

# IMPORTANT

\* THE NO OF CAST IRON PIPE ELECTRODES SHALL BE PROVIDED AS PER GUIDELINES

**\* BEFORE EXECUTION PLEASE CAREFULLY GO THROUGH THE ENCLOSED GUIDELINES \***

\* ALL DIMENSIONS ARE IN METER

## SALIENT DESIGN FEATURES

AREA COVERED BY EARTHMAT IN SQ MTR

### DEPTH OF BURIAL OF EARTH MAT IN MTR

SPACING BETWEEN MAT CONDUCTOR (M.S. FLAT) IN MTR

SIZE OF EARTH MAT CONDUCTOR (M.S. FLAT) IN MM

11408

0.9

2

75 X 8 MM

## 1. Excavation, formation, refilling

2 Material for formation of earthmat as per specification

a) M 5 Flat 75 X 8 MM

b) MS Round rods 32 mm dia, 1.075 Mt. long

c) G.I. Flats 75 X 8 MM for earth connection

d) Cast iron pipe electrodes of 100 mm Id, 13 mm thick, 2.75 mtr. long

e) Asphalting to a height of 100 mm

g) Deep bore electrodes of 40 mm dia, 5 Mt. long shall be provided at convenient location within earthen area by maintaining min. spacing of 10 mtr between any 2 deep bore electrodes.

5542

12439

252 No.

1760 Mtr.

No. 56

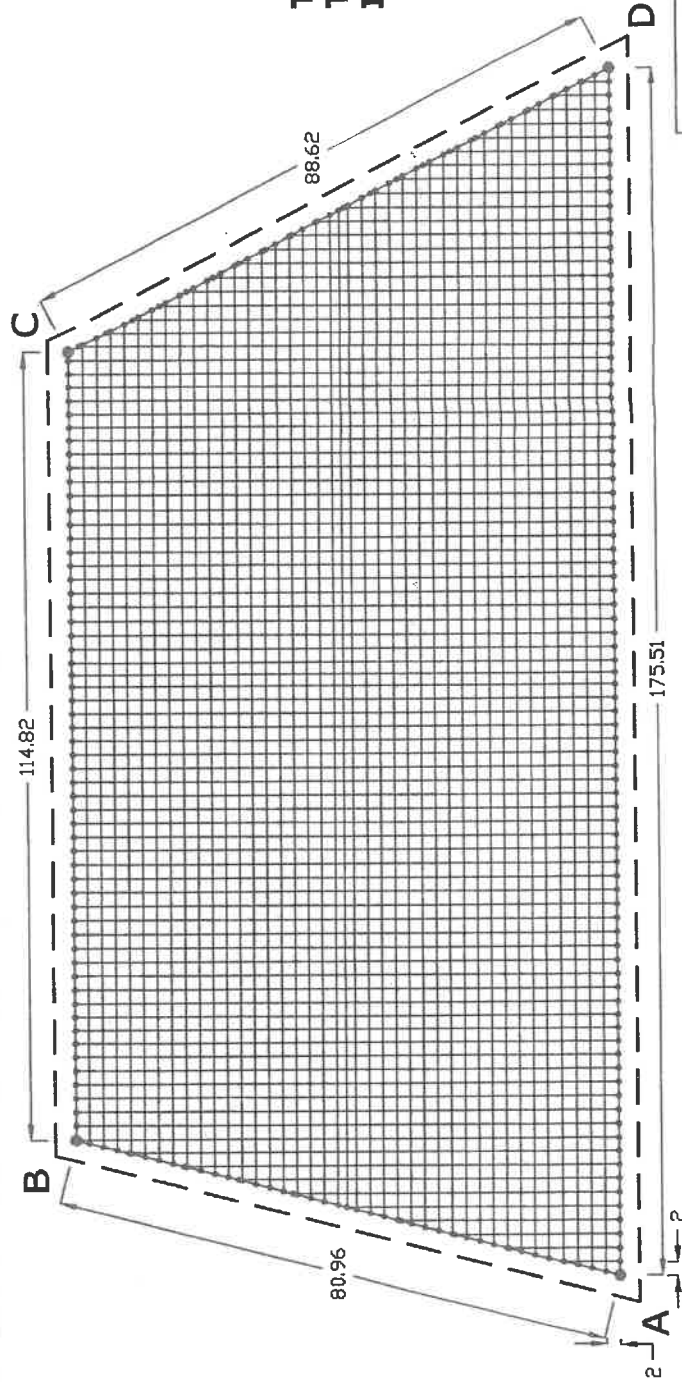
1141	Cmtr.
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No. 25

**ASPHALTING TO AN HEIGHT OF 100 MM SHALL BE PROVIDED OVER THE ENTIRE EARTH MAT AREA.**

**NOTE:**

- NOTE:
1. THE PROPOSED EARTHMAT IS DESIGNED CONSIDERING 110KV CLASS BREAKER SHORT TIME CURRENT RATING OF 40KA WITH 0.5 GRID FACTOR.
  2. DUE TO HIGH RESISTIVITY & AVAILABILITY OF LESS LAND, ASPHALTING IS SUGGESTED FOR ENTIRE SWITCHYARD AREA TO OBTAIN SAFE STEP AND TOUCH POTENTIAL
  3. 25NOS OF 40MM DIA, 5M LONG DEEP BORE ELECTRODES SHALL BE PROVIDED AT SUITABLE LOCATIONS WITH IN THE EARTHMAT AREA  
BY MAINTAINING MINIMUM DISTANCE OF 10M BETWEEN TWO ELECTRODES.
  4. PROPOSED EARTHMAT SHALL BE EXECUTED DULY OBSERVING R&D GUIDELINES.



**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 EARTH MAT
- 32 MM DIA M.S. ROUND RODS OF LENGTH ONE METER TO BE DRIVEN AS SHOWN
- C.I.PIPE ELECTRODES FOR EARTH MAT CORNERS (Minimum spacing of 5.5m shall be maintained between any two electrodes)

R&amp;D CENTRE, K P T C L

DRG NO SEE/R&D/FFF/KCO-169/E-110(09)/2024-25/R2 Dtd.01-01-2025

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