

INDICATIVE DRAWING FOR TENDER PURPOSE ONLY



LEGEND:-	
SYMBOL	DESCRIPTIONS
	MAIN EARTHMAT (40mm MS ROD)
	EQUIPMENT RISER (40mm MS ROD)
	ROD ELECTRODE WITH TEST LINK
	PIPE ELECTRODE

SUMMARY: EARTHING MATERIAL QUANTITY			
Sl. No.	EARTHING ITEMS	UNIT	QTY
1	40MM DIA MS ROD FOR MAIN EARTH MAT (EXCLUDING GROUNDING ROD LENGTH)	Mtrs	19100
2	40MM DIA MS ROD FOR AUX EARTH MAT	Mtrs	6695
3	40MM DIA MS ROD FOR BELOW GROUND RISER	Mtrs	6654
4	75 X 12 MM G.S. PLAT FOR ABOVE GROUND EARTHING OF MAIN EQUIPMENT & SUPPORT STRUCTURE	Mtrs	6547
5	50 X 6 MM G.S. PLAT FOR ABOVE GROUND EARTHING OF MB, JB, BWK Etc.	Mtrs	2739
6	3M LONG X 40MM DIA MS ROD WITH TEST LINK	Nos.	160
7	3M LONG X 40MM DIA GI PIPE (TREATED PIT)	Nos.	14

- NOTES FOR EARTHING:-
- ALL DIMENSIONS ARE IN mm AND LEVELS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 - ALL GROUNDING WORK CONFORMS TO THE PROVISION OF IS:3043.
 - CABLE TRAYS SHALL BE MADE ELECTRICALLY CONTINUOUS BY BONDING THE JOINTS BETWEEN HORIZONTAL RUNNER. ALL CABLE TRAYS SHALL BE EFFECTIVELY CONNECTED TO EARTH GRID. CONTINUOUS LENGTH OF CABLE TRAYS SHALL BE EARTHED AT 30 METRES INTERVAL.
 - METAL SHEATH, SCREEN, SHIELD AND ARMOUR OF ALL CABLES EXCEPT SINGLE CORE CABLE, SHALL BE EARTHED AT BOTH ENDS AT THE EQUIPMENT WHERE THE CABLES ARE TERMINATED. SINGLE CORE CABLE SHALL BE EARTHED AT SWITCHGEAR ONLY.
 - EARTHING CONNECTION WITH EQUIPMENT EARTHING PADS SHALL BE WELDED TYPE.
 - WHEREVER IT PASSES THROUGH WALL, FLOORS ETC. GALVANISED IRON SLEEVES SHALL BE PROVIDED FOR THE PASSAGE OF THE CONDUCTOR AND BOTH ENDS OF THE SLEEVE SHALL BE SEALED TO PREVENT THE PASSAGE OF WATER THROUGH THE SLEEVES.
 - EARTHING CONDUCTOR AROUND THE BUILDING SHALL BE BURIED 600mm BELOW GROUND LEVEL IN EARTH AT A MINIMUM DISTANCE OF 1500mm FROM THE OUTER BOUNDARY OF THE BUILDING.
 - CONNECTION BETWEEN EQUIPMENT EARTHING LEAD AND MAIN EARTHING CONDUCTORS AND BETWEEN MAIN EARTHING CONDUCTORS SHALL BE WELDED TYPE. FOR RUST PROTECTIONS, THE WELDS SHOULD BE TREATED WITH RED LEAD AND AFTERWARDS COATED WITH TWO LAYERS OF BITUMEN COMPOUND TO PREVENT CORROSION.
 - ALL THE PANELS & ELECTRICAL EQUIPMENT SHALL BE EARTHED AT TWO POINTS (MINIMUM).
 - THE PORTION OF GALVANISED STEEL FLATS WHICH UNDERGOES WELDING AT SITE SHALL BE COATED WITH TWO COATS OF ANTI-CORROSIVE PAINT AFTER WELD.
 - WHEREVER EARTHING GRID INFRINGES WITH FOUNDATION, GRID CONDUCTOR SHALL BE DIVERTED SUITABLY AT SITE.
 - THE DISTANCE BETWEEN TWO GI PIPE ELECTRODE SHOULD BE TWICE OF THE LENGTH OF GI PIPE ELECTRODE.
 - WHEREVER EARTHING CONDUCTOR CROSSES CABLE TRENCHES, UNDERGROUND SERVICE DUCTS, PIPES, TUNNELS, RAILWAY TRACKS ETC., IT SHALL BE LAID MINIMUM 300mm BELOW THEM AND SHALL BE RE-ROUTED IN CASE IT FOULS WITH EQUIPMENT/STRUCTURE FOUNDATIONS.
 - EQUIPMENT EARTHING DETAILS DRAWING SHALL BE SUBMITTED SEPARATELY VIA DRAWING NO. KEC-SB210-KLM-ESE-307-DRG-046.
 - EARTHING CONDUCTOR IS BURIED 2000 MM OUTSIDE THE SWITCHYARD FENCE. ALL THE GATES AND EVERY ALTERNATE POST OF THE FENCE SHALL BE CONNECTED TO EARTHING GRID.
 - MBK & JB EARTHING RISER SHALL BE AS PER EQUIPMENT EARTHING DETAILS DRAWING NO. KEC-SB210-KLM-ESE-307-DRG-046.

- REFERENCE DRAWING:-
- FOUNDATION LAYOUT PLAN (WP) = KEC-SB210-KLM-ESC-600-DRG-002
 - ELECTRICAL LAYOUT PLAN = KEC-SB210-KLM-ESE-305-DRG-001
 - EARTH MAT SIZING CALCULATION = KEC-SB210-KLM-ESE-307-CAL-045

03	FOR APPROVAL					28.03.2023
02	FOR APPROVAL					24.03.2023
01	FOR APPROVAL					21.03.2023
00	FOR APPROVAL					17.03.2023
REV.	DESCRIPTION	DRAWN	PREP.	CHKD.	APPD.	DATE

OWNER	 IndiGrid KALLAM TRANSMISSION LIMITED Regd. Office: A-52/6, G/F, Ali Extn, Badarpur, New Delhi - 110044, India.	
EPC CONTRACTOR	 KEC KEC INTERNATIONAL LTD. # FLOOR, BUILDING No. 9A, DLF CYBER CITY, PHASE III, GURUGRAM (HARYANA) - 122002	
PROJECT:	Design, Engineering, Procurement, Construction, Testing and Commissioning of 2X 500 MVA 400/220kV AIS Substation at Kallam and 400kV Multi circuit & 400kV Double Circuit Transmission Lines associated with Kallam Transmission Ltd.	
LOA NO.	KTL/22-23/LOA/001 Dated: 14th January 2022	
TRANSMISSION SCHEME	Transmission System for Evacuation of Power from RE Project in Osmanabad Area (1GW) in Maharashtra.	
DRG. TITLE	OUTDOOR EARTHMAT LAYOUT PLAN	
DRG. NO.:	KEC-SB210-KAL-ESE-307-DRG-045	
SCALE: 1:675	JOB NO:	SHEET: 1 OF 1