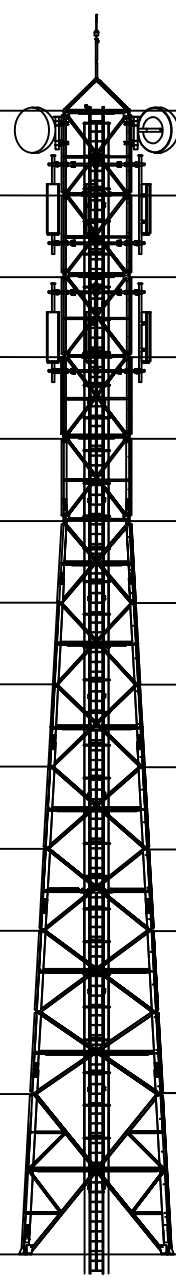
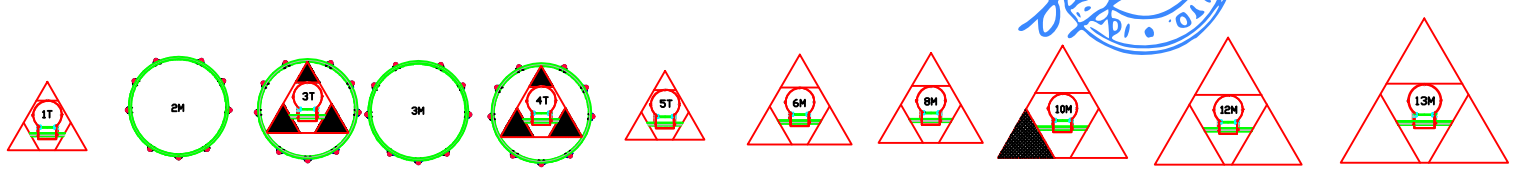


| LEVEL | FACE WIDTH | PLATFORM         | LEG JOINT NAME | LEG LENGTH | LEGS SIZE  | PANEL NO. | LENGTH (METER) | DIAGONALS | PANEL TOP- HORIZONTALS | PANEL MID- HORIZONTALS | PLAN BRACING | SEC. BRACING |
|-------|------------|------------------|----------------|------------|------------|-----------|----------------|-----------|------------------------|------------------------|--------------|--------------|
| 35000 | 1700       |                  | A              |            |            |           |                |           |                        |                        |              |              |
| 32500 | 1700       | WORKING PLATFORM | B              | 5000       | 75x75x6    | 1         | 2              | 50x50x4   | 45x45x4                | 45x45x4                | 45x45x4      | 45x45x4      |
| 30000 | 1700       |                  |                |            |            | 2         | 2.5            | 55x55x4   |                        |                        |              |              |
| 27500 | 1700       | WORKING PLATFORM | C              | 5000       | 75x75x6    | 3         | 2.5            | 55x55x4   | 45x45x4                | 45x45x4                |              |              |
| 25000 | 1950       |                  |                |            |            | 4         | 2.5            | 55x55x5   |                        |                        |              |              |
| 22500 | 2200       |                  | D              | 2500       | 100x100x8  | 5         | 2.5            | 65x65x5   |                        |                        | 50x50x4      | 50x50x4      |
| 20000 | 2450       |                  |                | 2503       |            | 6         | 2.5            |           |                        |                        |              |              |
| 17500 | 2700       |                  | E              | 5000       | 110x110x12 | 7         | 2.5            | 60x60x5   | 50x50x4                | 50x50x4                | 50x50x4      | 50x50x4      |
| 15000 | 2950       | REST PLATFORM    |                |            |            | 8         | 2.5            |           |                        |                        |              |              |
| 12500 | 3200       |                  | F              | 5000       | 120x120x12 | 9         | 2.5            | 60x60x5   |                        |                        |              |              |
| 10000 | 3450       |                  | G              | 5000       | 130x130x12 | 10        | 2.5            |           | 50x50x4                | 50x50x4                | 50x50x4      | 50x50x4      |
| 5000  | 3909       |                  | H              | 5000       | 150x150x16 | 11        | 5              | 70x70x5   | 50x50x4                | 50x50x4                | 45x45x4      | 45x45x4      |
| 0000  | 4455       |                  | I              | 5000       |            | 12        | 5              | 75x75x5   | 50x50x4                | 50x50x4                | 50x50x4      | 45x45x4      |



- Loading**
- GSM Antenna - 6 nos
  - RRU- 6 nos
  - MW Antenna- 2 nos



**PLAN VIEWS**



NOTE:- ALL DIMENSIONS ARE IN MM

Weight per Tower 6150 kgs.

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|              |           |        |            |   |                    |                      |  |
|--------------|-----------|--------|------------|---|--------------------|----------------------|--|
| NAME         | SIGNATURE | DATE   | TOLERANCE: | SCALE: 1:1  | DRW. NO:           | DRW. NAME:           |  <b>ICON POWER SOLUTIONS(P) LTD.</b><br>112-113, Sector-5, IMT Manesar,<br>Gurugram, Haryana, INDIA-122050<br>TEL : +91 124 4120600/01/02 |
| DRAWN BY:    | PRAM      | PRAM   | ISO 2768-m |  | IPS-35M-3L-BT-6G2M | 35 METER 3 LEG TOWER |  |
| DESIGNED BY: | SUJITH    | SUJITH |            |   | REV 0              | PROJECT NAME:        |  |
| CHECKED BY:  | SUJITH    | SUJITH |            |   | 1 OF 1             | BHUTAN TELECOM       |  |

LIGHTENING ARRESTER (LA)

AVIATION LIGHT

MW ANTETENNA MOUNTING ARRANGEMENT

GSM ANTETENNA MOUNTING ARRANGEMENT

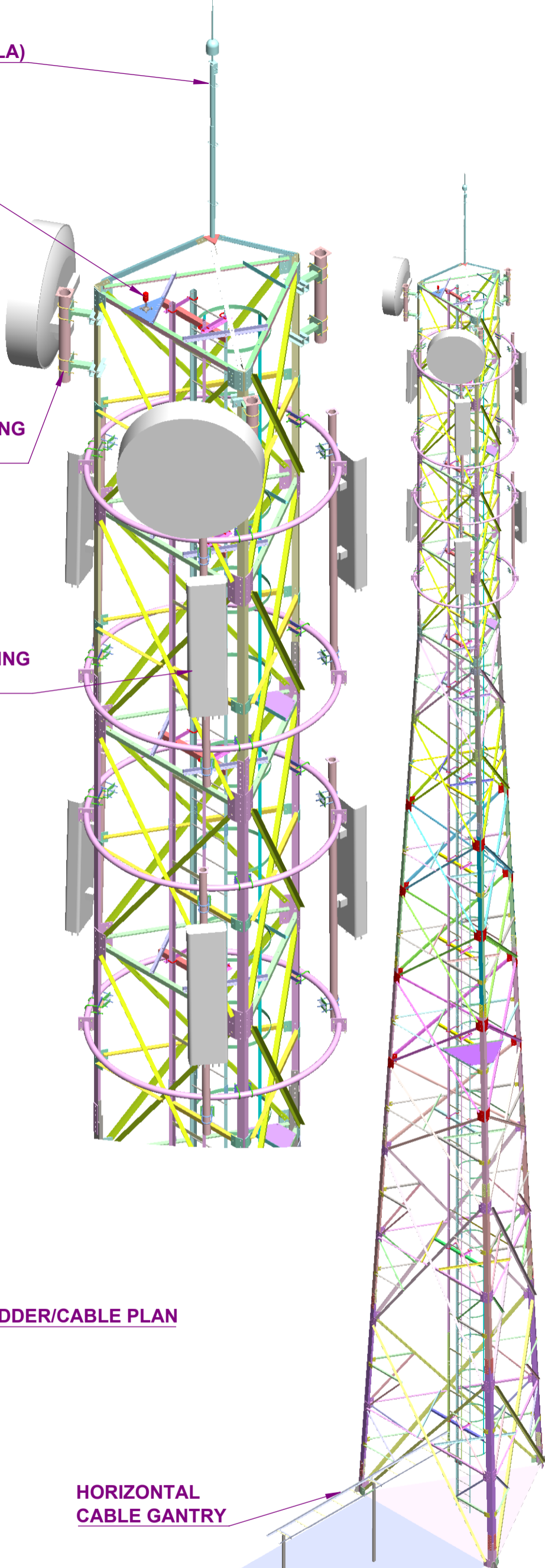
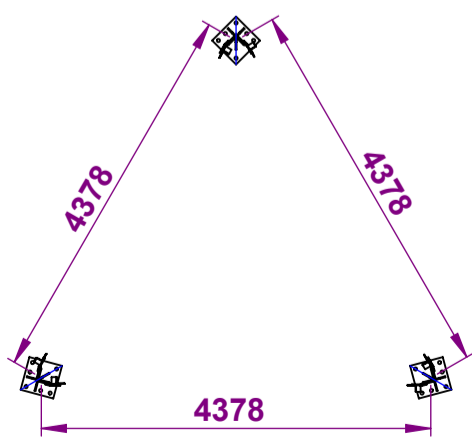
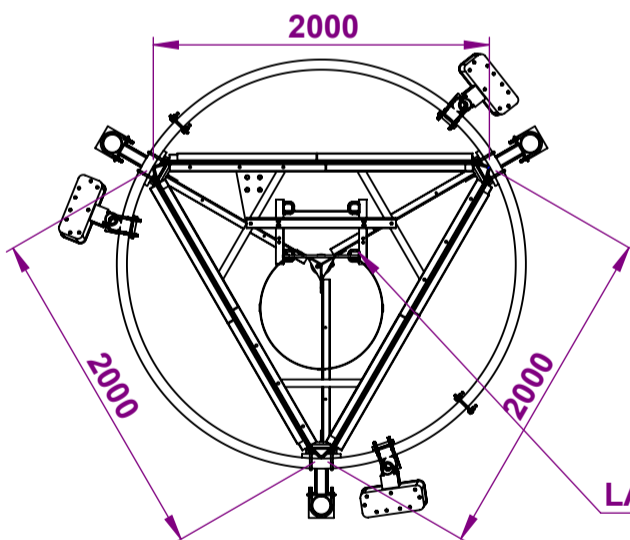
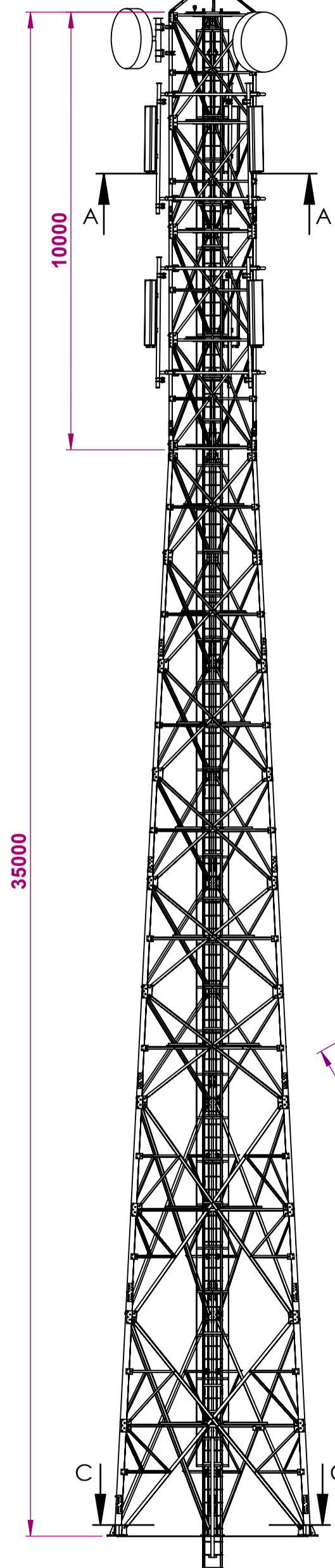
LADDER/CABLE PLAN

HORIZONTAL CABLE GANTRY

FOUNDATION PLAN


SECTION A-A  
SCALE 1 : 45

SECTION C-C  
SCALE 1 : 85



NOTE:- ALL DIMENSIONS ARE IN MM

|              |        |            |        |       |            |            |            |        |       |           |                    |               |                |
|--------------|--------|------------|--------|-------|------------|------------|------------|--------|-------|-----------|--------------------|---------------|----------------|
| DRAWN BY:    | PRAM   | SIGNATURE: | PRAM   | DATE: | 29-11-2025 | TOLERANCE: | ISO 2768-m | SCALE: | 1:110 | DRW. NO.: | IPS-35M-3L-BT-6G2M | DRW. NAME:    | 35 METER TOWER |
| DESIGNED BY: | SUJITH | SIGNATURE: | SUJITH | DATE: | 29-11-2025 |            |            |        |       | REV       | 0                  | SHEET NO.:    | 1 OF 1         |
| CHECKED BY:  | SUJITH | SIGNATURE: | SUJITH | DATE: | 29-11-2025 |            |            |        |       | SIZE:     | A3                 | PROJECT NAME: | BHUTAN TELECOM |



ICON POWER SOLUTIONS(P) LTD.  
112-113, Sector-5, IMT Manesar,  
Gurugram, Haryana, INDIA-122050  
TEL : +91 124 4120600/01/02

# ICON POWER SOLUTIONS PVT LTD

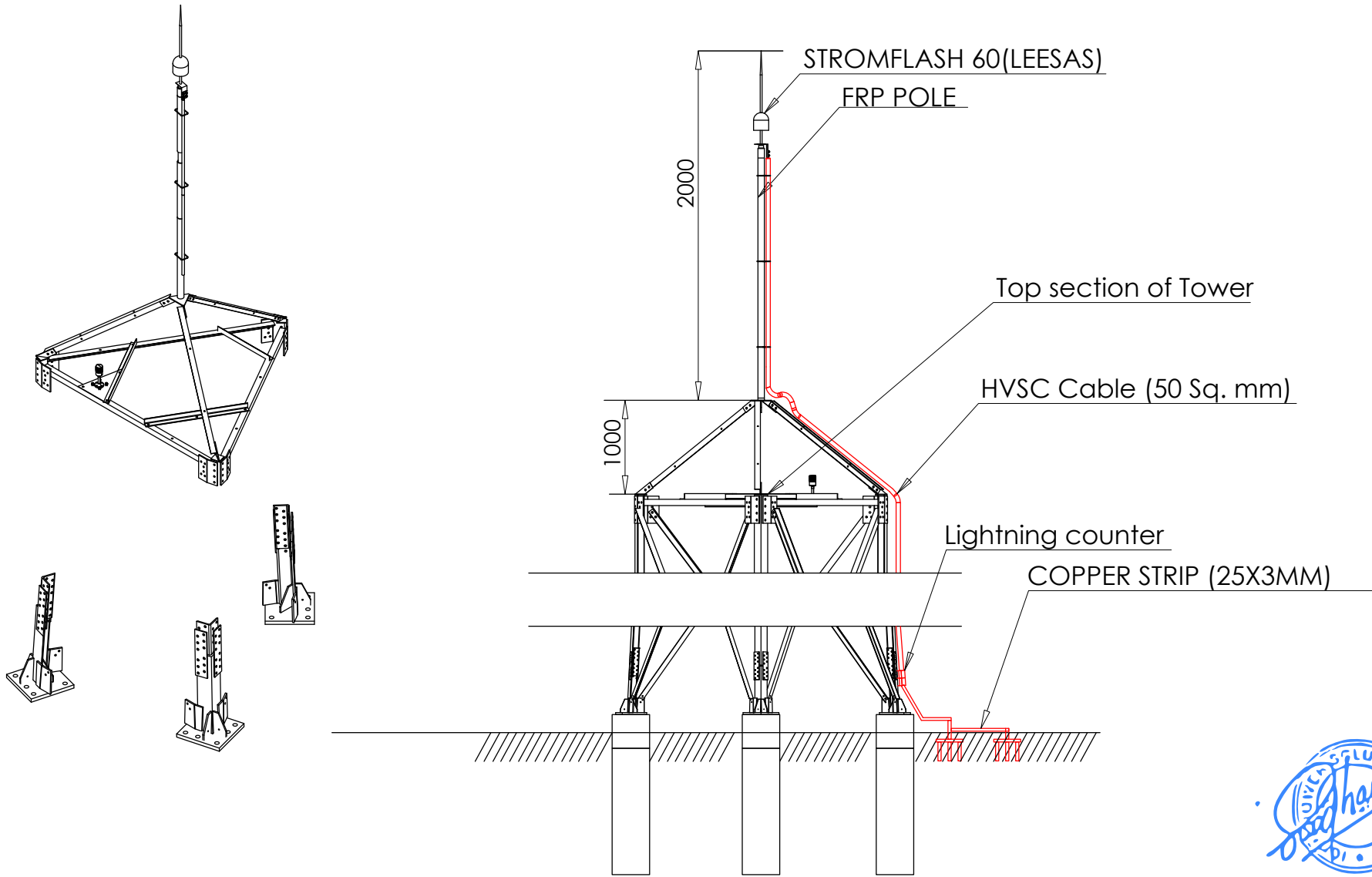
112 113, Sector 5, IMT Manesar, Gurgaon - 122050, Haryana

## Technical Specification sheet of 35MTR 3 Legged Triangular Tower


| S.No. | DESCRIPTION  | DETAILS   | REMARK                                       |
|-------|--|---|--|
| 1     | <b>DESIGN SPECIFICATION</b>  | (ANSI/TIA-222G)   |  |
| 1.1   | Design Wind Velocity   |   |  |
|       | Survival   | 150 KMPH  |  |
|       | Operational  | 105 KMPH  |  |
| 1.2   | Twist & Sway   | Less than <.5 degree  |  |
| 1.3   | Factor of Safety   | 1.2 For Dead Load   |  |
|       |  | 1.6 For Wind Load   |  |
| 1.4   | Antenna Loading  |   |  |
|       | GSM Antenna  | 6 nos.  | 200 Kg                                       |
|       | RRU  | 6 nos.  | 90 Kg  |
|       | 1.2 Dia MW Antenna   | 2nos.   | 100 Kg                                       |
| 1.5   | Antenna Pole Mount stand   | As per requirement  |  |
| 2     | <b>Obstruction Light System</b>                                    |   |  |
| 2.1   | No .Of Obstruction Light Lamp&Watts                                | 1 No. LED Type  |  |
| 2.2   | Power Cable Type&Length  | 2.5 Sqmm x 45 mtr. Length   | 2 core armoured                              |
| 3     | <b>Lighting Protection &amp; Earthing System(Grounding system)</b> |   |  |
| 3.1   | Lightning Arrestor   | Lightning Arrestor (ESE)<br>STORMFLASH 60 (LEESAS)  | 1 nos with FRP mast and HVSC cable & Counter |
| 4     | 4.1 <b>Structure Of Tower</b>                                      | Self Supprrting 3 legged Angular construction with vertical ladder in the center intergrated with cable tray & horizontal cable tray from tower to Building |  |
|       | 4.2 Main Leg   | 90 Degree Angle   |  |
|       | 4.3 Bracing  | 90 Degree Angle   |  |
|       | 4.4 Climbing Ladder  | 450 mm Rung Width, 300mm Rung space & 700mm Hoop  |  |
|       | 4.5 Cable Tray Verticle  | 450 mm Width  | along the tower Height                       |
|       | 4.6 Cable Tray Horizontal  | 450 mm Width  | 6 MTR.                                       |
|       | 4.7 Steel Type   | Mild Steel - E 250  |  |
|       | 4.8 Platforms  |   |  |
|       | Working  | 2 Nos   | 27.5 & 32.5 Mtr                              |
|       | Rest   | 1 Nos.  | 15 mtr                                       |
| 5     | 5.1 Foundation bolt & Template                                     | As Per Tower Design   | Included                                     |
|       | 5.2 Bolts & Nut with spring & Plane washer                         | Hot Dipped Galvanized Property Class 5.6  | Extra 2%                                     |
|       | 5.3 Size   | As per Standard <b>ASTM A 153</b>   |  |
|       | 5.3 Size   | As per Design Specs.  |  |
| 6     | 6.0 Hot Dipped Galvanization                                       | As per Standard <b>ISO 1461</b>   | 85 Microns                                   |
| 7     | <u>Others to be specified</u>                                      |   |  |
|       | 7.1 Weight Per Tower   | 6150 Kg   | (+/-) 5%                                     |
|       | 7.2 Drawing No.  | IPS-35M-3L-BT-6G2M  |  |

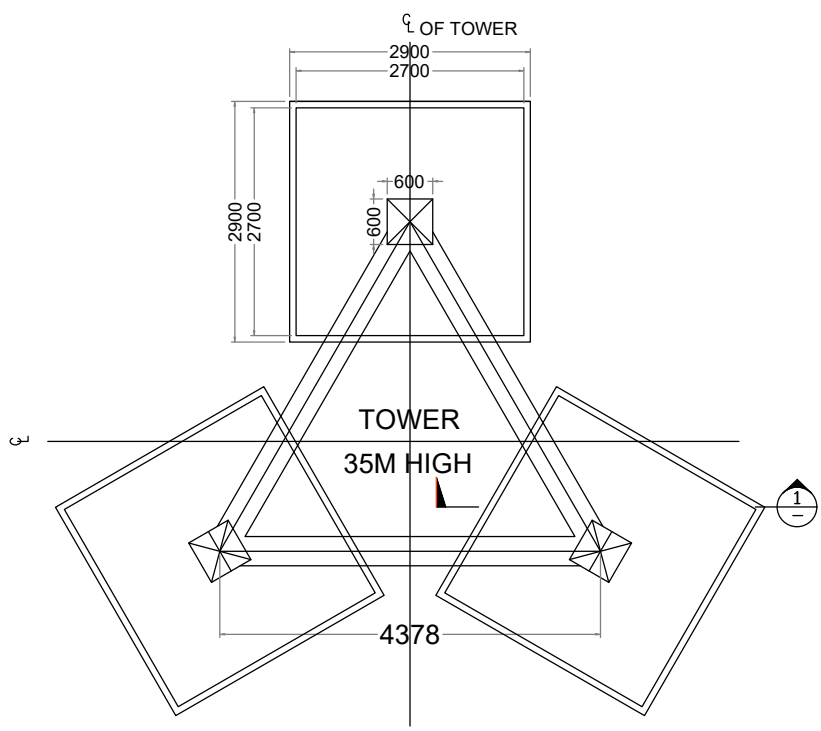
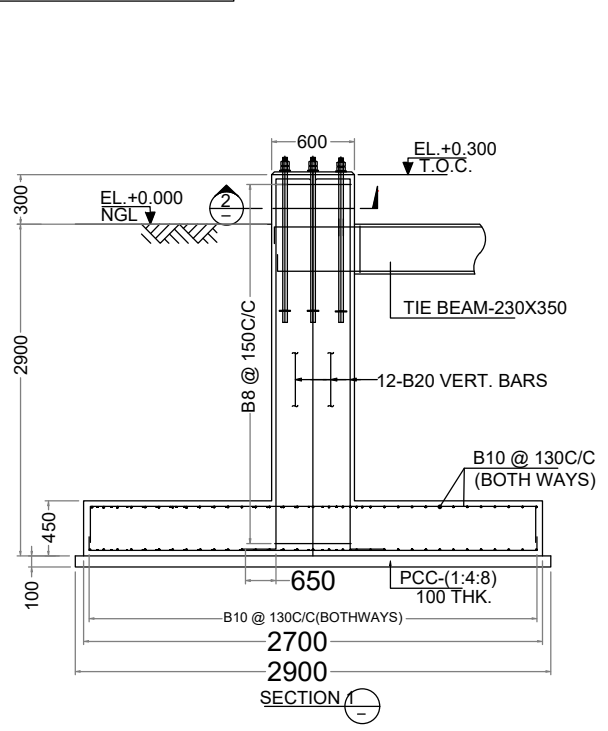


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|              | NAME   | SIGNATURE | DATE       | CHANGES | NAME | SIGNATURE | DATE | NO: | TOLERANCE: | SCALE: 1:50 | DRW. NO:           | DRW. NAME:                                  |
|--------------|--------|-----------|------------|---------|------|-----------|------|-----|------------|-------------|--------------------|---|
| DRAWN BY:    | PANKAJ | PANKAJ    | 03-12-2025 |         |      |           |      |     | X ±        |             | LA-ASSY-3LEG TOWER | LIGHTING ARRESTOR MOUNTING ARRANGEMENT-3LEG |
| DESIGNED BY: | SUJITH | SUJITH    | 03-12-2025 |         |      |           |      |     | X.X ±      |             | REV 0              | PROJECT NAME:                               |
| CHECKED BY:  | SUJITH | SUJITH    | 03-12-2025 |         |      |           |      |     | X.XX ±     |             |                    | BHUTAN TELECOM LTD 2026                     |
|              |        |           |            |         |      |           |      |     | X.XXX ±    |             |                    |   |
|              |        |           |            |         |      |           |      |     | ANGLES ±   |             |                    |   |


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FOUNDATION KEY PLAN

- NOTES**
- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
  - USE M20 GRADE CONCRETE AND Fe 415 GRADE FOR STEEL.
  - CLEAR COVER TO MAIN REINFORCEMENT:-  
(a) 50MM FOR FOUNDATION (b) 25MM FOR BEAMS  
(c) 40MM FOR COLUMNS
  - PRIOR TO AND DURING CONCRETING ALL BOLTS SHALL BE SECURELY HELD IN POSITION BY USE OF TEMPLATE.
  - BEFORE COMMENCEMENT OF CONSTRUCTION USING THIS DESIGN, CLIENT/CONTRACTOR SHALL CARRY OUT DETAILED SOIL INVESTIGATION OF EVERY SITE.
  - THIS FOUNDATION DESIGN SHALL NOT BE USED IN CASE HIGHLY SOIL ARE FOUND AT ANY DEPTH DURING SOIL INVESTIGATION.
  - CONCRETE SHALL BE MECHANICALLY MIXED & VIBRATED.
  - SPlicing OF BARS SHALL NOT BE MORE THAN 50% AT ANY LOCATION.
  - PROPER CURING OF CONCRETE SHALL BE DONE.
  - BENDING OF BARS SHALL BE AS PER IS:2502.
  - ANY DISCREPANCY SHOULD BE BROUGHT TO THE CONSULTANT'S ATTENTION.

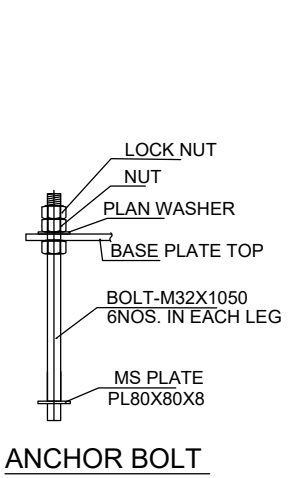
**GENERAL DETAILS**

| S.No | DESCRIPTION           | DETAILS      |
|------|-----------------------|--------------|
| 1    | SOIL BEARING CAPACITY | 10.00 T/SQM  |
| 2    | DRY DENSITY OF SOIL   | 1.8 T/SQM    |
| 3    | ANGLE OF REPOSE       | 30.00 DEGREE |

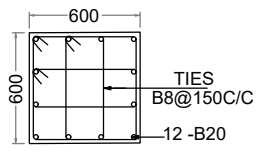
**BILL OF MATERIALS**

| ITEM        | UNIT | TOTAL   |
|-------------|------|---------|
| EXCAVATION  | CUM  | 78.32   |
| PCC-(1:4:8) | CUM  | 2.52    |
| RCC-M20     | CUM  | 12.96   |
| STEEL-Fe415 | KG   | 1111.07 |

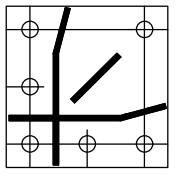
CHAIRS SHALL BE PROVIDED WHEREEVER REQUIRED



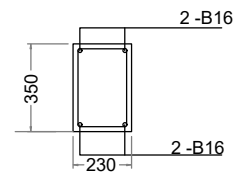
ANCHOR BOLT



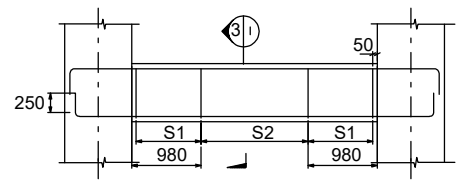
SECTION 2  
COLUMN 600X600



BASE PLATE



SECTION 3



TIE BEAM (TYP DETAILS)

**STIRRUP DETAILS**  
S1:-2 LEGGED Y8 @ 100 C/C  
S2:-2 LEGGED Y8 @ 200 C/C



**REVISION NOTES**

| REV. NO. | DESCRIPTION | DATE     | SIGN.      |
|----------|-------------|----------|------------|
| DRAWN    | CHECKED     | APPROVED | DATE       |
| HEMANT   | SUJITH      | SUJITH   | 01-12-2025 |
|          |             |          | NTS        |

CLIENT: **BHUTAN TELECOM**

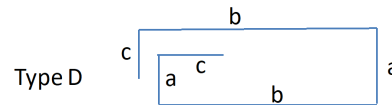
DESIGN BY: **ICON POWER SOLUTIONS PVT. LTD. GURGAON**

PROJECT: **NETWORK EXPANSION 2025**

TITLE : **FOUNDATION DETAILS FOR 35M HIGH TRIANGULAR TOWER**  
SBC : 10 T/SQM

| DRAWING No.        | SH. NO. | REV. |
|--------------------|---------|------|
| IPS-35M-3L-BT-6G2M | 1 OF 2  | 01   |

## IPS-35M-3L-BT-6G2M Tower Bar Bending Schedule



Cover Slab 50 mm

Column 40 mm

Beam 25 mm

| Item         | Position | Type | Dia. Of Rebar<br>(mm) | Size | Size | Size | Length<br>(mm) | Qty in Nos<br>both ways<br>or total | Unit wt<br>(kg/m) | Total<br>Weight of<br>(kg) |
|--------------|----------|------|-----------------------|------|------|------|----------------|-------------------------------------|-------------------|----------------------------|
|              |          |      |                       | a    | b    | c    |                |                                     |                   |                            |
|              |          |      |                       | (mm) | (mm) | (mm) |                |                                     |                   |                            |
| Raft Slab    | Top      | B    | B10                   | 2600 | 250  | 250  | 3100           | 120                                 | 0.62              | 230.64                     |
|              | Bottom   | B    | B10                   | 2600 | 250  | 250  | 3100           | 120                                 | 0.62              | 230.64                     |
| Tie Beams    | Top      | B    | B16                   | 4378 | 250  | 250  | 4878           | 6                                   | 1.58              | 46.24                      |
|              | Bottom   | B    | B16                   | 4378 | 250  | 250  | 4878           | 6                                   | 1.58              | 46.24                      |
|              | Strips   | D    | B8                    | 180  | 300  | 80   | 1120           | 87                                  | 0.40              | 38.98                      |
| Column       | Main     | C    | B20                   | 3100 | 0    | 650  | 3750           | 36                                  | 2.47              | 333.45                     |
|              | Ties     | D    | B8                    | 512  | 512  | 80   | 2208           | 63                                  | 0.40              | 55.64                      |
|              |          | D    | B8                    | 512  | 200  | 80   | 1584           | 126                                 | 0.40              | 79.83                      |
| <b>Total</b> |          |      |                       |      |      |      |                |                                     |                   | <b>1111.07</b>             |

\* Chairs Shall be Provided whenever required

### Notes :

- Dimensions of Bars are along the Center Lines.
- Splicing of Bars should not be more than 50%. Length of splice as per Standards.



### REVISION NOTES

| REV. NO. | DESCRIPTION | DATE     | SIGN.      |
|----------|-------------|----------|------------|
| DRAWN    | CHECKED     | APPROVED | DATE       |
| HEMANT   | SUJITH      | SUJITH   | 01-12-2025 |
|          |             |          | NTS        |

CLIENT:

BHUTAN TELECOM

DESIGN BY: ICON POWER SOLUTIONS PVT. LTD.

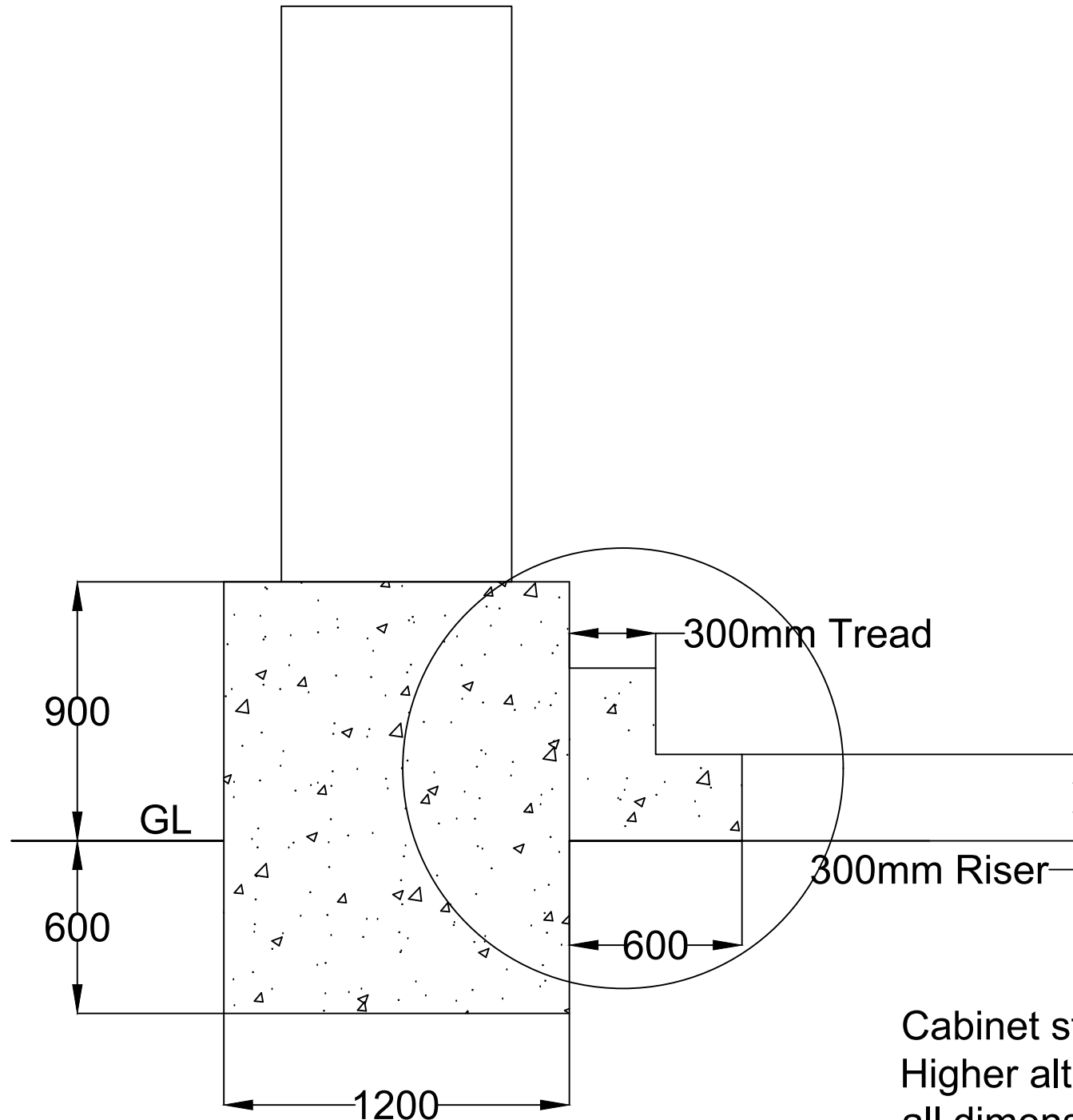
GURGAON

PROJECT:

NETWORK EXPANSION 2025

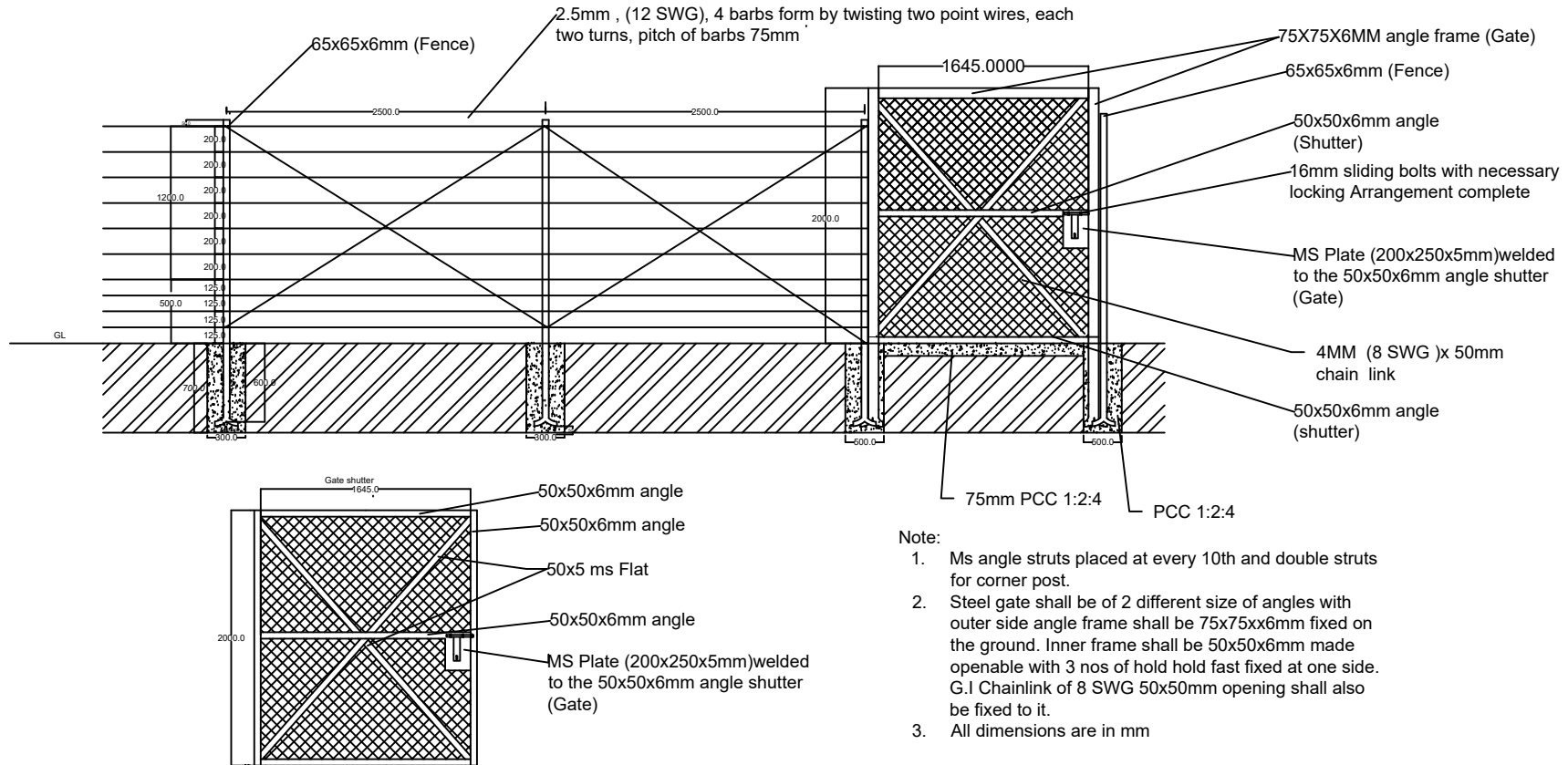
TITLE : FOUNDATION DETAILS FOR 35M HIGH TRIANGULAR TOWER  
SBC : 10 T/SQM

| DRAWING No.        | SH. NO. | REV. |
|--------------------|---------|------|
| IPS-35M-3L-BT-6G2M | 2 OF 2  | 01   |



Cabinet stand for  
Higher altitude  
all dimension in mm

# BARBED WIRE FENCING AND GATE DRAWING



Title : Barbed wire fencing

BHUTAN TELECOM LIMITED

Checked by:

Approved by:

