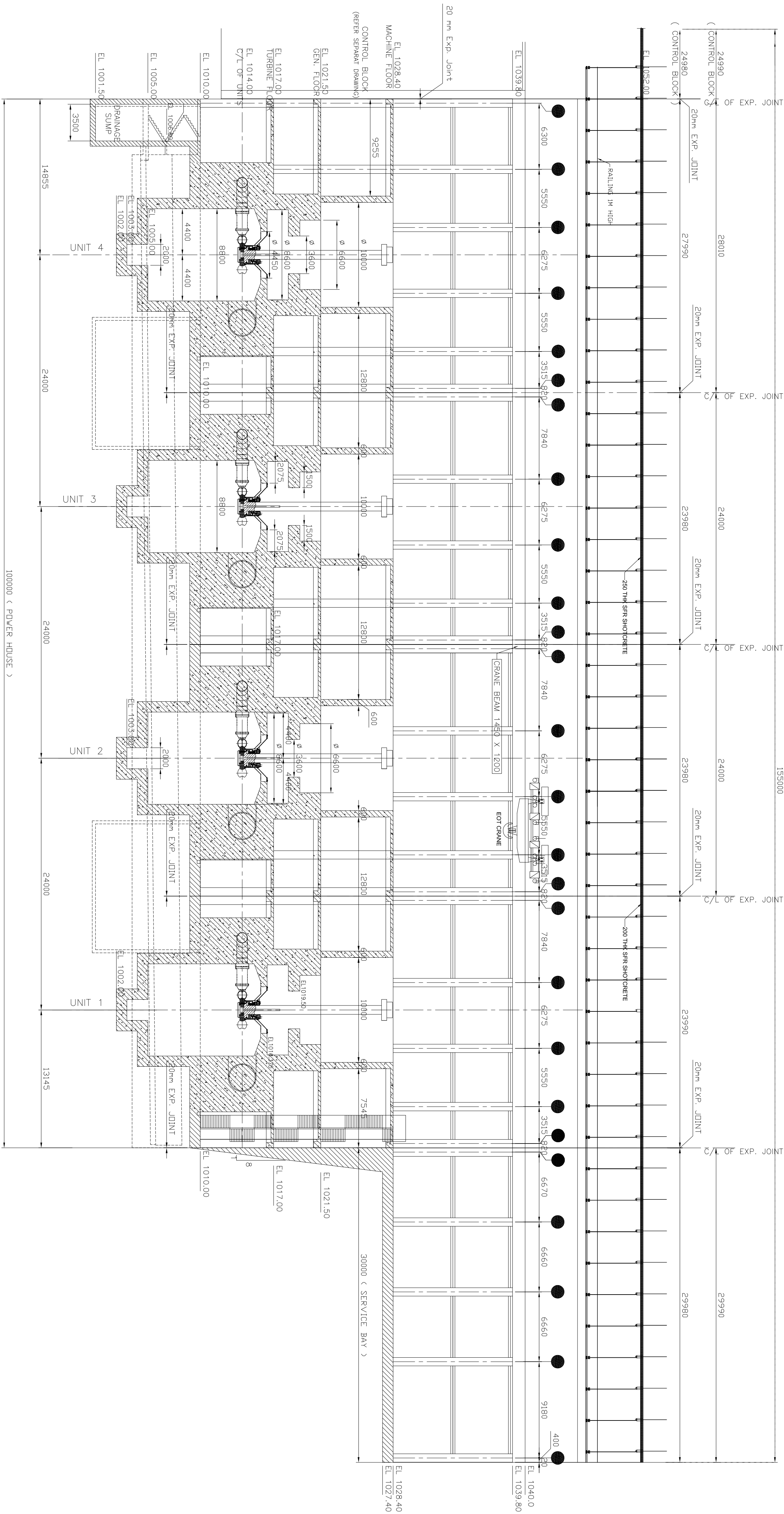
TABLE FOR DIMENSIONS OF EQUIPMENTS AT EL. 1021.5M:-

S/no	DESCRIPTION	JERSEY SIZE (MM)	LOCATED WEIGHT PER UNIT (KGS.)	QUANTITY REMAINS PER UNIT QUANTITY
6	REAR END AIR COMPRESSOR	1700 800	-	2 H/E
8	AIR COMPRESSOR	1900 800	107.0	2
9	B.P.A.M RECEIVER	1800 3400	2022	2 H/E
10	WATERING ACORN	1500 2500	1017.0	-
12	UNDERCUTTING JAW	1700 1900	2000	-
15	UNDERCUTTING JAW	1700 1900	2000	107.0
16	CENTRIFUGAL TYPE TURB. OIL PUMPS	2200 2800	1017.0	2800
25				2
				H/E (CON.)
				USE

TABLE FOR DIMENSIONS OF EQUIPMENTS PLACED AT TURBINE FLOOR:-

[illegible]

02000019258 ON 3RD



REFERENCE DRAWINGS:

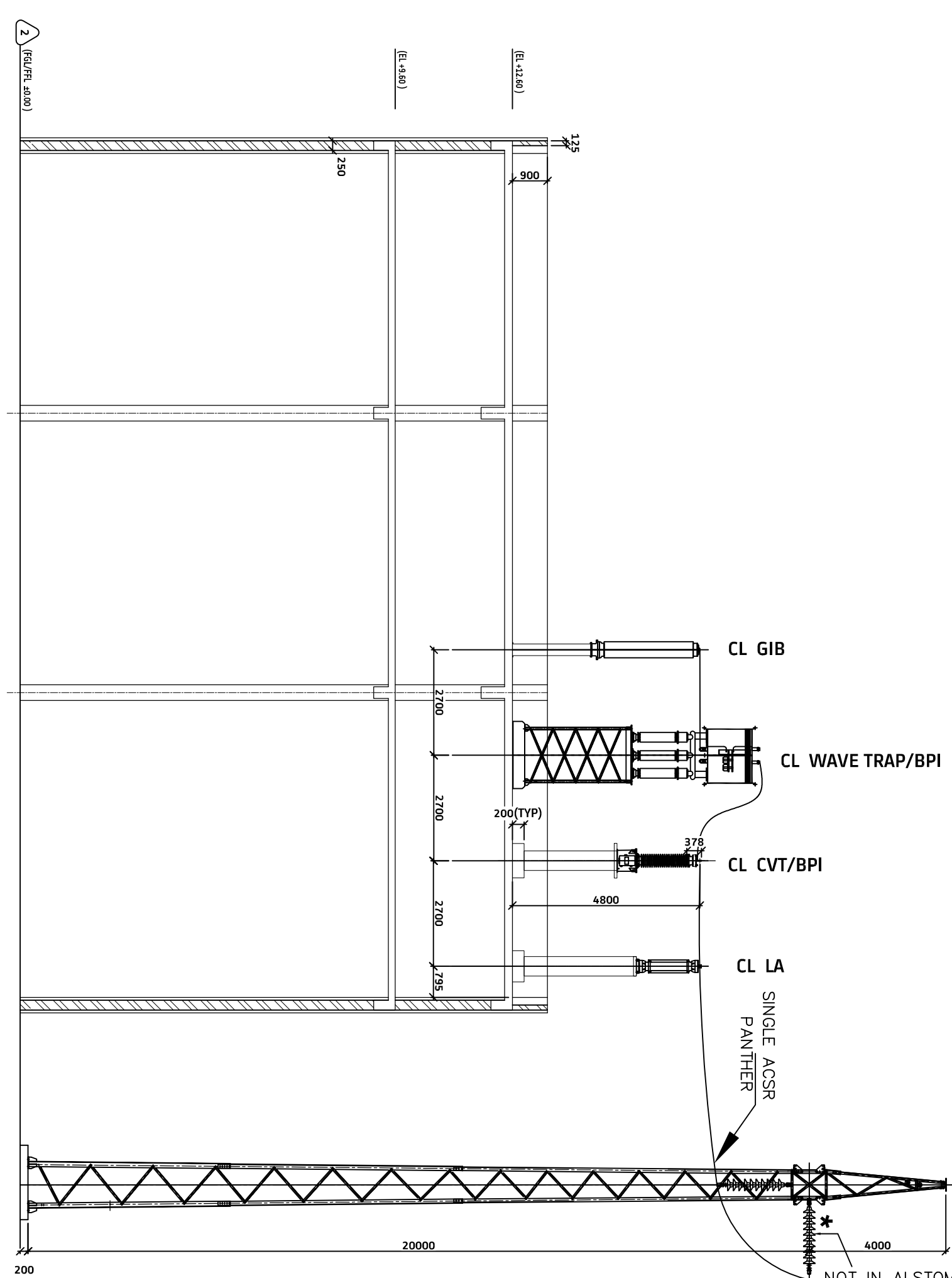
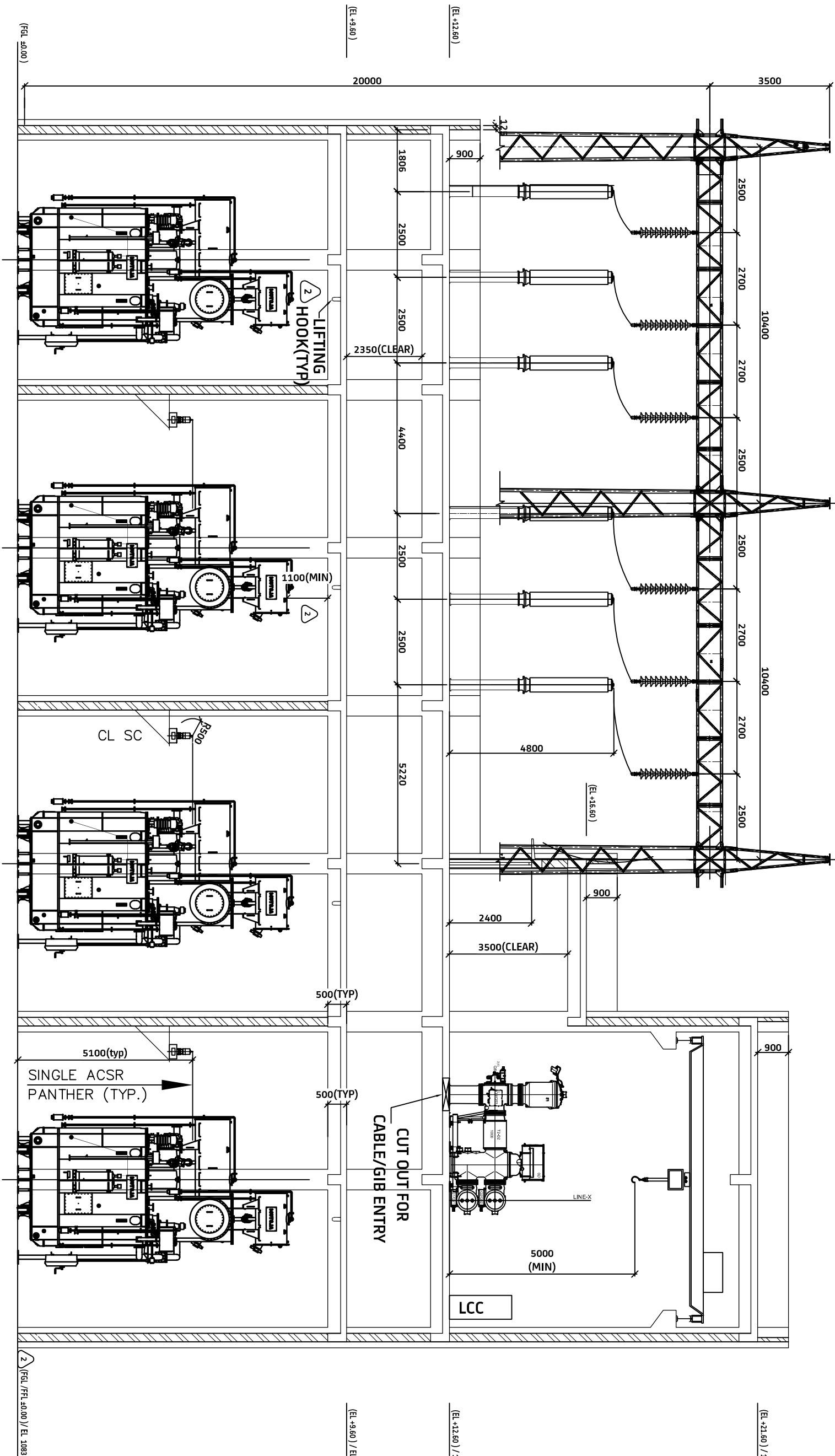
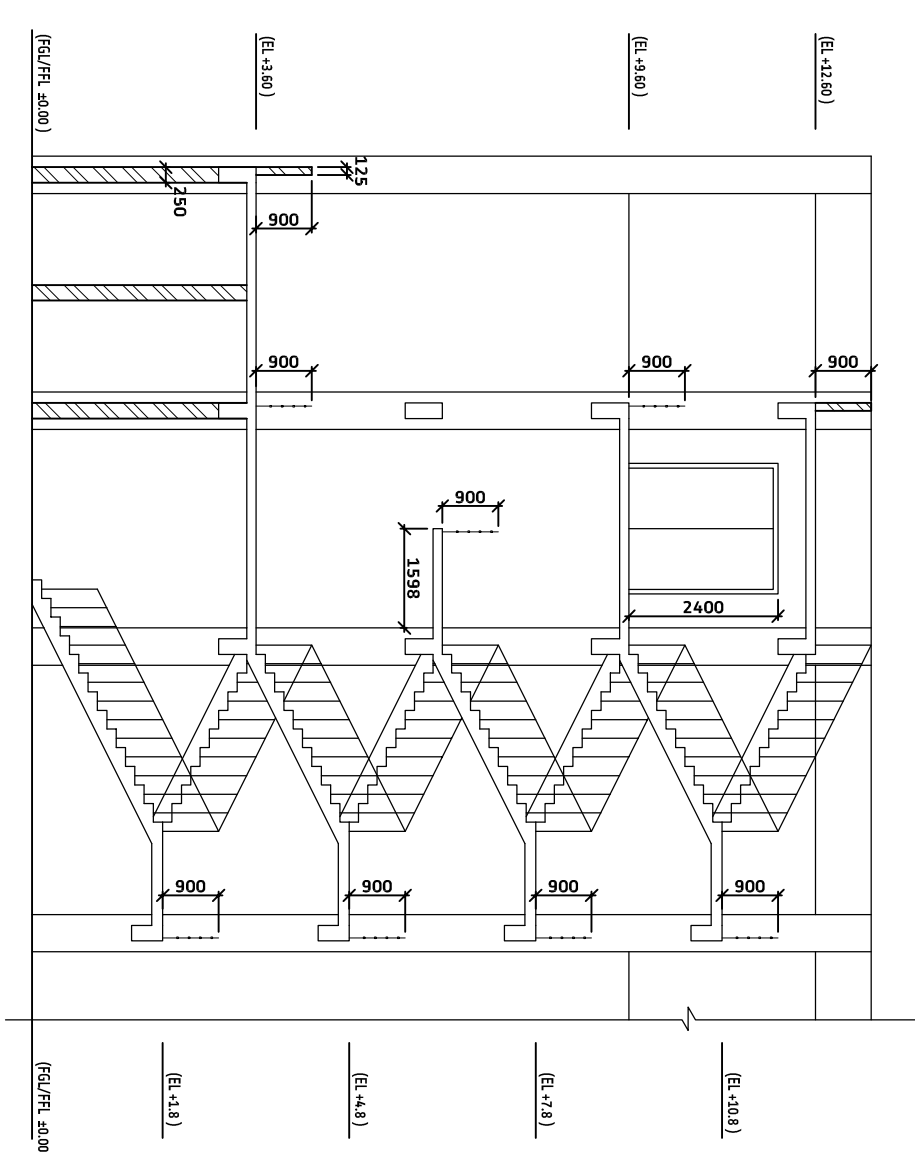
S.NO	DRAWING NO	DRAWING DESCRIPTION
1	0-200-00-19251	CROSS SECTION OF POWER HOUSE
2	0-200-00-19252	PLAN AT EL. 1005.0M
3	0-200-00-19253	PLAN AT EL. 1010.0M
4	0-200-00-19254	PLAN AT EL. 1017.0M
5	0-200-00-19255	PLAN AT EL. 1021.5M
6	0-200-00-19256	PLAN AT EL. 1028.4M
7	0-200-00-19257	PLAN AT VARIOUS AUXILIARY BLOCKS

LONGITUDINAL SECTION

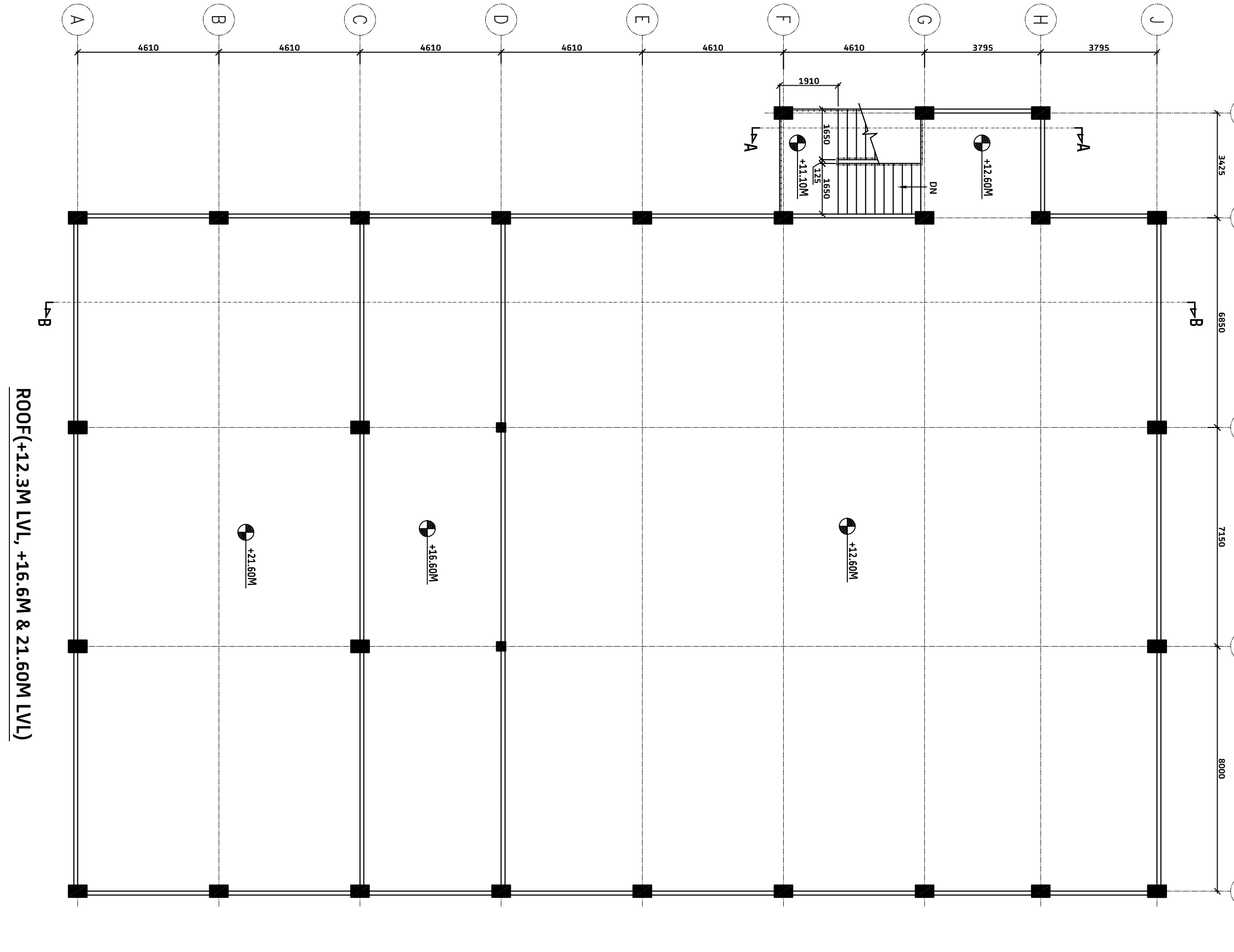
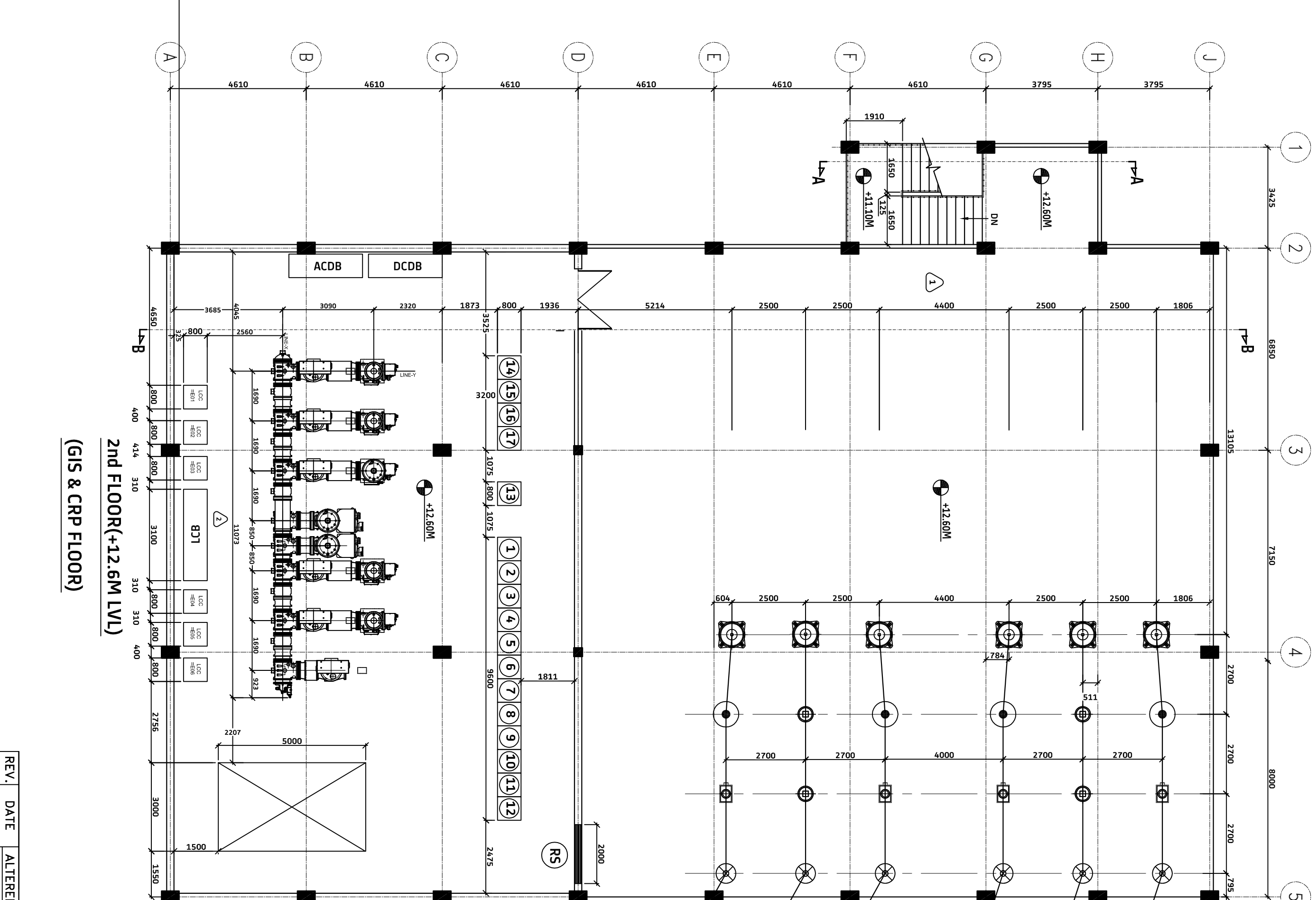
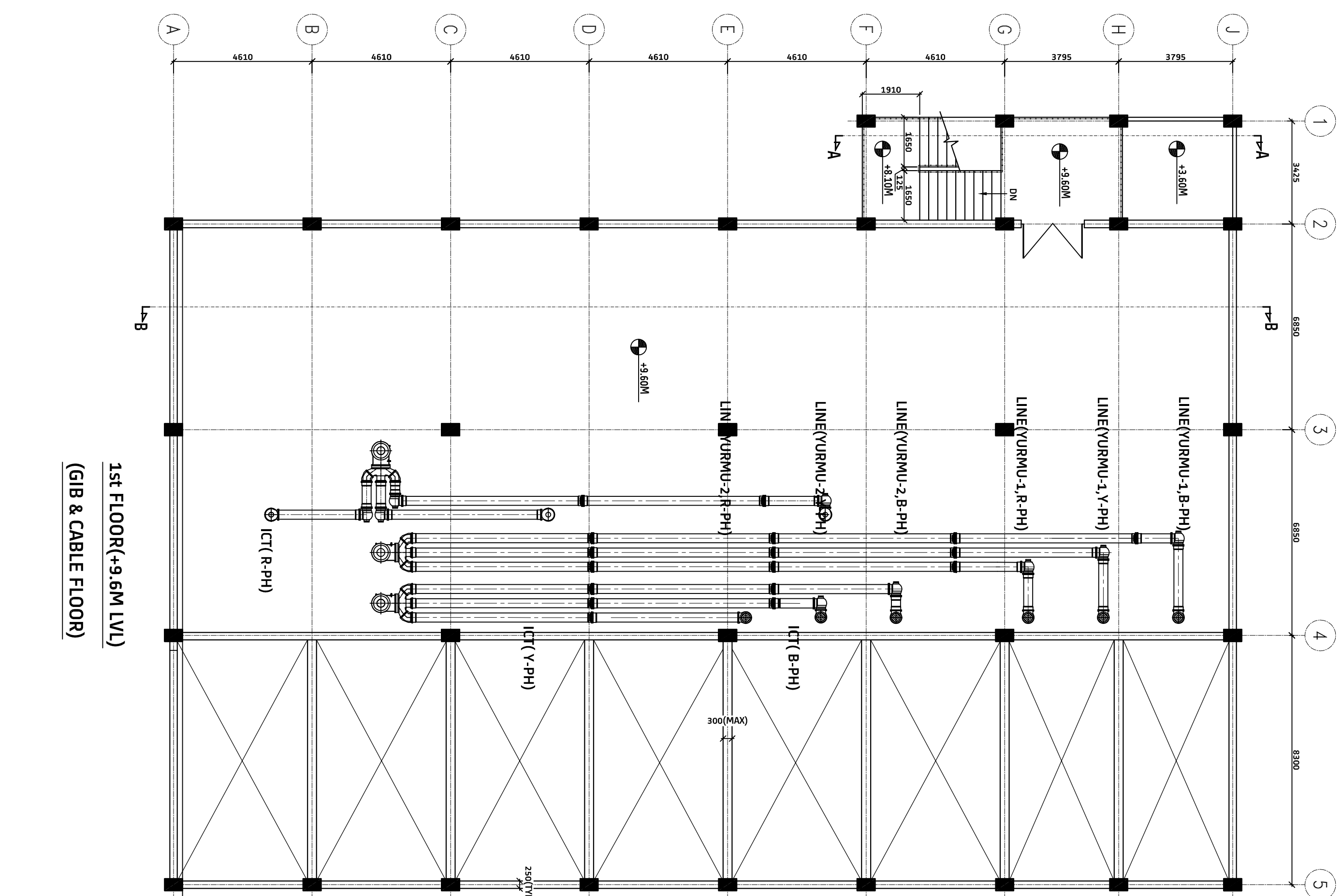
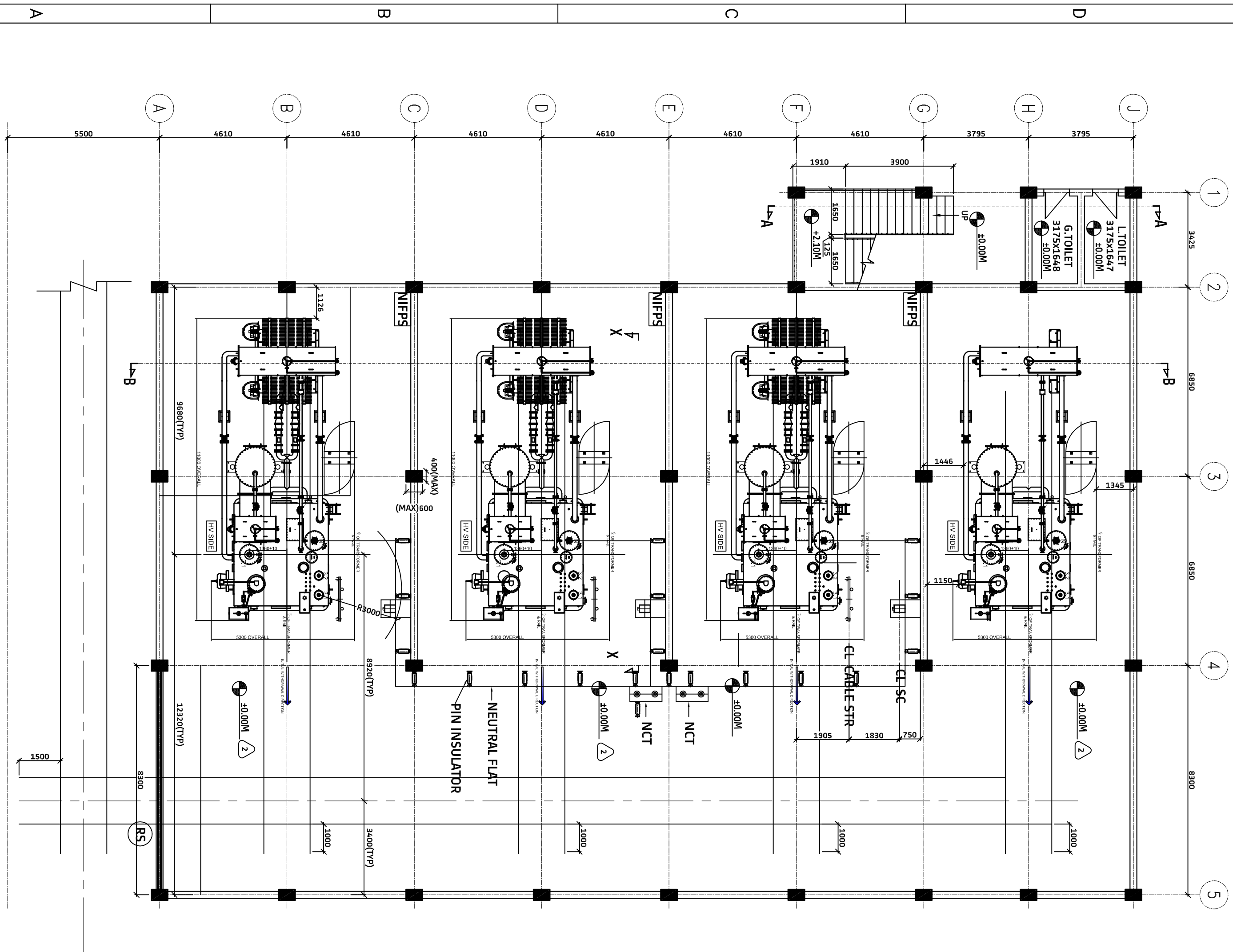
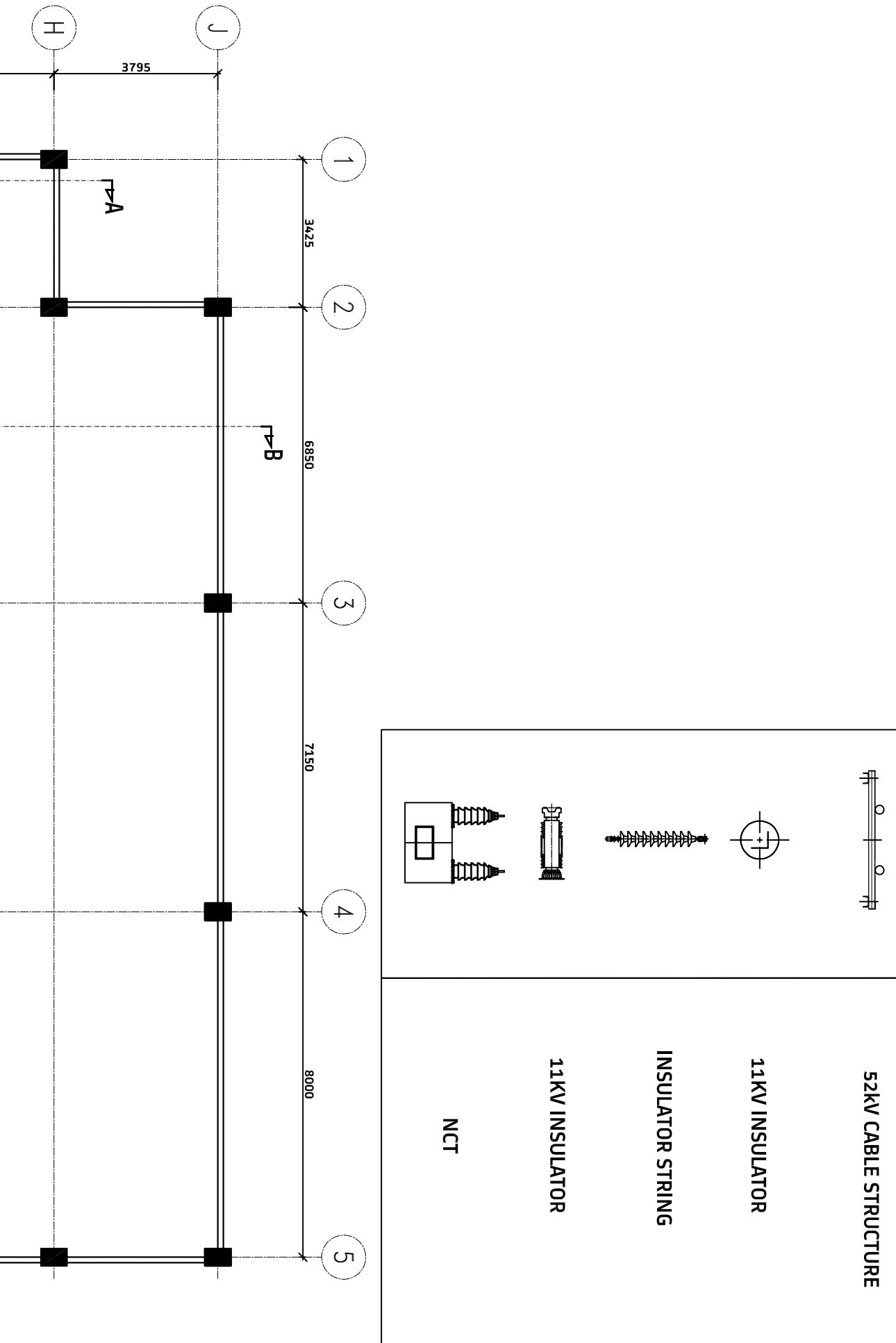
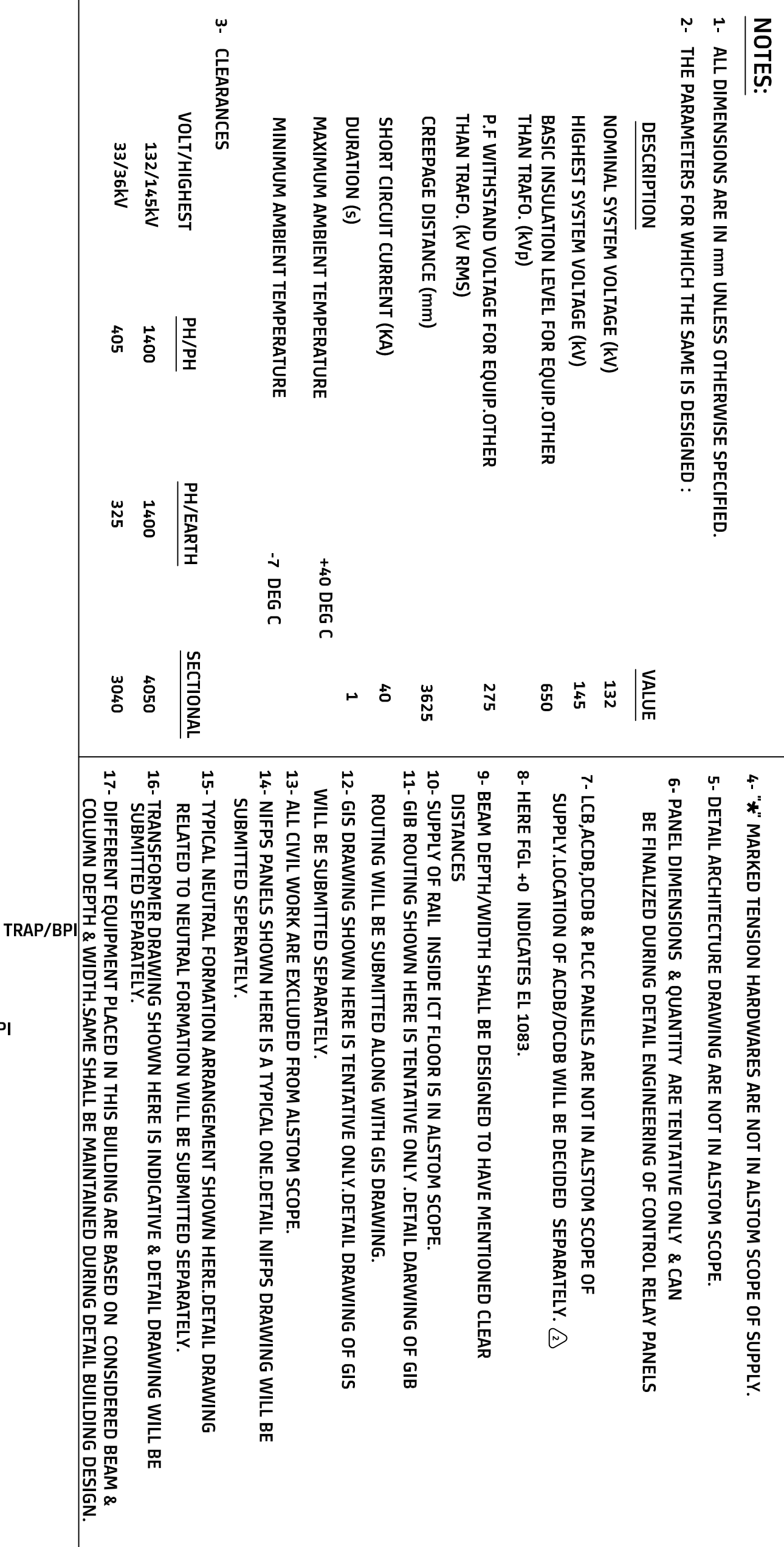
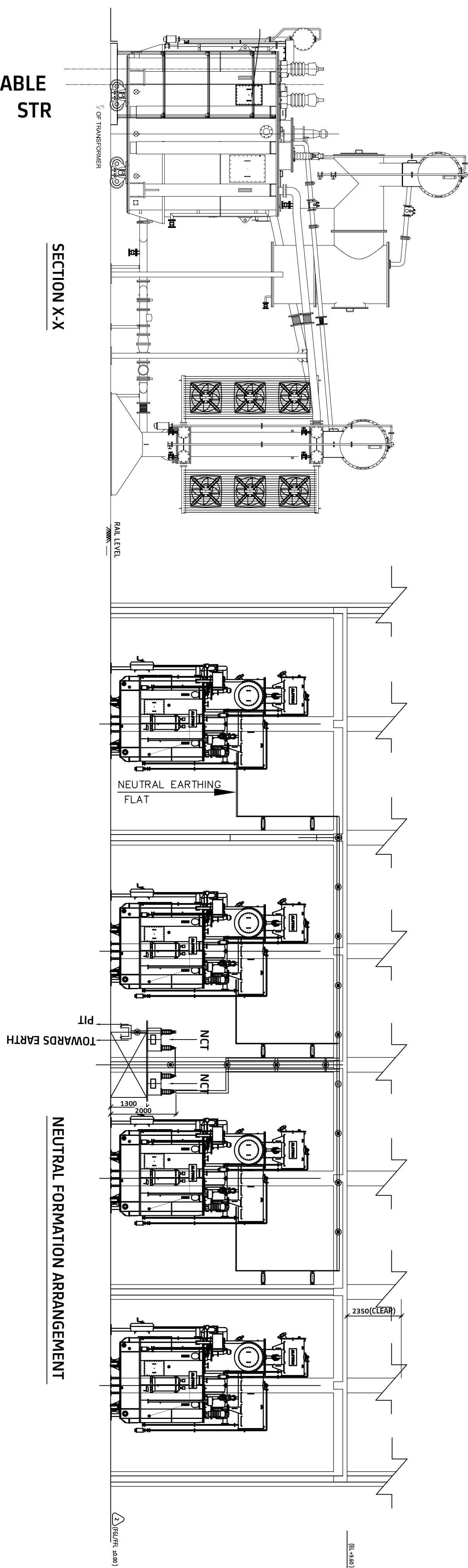
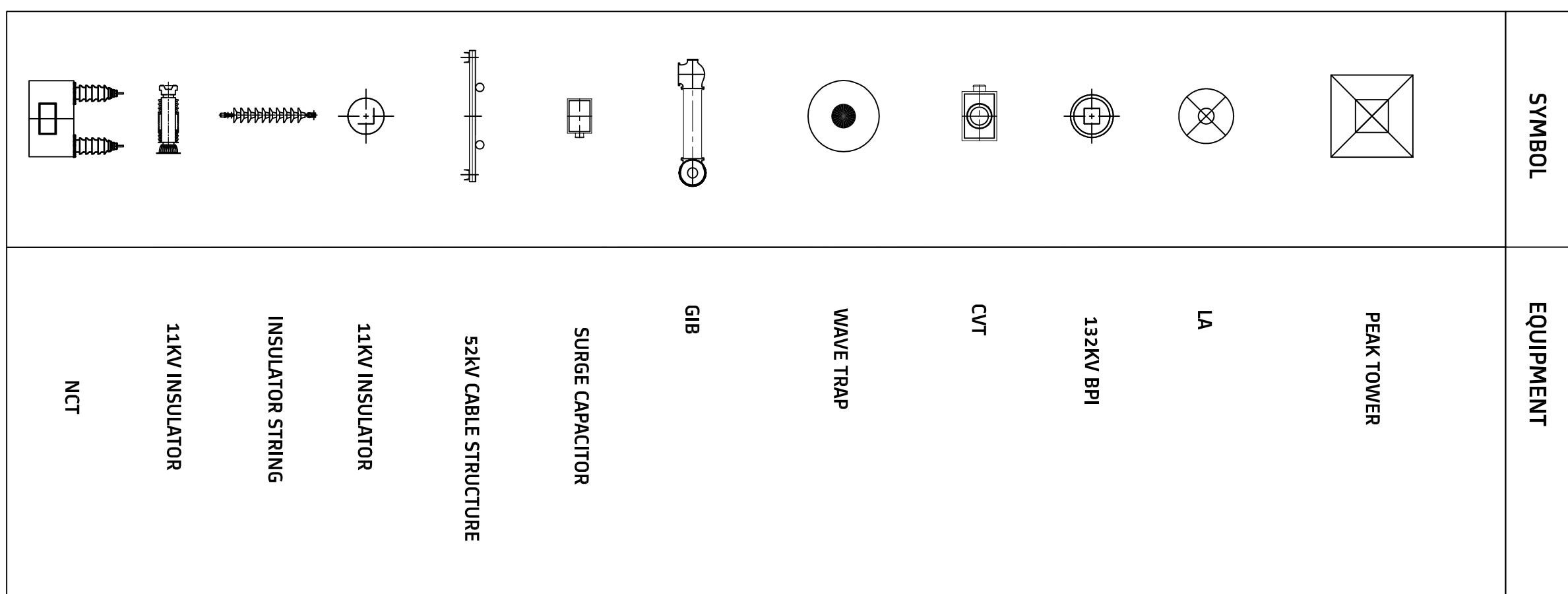
- NOTES:- 1) LAYOUT SHOWS THE OVERALL DIMENSIONS OF POWERHOUSE FOR ELECTRO MECHANICAL EQUIPMENT WHICH ARE TENTATIVE.
2) ALL CIVIL DESIGN INCLUDING CONCRETE THICKNESSES OF TURBINE GENERATOR, WALLS, BEAMS, FLOORS TO BE DEVELOPED
3) OTHER DESIGNS LIKE SUPER STRUCTURE, STAIRWAY, RAILINGS ALSO TO BE DESIGNED BY CIVIL
4) AREAS IDENTIFIED FOR EQUIPMENT ARE TENTATIVE AND MAY CHANGE DURING DETAIL DESIGN.
5) ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES.

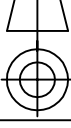
LEGEND :-
FIRST STAGE CONCRETE
SECOND STAGE CONCRETE
THIRD STAGE CONCRETE

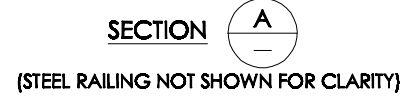
ADDITIONAL INFORMATION		PROJECT		4X180MW MANGDECHHU HEP	
STATUS OF DRAWING		CUSTOMER		MHPA, BHUTAN	
DISTRIBUTION OF PRINTS		CONSULTANT		NHPC LIMITED (A COE. OF NHPC ENTERPRISE)	
SUB-SUPPLIER/VENDOR		CONTRACTOR		BHARAT HEAVY ELECTRICALS LTD. BHOPAL	
DATE		DATE		DATE	
CHECKED		CHECKED		CHECKED	
APPROVED		APPROVED		APPROVED	
SCALE		SCALE		SCALE	
WEIGHT (K.G.)		WEIGHT (K.G.)		WEIGHT (K.G.)	
REF. TO DES/SEC.		REF. TO DES/SEC.		REF. TO DES/SEC.	
ITEM NO.		ITEM NO.		ITEM NO.	
REV.		REV.		REV.	
DRAWING NO.		DRAWING NO.		DRAWING NO.	
02000019258		02000019258		02000019258	
SHEET NO.		SHEET NO.		SHEET NO.	
01		01		01	
NO. OF SHEET		NO. OF SHEET		NO. OF SHEET	
01		01		01	



PANEL NO	PANEL DETAIL	APPROX. DIMENSION (width)x(hmm)
1	GRP PANEL FOR VIBRUM-1	800X800X23.15
2	GRP PANEL FOR VIBRUM-1	800X800X23.15
3	GRP PANEL FOR VIBRUM-2	800X800X23.15
4	GRP PANEL FOR VIBRUM-2	800X800X23.15
5	GRP PANEL	800X800X23.15
6	GRP FOR B/C COUPLER	800X800X23.15
7	GRP PANEL FOR NIKKACHU-1	800X800X23.15
8	GRP PANEL FOR NIKKACHU-2	800X800X23.15
9	GRP PANEL FOR NIKKACHU-2	800X800X23.15
10	GRP PANEL FOR NIKKACHU-2	800X800X23.15
11	BUS BAR PANEL-1	800X800X23.15
12	BUS BAR PANEL-2	800X800X23.15
13	PTCC	800X800X2000
14	PTCC FOR VIBRUM-1	800X800X2000
15	PTCC FOR VIBRUM-2	800X800X2000
16	PTCC FOR NIKKACHU-1	800X800X2000
17	PTCC FOR NIKKACHU-2	800X800X2000
...	ACB	2500X800X1500
...	DCB	2500X800X1500
...	ICB	2500X800X1500



4X180MW MANGDECHHU HEP														
ADDITIONAL INFORMATION				PROJECT				MHPA, BHUTAN						
STATUS OF DRAWING				CUSTOMER				 MHPA DRG. NO. M H P - H C T 0 1 D D 0 0 3 - 0 2						
DISTRIBUTION OF PRINTS				CONSULTANT				 NHPC LIMITED (A CONT. OF INDIA ENTERPRISES)						
SUB-SUPPLIER/VENDOR				CONTRACTOR				ALSTOM T&D INDIA LTD						
REV. DATE		ALTERED		BY		DATE		NO. OF						
ZONE		APPRO.		CODE		UNTOOL. DIMS. GR.		SCALE		WEIGHT (K.G.)		ITEM NO.		
								MIS						
TITLE				EQUIPMENT ARRANGEMENT LAYOUT FOR ICT CUM GIS BUILDING				CONTRACTOR DRAWING NO. 542/PK404-MHP-E-STD-SYS-0026-GA SHT. NO. - 10FT1 NO. OF SHT. : 1						
								RE						
								NO						



LEGEND

 **M15 / A40**
 **M25 / A40**
 **M25 / A20**

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		MANGDECHHU HYDROELECTRIC PROJECT AUTHORITY THIMPHU BHUTAN					
		एन एच पी सी लिमिटेड (भारत सरकार का प्राम) NHPCL Limited (A GOVT. OF INDIA ENTERPRISE)					
मांगडेछु जलविद्युत परियोजना (भूटान) MANGDECHHU H.E PROJECT (BHUTAN)							
FIRE FIGHTING TANK CONCRETE DETAILS PLAN AND SECTION							
SHEET 1 OF 2							
DRAWN प्रक्षेत्र		SUBMITTED प्रस्तुत		RECOMMENDED अनुमोदित		APPROVED अनुमोदन	
DATE दिनांक		DRG. NO.		NHNMN		4EC3	
SEP., 2016		41		DD		204	
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