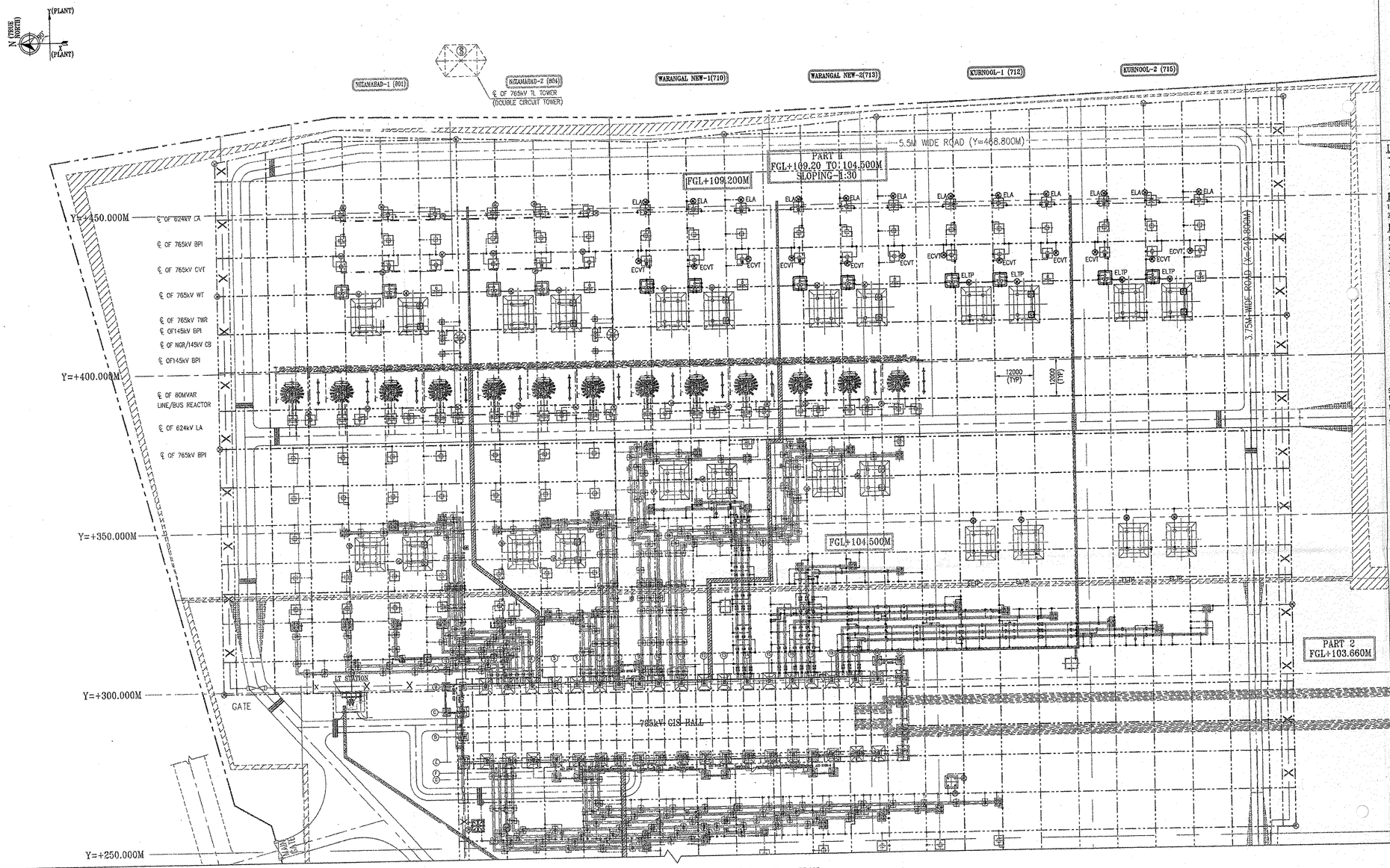
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OVERALL EARTHING LAYOUT – PLAN

LEGEND:–

- ——— 40mm ø MS ROD FOR MAIN EARTH MAT (EXISTING UNDER PROPOSED BAY AND THEREFORE NOT IN L&T's SCOPE)
- – – – 40mm ø MS ROD (BELOW GROUND RISER)
- –·–·– 50x6mm MS FLAT (FOR OUTDOOR CABLE TRENCH)
- ⊗ 40mm ø, 3M LONG M.S ROD ELECTRODE

PGCIL REFERENCE DRAWINGS:–

1. GENERAL ARRANGEMENT – 765/400kV HYDERABAD GIS SUBSTATION, DWG NO: C/ENGG/SR-I/HYDERABAD GIS/GA, REV 00.
2. STANDARD EARTHING DETAILS, DRAWING No: C/ENGG/SPEC/SE REV. No: 08

EXISTING SUBSTATION REFERENCE DRAWINGS:–

1. 765/400kV HYDERABAD GIS SUBSTATION – OVERALL EQUIPMENT LAYOUT, DWG NO: 017129–E–IS–SY–EL–1001.
2. 765/400kV HYDERABAD GIS SUBSTATION – 765kV GIS BUILDING EARTHING & LIGHTNING PROTECTION LAYOUT, DWG No: 015052–E–IS–GB–GL–1014
3. 765/400kV HYDERABAD GIS SUBSTATION – 765kV GIS OUTDOOR EARTHING LAYOUT, DWG No: 015052–E–IS–SY–GL–1013.

L&T REFERENCE DRAWINGS:–

1. 765/400kV HYDERABAD GIS SUBSTATION – 765kV GIS BUILDING EARTHING LAYOUT, DRAWING No: 017129–E–IS–HY–GL–1009.
2. 765/400kV HYDERABAD GIS SUBSTATION – 765kV OUTDOOR CABLE TRENCH LAYOUT, DRAWING No: 017129–E–IS–HY–CL–1008.

NOTES:–

1. ALL DIMENSIONS ARE IN mm AND LEVELS & CO–ORDINATES ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
2. EARTHPIT LOCATION SHOWN ARE INDICATIVE ONLY. MINOR MODIFICATION IF ANY MAY BE CARRIED OUT AT SITE.
3. EARTHING CONNECTIONS TO EQUIPMENT TERMINALS SHALL BE OF BOLTED TYPE.
4. CONNECTION OF EQUIPMENT ARE INDICATIVE ONLY. EXACT LOCATION OF CONNECTIONS SHALL BE DECIDED SUITABLY AT SITE AS PER EQUIPMENT MANUFACTURER'S EARTHING ARRANGEMENT.
5. TAP CONNECTION FROM EARTHGRID TO THE EQUIPMENT/STRUCTURE SHALL BE TERMINATED ON THE EARTHING TERMINALS OF THE EQUIPMENT/ STRUCTURE AS PER THE "PGCIL STANDARD EARTHING DETAILS" OF SECTION–SWITCHYARD ERECTION REV. 10 OF TECHNICAL SPECIFICATION.
6. WHEREVER EARTHING GRID INFRINGES WITH FOUNDATION, GRID CONDUCTOR SHALL BE DIVERTED SUITABLY AT SITE, WITHOUT EXCEEDING THE MAXIMUM SPAN INDICATED IN THE LAYOUT
7. ALL UNDERGROUND CONNECTIONS SHALL BE MADE BY ELECTRIC ARC WELDING. THE WELDING JOINT SHALL BE ALLOWED TO COOL NATURALLY.
8. ALL THE WELD JOINTS SHALL BE TREATED WITH RED LEAD AND AFTERWARDS COATED WITH TWO COATS OF BITUMEN COMPOUND.
9. CABLE SUPPORTS IN TRENCHES SHALL BE EARTHED BY 50x6 mm MS FLAT.
10. WHEREVER EARTHING CONDUCTOR INFRINGES CABLE TRENCH, THE SAME SHALL BE LAID AT 300mm BELOW CABLE TRENCH.
11. THE EARTH FLAT ALONG THE CABLE TRENCH SHALL BE EARTHED AT THE ENDS OF THE TRENCH END AND AT EVERY 30M (MAX.) INTERVAL. THE FLAT SHALL BE FINALLY PAINTED WITH TWO COATS OF RED OXIDE PRIMER AND TWO COATS OF POST OFFICE RED ENAMEL PAINT.
12. ALL THE EQUIPMENTS STRUCTURE, TOWER STRUCTURE SHALL BE CONNECTED TO THE NEAREST EARTHING GRID BY TWO EARTHING LEADS.
13. GRAVEL SPREADING AND PCC MAT SHALL BE PROVIDED IN SEPARATE CIVIL LAYOUT.
14. TWO RISERS TO BE PROVIDED FOR EACH BUSDUCT SUPPORT STRUCTURE.

for reference only.

BILL OF QUANTITY FOR EARTHING:–

SYMBOL	DESCRIPTION	UNIT	QUANTITY	BPS QTY
⊗ ELA	ROD EARTH ELECTRODE FOR LIGHTNING ARRESTOR 40mm ø, 3M LONG M.S ROD ELECTRODE (AS PER PGCIL STANDARD DWG SHEET:14 & 06)	No.	12	LS
⊗ ECVT	ROD EARTH ELECTRODE FOR CAPACITOR VOLTAGE TRAFO. 40mm ø, 3M LONG M.S ROD ELECTRODE (AS PER PGCIL STANDARD DWG SHEET:13 & 06)	No.	12	LS
⊗ ELTP	ROD EARTH ELECTRODE FOR TOWER WITH PEAK 40mm ø, 3M LONG MS ROD ELECTRODE (AS PER PGCIL STANDARD DWG SHEET: 06)	No.	8	LS
———	40mm ø MS ROD FOR MAIN EARTH MAT SWTCHYARD AREA	M	Ⓐ	–
– – –	40mm ø MS ROD (BELOW GROUND RISER INCLUDING CIB SUPPORT STRUCTURES)	M	1500	LS
	75x12mm GS FLAT (ABOVE GROUND RISER)	M	1200	LS
	50x6mm GS FLAT FOR JB / MB	M	50	LS
–·–·–	50x6mm MS FLAT (FOR OUTDOOR CABLE TRENCH)	M	Ⓑ 276	LS
	CLEAT TYPE CLAMP TO SUIT 75x12mm GS FLAT AT EVERY 2M INTERVAL	No.	486	LS

Ⓐ AS PART OF OUTDOOR CABLE TRENCH LAYOUT, DWG No. 017129–E–IS–HY–CL–1008.
Ⓑ EARTHMAT IN THE SWITCHYARD FOR THE PROPOSED BAY IS EXISTING.

Any additional item/quantity required for successful completion of scope of work shall be supplied by ..... without any additional cost implication to POWERGRID.

Cat - I

Acc 13/12/17

REV.NO.	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
A	ISSUED FOR APPROVAL	APV 30.09.17	UM 30.09.17	RAJ 03.10.17	SHM 03.10.17

REVISIONS

HYOSUNG CORPORATION

L&T Construction
Power Transmission & Distribution

CLIENT: POWER GRID CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)

CONSULTANT: –

PROJECT: SUBSTATION PACKAGE SS–01 FOR A) EXTENSION OF 765kV HYDERABAD (GIS) SUBSTATION, B) EXTENSION OF 765kV KURNOOL (AIS) SUBSTATION & EXTENSION Of 400kV WARANGAL (AIS) SUBSTATION WORKS ASSOCIATED WITH ADDITIONAL INTER–REGIONAL AC LINK FOR IMPORT INTO SOUTHERN REGION
LOA NO. :CC–CS/708–SR1/SS–3539/3/G11/NOA–II/7208 & NOA Ref No:–CC–CS/708–SR1/SS–3539/3/G11/NOA–II/7209

017129–E–IS

TITLE: EXTENSION OF 765kV HYDERABAD (MAHESWARAM) GIS SUBSTATION
765kV GIS BUILDING
OUTDOOR EARTHING LAYOUT

SCALE 1:700

PROJECTION

CHECKED BY	SIGN	DATE
ARCHITECTURE	–	–
CIVIL & STRUCTURAL	3/10/17	R.V
PLUMBING & SANITARY	–	–
MECHANICAL	–	–
ELECTRICAL	–	–
INSTRUMENTATION	–	–

DRG. No. 0 1 7 1 2 9 – E – I S – H Y – E S – 1 0 0 4
SHEET 01 OF 01

SIZE A1 REV. A

RELEASED FOR ☐ PRELIMINARY ☐ TENDER ☐ INFORMATION ☑ APPROVAL ☐ CONSTRUCTION

E:\Mahendran\Hyderabad GIS 765kV\Outdoor Earthing\017129–E–IS–HY–ES–1004–01–A.dwg