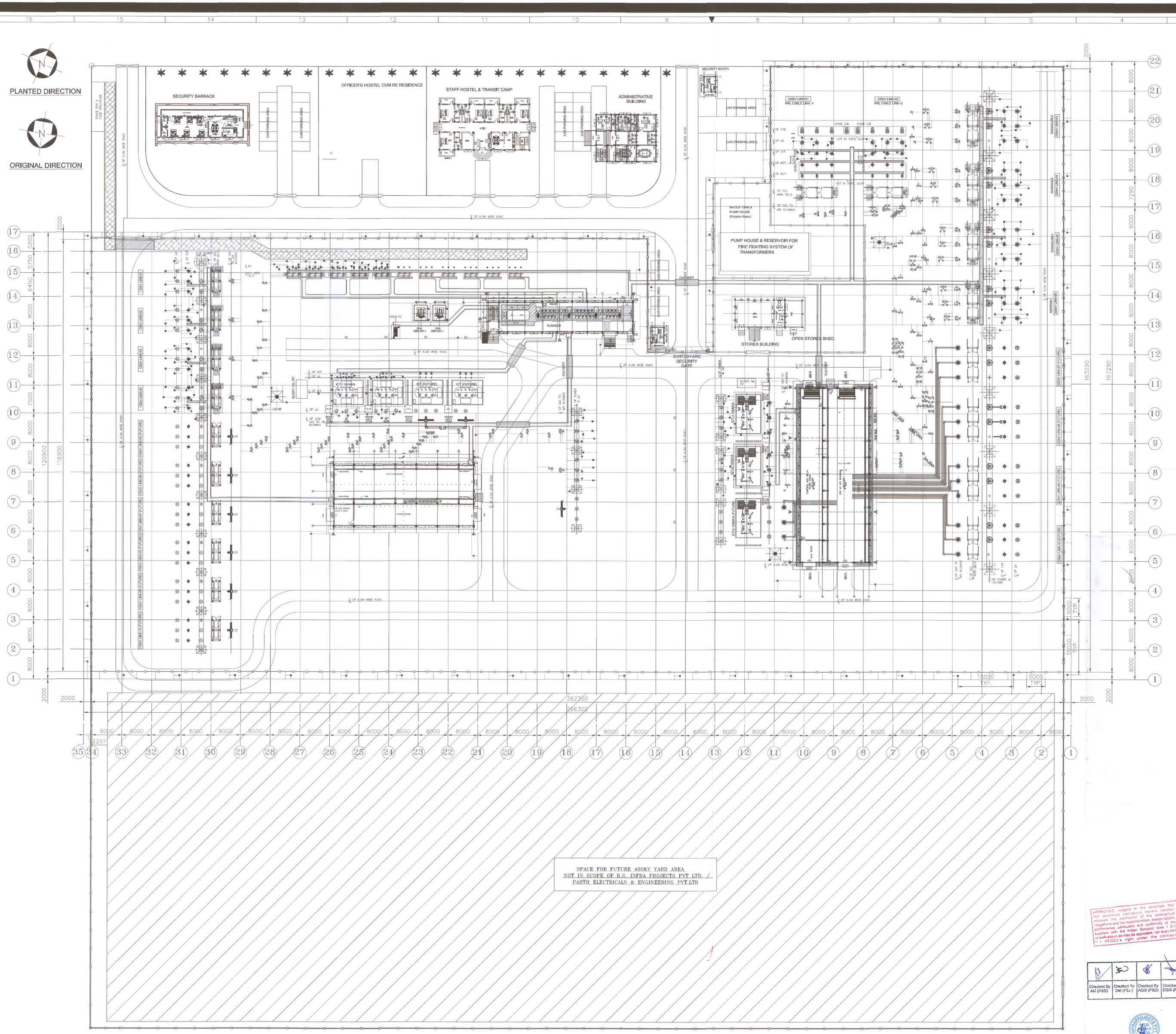
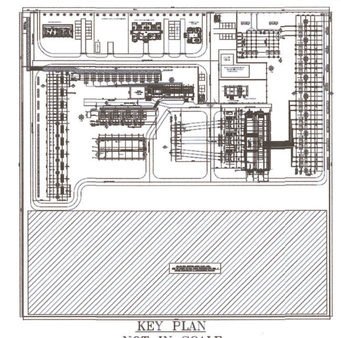




KEY PLAN
NOT IN SCALE

NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. THE LOCATION OF THE MAIN EARTHING FLATS, RISERS, EARTH ELECTRODES SHOWN IN THE DRAWING ARE SYMBOLIC AND SHALL BE UPDATED TO MEET SITE SUITED INSTALLATION REQUIREMENTS.
3. EARTHING CONDUCTORS SHALL BE BURIED AT 700MM (BELOW FINISHED GROUND LEVEL (FGL).
4. EARTHING CONNECTIONS TO EQUIPMENT TERMINALS SHALL BE OF BOLTED TYPE.
5. ALL THE WELDED JOINTS SHALL BE TREATED WITH RED LEAD AND AFTERWARDS COATED WITH TWO COATS OF BITUMEN COMPOUND.
6. WHEREVER EARTHING CONDUCTOR INFRINGES ACROSS CABLE TRENCH AND RAIL TRACKS IT SHALL BE LAID AT 300mm BELOW IT.
7. EARTHING CONDUCTOR CROSSING ROAD SHALL BE LAID AT 300mm (BELOW ROAD OR AT GREATER DEPTH TO SUIT SITE CONDITION.
8. 1500x1500mm AUXILIARY EARTH MAT OF FINER MESH (300mmx300mm) SHALL BE PROVIDED UNDER ISOLATOR MAIN SWITCH & EARTH SWITCH OPERATING MECHANISAM AT A DEPTH OF 300mm BELOW FINISHED GROUND LEVEL.
9. FENCE SHALL BE EARTHED EVERY 5M.
10. CLEAT CLAMPS SUIT FOR 75X12mm GI FLAT EQUIPMENT & STRUCTURE EARTHING RISER. CLEATING AT INTERVALS OF 2000MM
11. ALL THE EQUIPMENT STRUCTURE, TOWER STRUCTURE, METALIC STAIRS SHALL BE CONNECTED TO THE NEAREST EARTHING GRID BY ATLEAST TWO EARTHING LEADS.
12. 75X12mm GI FLAT SUIT FOR CLEAT CLAMP IN EQUIPMENT & STRUCTURE NOT CONSIDER.
13. CABLE TRAY,TRENCH AND GIS BUS DUCT STRUCTURE EARTHING NOT CONSIDER.
14. UNTREATED EARTH PIT WILL BE ADDED IN THIS BOQ WHICH IS SHOWN DETAILED IN INDOOR DSPL.

SI.NO	DESCRIPTION	SYMBOL	QTY.	UNITS
01.	40mm DIA MS ROD FOR MAIN EARTHING CONDUCTOR WITH 10% MARGIN		10512	Meters
02.	40mm DIA MS ROD FOR AUX. EARTH MAT WITH 10% MARGIN		675	Meters
03.	75X12mm GI FLAT FOR RISER - Equipment & Structure Earthing, CABLE TRENCH GATE FENCE (Above ground)		2450	Meters
04.	40mm DIA MS ROD FOR RISER - Equipment & Structure Earthing,CABLE TRENCH GATE FENCE (Below ground)		3386	Meters
05.	FLEXIBLE COPPER CONDUCTOR-Transformer Neutral Earthing (Above ground)		60	Meters
06.	50MM DIA GI PIPE ELECTRODE 3mtrs. LONG FOR TREATED EARTH PIT. FOR CVT & LA		216	Nos.
07.	50MM DIA GI PIPE ELECTRODE 3mtrs.' LONG FOR TREATED EARTH PIT FOR INDOOR LAYOUT		12	Nos.
08.	40 MM DIA MS ROD ELECTRODE 3mtrs. LONG FOR NON TREATED EARTH PIT FOR ICT,AUX TRAFO, LCLM & DC PERIFARAL EARTH GRID/BOUNDRY & TOWER WITH PEAK		97	Nos.
08.	TREATED EARTH PIT FOR INDOOR DSPL LAYOUT	P	17	Nos.

quantity shall be as per Earthing calculation and as per site requirement

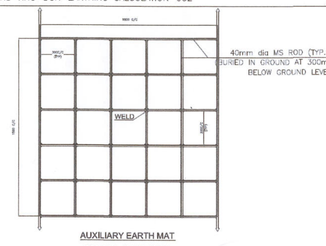
* all the equipment earthing shall be as per the approved typical Earthing drawing.

LEGEND:-

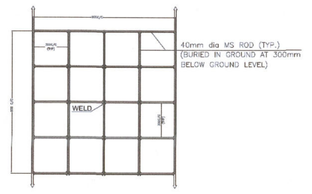
- 40mm Dia MS Rod (MAIN MAT)
- 40mm DIA MS ROD FOR RISER (Below ground)
- 75X12mm GI FLAT FOR CABLE TRENCH
- 50MM DIA GI PIPE ELECTRODE 3mtrs. LONG FOR TREATED EARTH PIT.
- 40 MM DIA MS ROD ELECTRODE 3mtrs. LONG FOR NON TREATED EARTH PIT.
- AUXILIARY EARTH MAT
- FLEXIBLE COPPER CONDUCTOR.
- TREATED EARTH PIT FOR INDOOR DSPL LAYOUT
- 50MM DIA GI PIPE ELECTRODE 3mtrs. LONG FOR TREATED EARTH PIT FOR INDOOR LAYOUT

REFERENCE DRGS:-

1. OVERALL GENERAL ARRANGEMENT LAYOUT PLAN & SECTION 220/132/33kV SUB-STATION AT KHUMTAI, GOLAGHAT (ASSAM). DRG. NO: DP-22100-RS-KHU-OGA-LAY-DWG-001
2. EARTHING DESIGN CALCULATION 400/220/132/33kV SWITCHYARD, KHUMTAI. DOC NO: DP-22100-RS-KHU-DGN-EARTHING CALCULATION-002



AUXILIARY EARTH MAT
220KV & 132KV SIDE



AUXILIARY EARTH MAT
33KV SIDE

REV.NO.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
3	21.02.25	AS PER REVICED COMMANDS	CS	KM	KS
2	24.12.24	AS PER REVICED COMMANDS	CS	KM	KS
1	12.09.24	AS PER REVICED COMMANDS	CS	KM	KS
0	19.03.24	FIRST SUBMISSION	DG	KM	KS

REVISIONS

CONTRACTOR: R.S. INFRAPROJECTS PVT. LTD (CONSORTIUM WITH) PARTH ELECTRICALS & ENGINEERING PVT.LTD

CLIENT: ASSAM ELECTRICITY GRID CORPORATION LIMITED

PROJECT: CONSTRUCTION OF 220/132KV, 2X160 MVA; 132/33KV, 2X50 MVA GIS AT LOCATION (KHUMTAI) AND ITS ASSOCIATED LINES AND BAY EXTENSION (PACKAGE D)

TITLE: OVERALL GENERAL ARRANGEMENT EARTHING LAYOUT. 220/132/33kV SUB-STATION AT KHUMTAI, GOLAGHAT (ASSAM)

APPROVED, subject to the condition that the approval conveyed herein neither relieves the contractor of his contractual obligations and his responsibilities, design details, performance particulars and conformity of the subsidiary with the Indian Statutory laws / IEE Regulations as may be applicable, nor does limit modification as may be AEGCL's right under the contract.

Checked By AM (PSD)	Checked By DM (P&C)	Checked By AGM (P&D)	Checked By DGM (P&D)	Approved By GM (P&D)

SCALE	NTS	DATE	DRG. NO.			SHEET SIZE
DRAWN BY	DG	21.12.24	DP-22100-RS-KHU-OGA-EARTHING-DWG-011			A0
CHECKED BY	KM	21.12.24				
APPROVED BY	KS	21.12.24	REVISION:	R3	SHEET NO. 01 OF 01	