

REVISED EARTHMAT FOR THE PROPOSED 110/11 KV CHALAGERI STATION IN RANEBENNUR(T), HAVERI(D)

IMPORTANT * THE NO OF CAST IRON PIPE ELECTRODES SHALL BE PROVIDED AS PER GUIDELINES
* BEFORE EXECUTION PLEASE CAREFULLY GO THROUGH THE ENCLOSED GUIDELINES *
* NOT TO SCALE

SALIENT DESIGN FEATURES
AREA COVERED BY EARTHMAT IN SQ MTR 7867
DEPTH OF BURIAL OF EARTHMAT IN MTR 0.9
SPACING BETWEEN MAT CONDUCTOR (M.S. FLAT) IN MTR 2
SIZE OF EARTHMAT CONDUCTOR (M.S.FLAT) IN MM 75 X 12 MM

SPREADING OF GRANITE METAL JELLY OF SIZE 20/25 MM TO A HEIGHT OF 100 MM OVER THE ENTIRE EARTH MAT AREA.

BILL OF MATERIALS (APPROXIMATE QUANTITY) FOR EARTHMAT FORMATION & FENCING.
(AS PER THE LAYOUT DRAWING NO.KPTCL/TECH/55-110/977-A Dtd 14.05 2025)

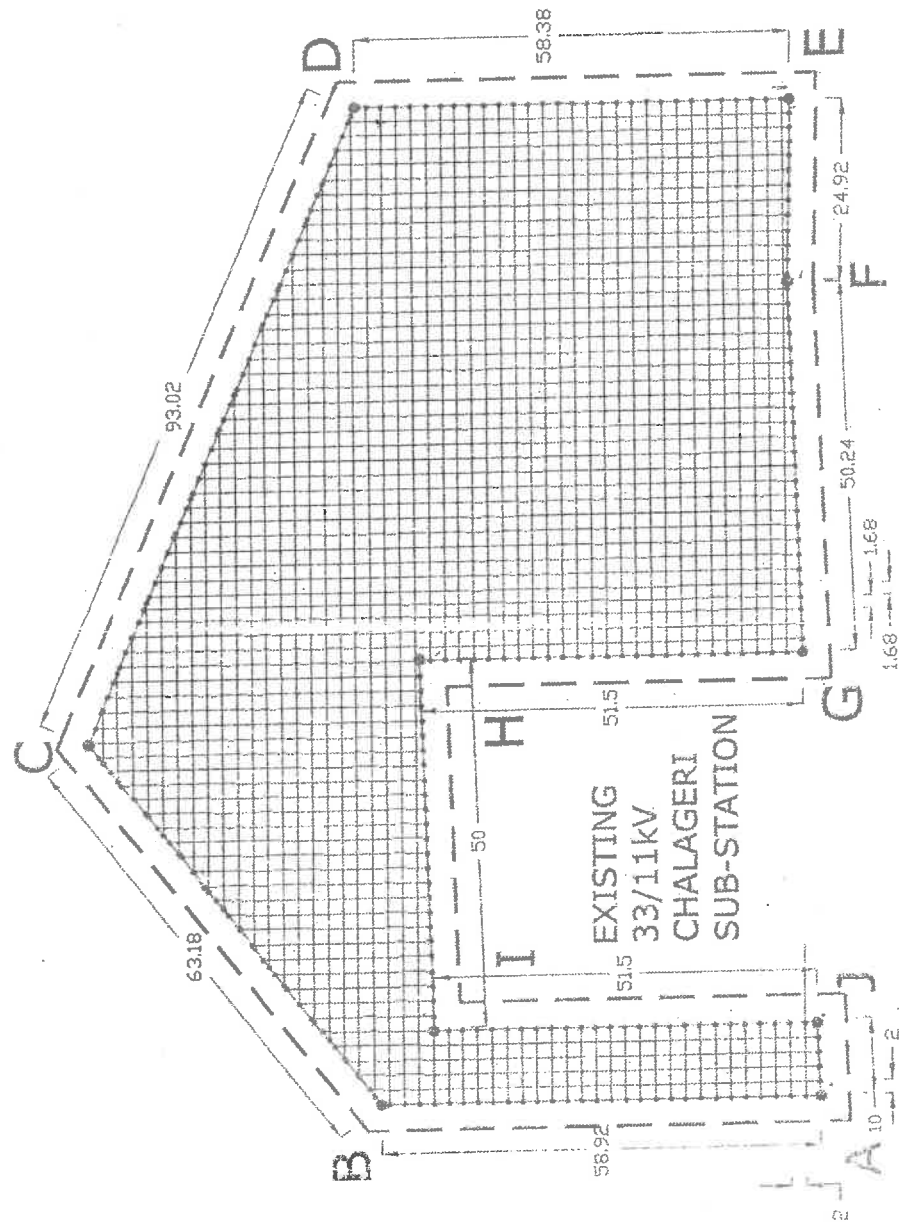
1.Excavation,formation,refilling	4030	Cmtr.
2.Material for formation of earthmat as per specification		
a)M.S.Flat 75 X 12 MM	8956	Mtr.
b)MS Round rods 40 mm dia,1.075 Ml. long	282	No.
c)G.I.Flats 75 X 12 MM for earth connection	1702	Mtr.
d)Cast iron pipe electrodes of 100 mm Id,13 mm thick,2.75 mtr.long	51	No.
e)Spreading of Granite metal jelly of size 20/25 mm size to a height of 100 mm	787	Cmtr.
f)Deep bore electrodes 40 mm Dia, 5 mtr length, 10 mtr spacing b/w any two electrodes	15	No's

* ALL DIMENSIONS ARE IN METER

NOTE:-

1. THE PROPOSED EARTHMAT IS DESIGNED CONSIDERING BREAKER SHORT TIME CURRENT RATING OF 40 KA WITH 0.75 GRID CURRENT FACTOR.
2. 'ABCDEFHJIA' INDICATES PROPOSED EARTH MAT OF AREA 7867 SQ MTR WITH 75 X 12 MM MS FLAT AT 2 MTR SPACING.
3. 'GHJIG' INDICATES EXISTING 33/11KV CHALAGERI EARTH MAT OF AREA 2209 SQ MTR WITH 50 X 6 MM MS FLAT AT 5MTR SPACING AND IT SHALL BE CONNECTED TO EXISTING EARTHMAT BY CONTINUOUS WELDING DULY OBSERVING R&D GUIDELINES.
4. EXISTING 33KV FENCE SHALL BE SHIFTED TO OUTER BOUNDARY BY MAINTAINING MINIMUM DISTANCE OF 1.5 MTR FROM THE EARTHMAT PERIPHERY.
5. THE PROPOSED EARTH MAT SHALL BE EXECUTED DULY OBSERVING THE R&D GUIDELINES.
6. DEEP BORE ELECTRODES SHALL BE PROVIDED AT CONVENIENT LOCATIONS IN PROPOSED EARTHMAT AREA(110KV SWITCHYARD) BY MAINTAINING MINIMUM DISTANCE OF 10M B/W TWO ELECTRODES.

THIS DRAWING SUPERCEDES ALL THE EARLIER EARTHMAT DESIGN ISSUED BY THIS OFFICE



FENCE SHALL BE AT A MINIMUM DISTANCE OF 1.5 METERS AWAY FROM THE PERIPHERY OF THE STATION EARTHMAT
40 MM DIA M.S. ROUND RODS OF LENGTH 1.075 METER TO BE DRIVEN AS SHOWN
C.I PIPE ELECTRODES PROPOSED (MIN 5.5 MTR SPACING SHALL BE MAINTAINED BETWEEN ANY TWO ELECTRODES)

R & D CENTRE, K P T C L			
DRG NO.	SEE/R&D/JEE/KCO-169/2025-26/F-110(11)-R1 Dtd.	11-05-2025	
Author	16/05/2025	16/05/2025	16/05/2025
Check	16/05/2025	16/05/2025	16/05/2025
Appr	16/05/2025	16/05/2025	16/05/2025
Scale	1:1	1:1	1:1