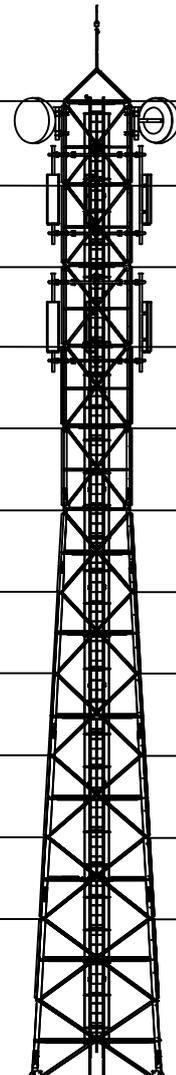


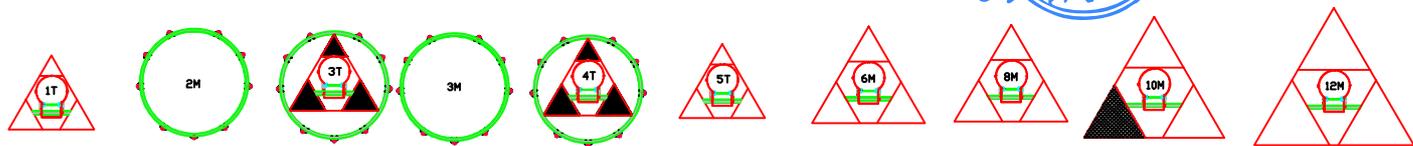
LEVEL	FACE WIDTH	PLATFORM	LEG JOINT NAME	LEG LENGTH	LEGS SIZE	PANEL NO.	LENGTH (METER)	DIAGONALS	PANEL TOP- HORIZONTALS	PANEL MID- HORIZONTALS	PLAN BRACING	SEC. BRACING
30000	1700		A	5000	75x75x6	1	2	50x50x4	50x50x4	45x45x4	45x45x4	
27500	1700	WORKING PLATFORM	B	5000	75x75x6	2	2.5	55x55x4	50x50x4	45x45x4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



30 Mtr

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

PLAN VIEWS

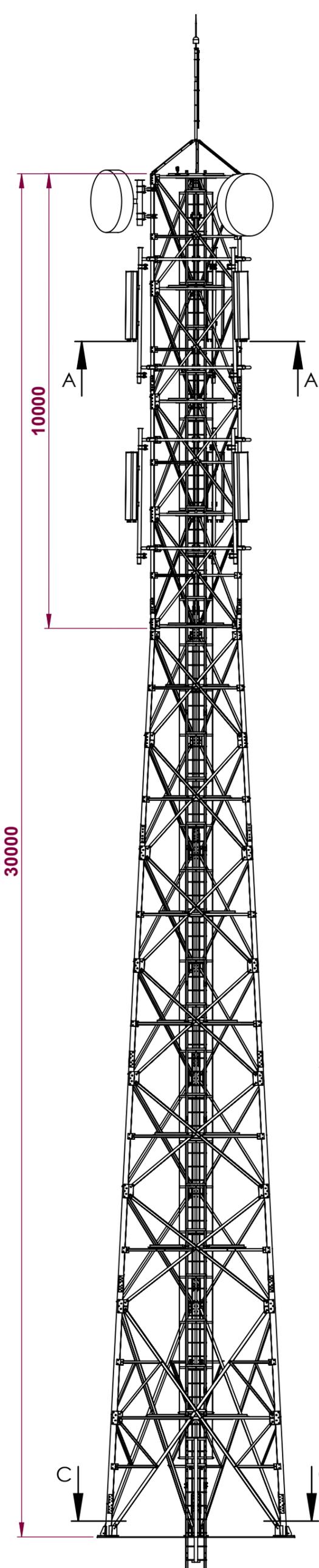


NOTE:- ALL DIMENSIONS ARE IN MM

Weight per Tower 5250 kgs.

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DRAWN BY: PRAM	SIGNATURE: PRAM	DATE: 28-11-2025	TOLERANCE: ISO 2768-m	SCALE: 1:1	DRW. NO: IPS-30M-3L-BT-6G2M	DRW. NAME: 30 METER 3 LEG TOWER	 ICON POWER SOLUTIONS(P) LTD. 112-113, Sector-5, IMT Manesar, Gurugram, Haryana, INDIA-122050 TEL : +91 124 4120600/01/02
DESIGNED BY: SUJITH	SIGNATURE: SUJITH	DATE: 28-11-2025			REV 0	SHEET NO: 1 OF 1	
CHECKED BY: SUJITH	SIGNATURE: SUJITH	DATE: 28-11-2025				SIZE: A3	

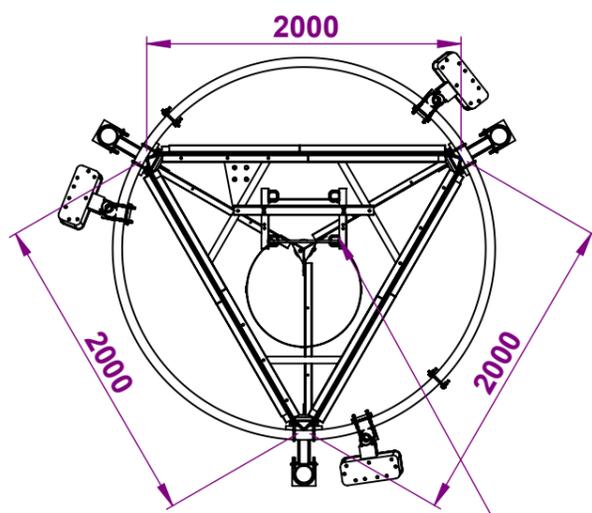
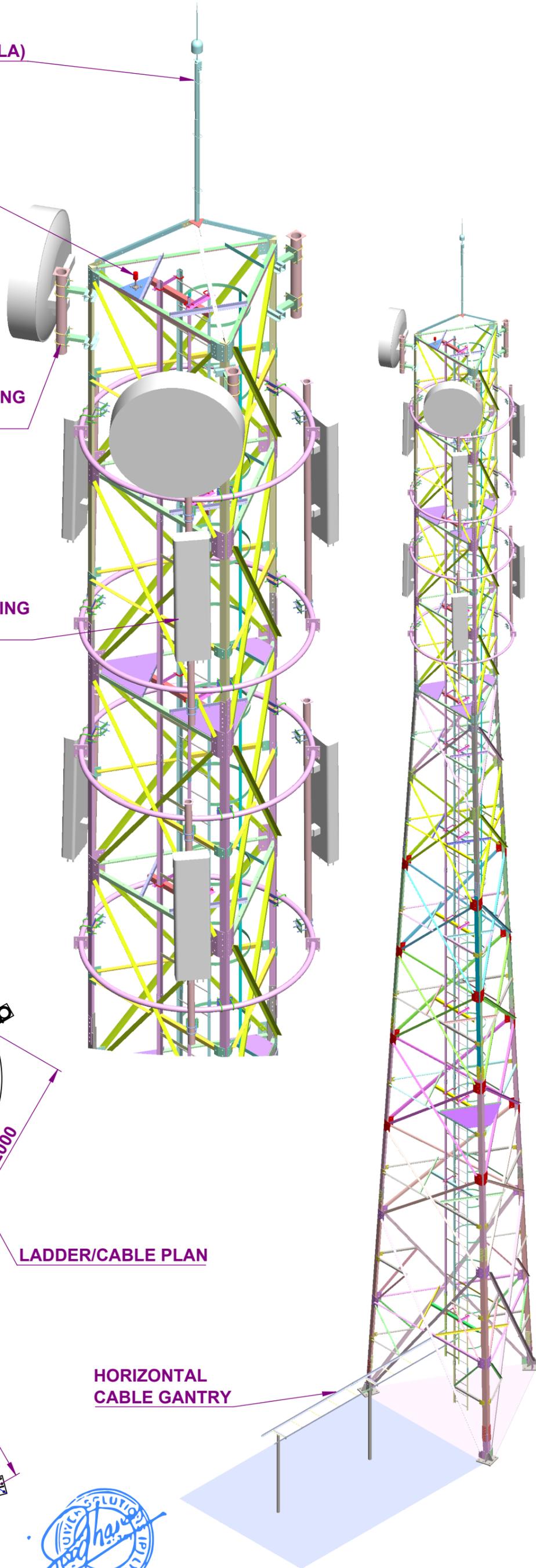


LIGHTNING ARRESTER (LA)

AVIATION LIGHT

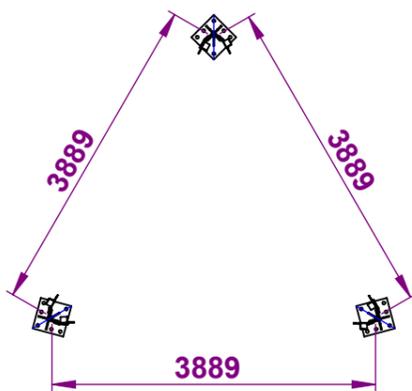
MW ANTENNA MOUNTING ARRANGEMENT

GSM ANTENNA MOUNTING ARRANGEMENT



SECTION A-A
SCALE 1 : 45

LADDER/CABLE PLAN



SECTION C-C
SCALE 1 : 85

HORIZONTAL CABLE GANTRY

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-30M-3L-BT-6G2M	DRW. NAME:	30 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

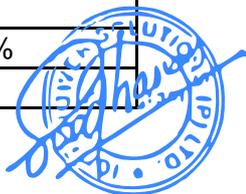
ICON POWER SOLUTIONS(P) LTD.
112-113, Sector-5, IMT Manesar,
Gurugram, Haryana, INDIA-122050
TEL : +91 124 4120600/01/02

ICON POWER SOLUTIONS PVT LTD

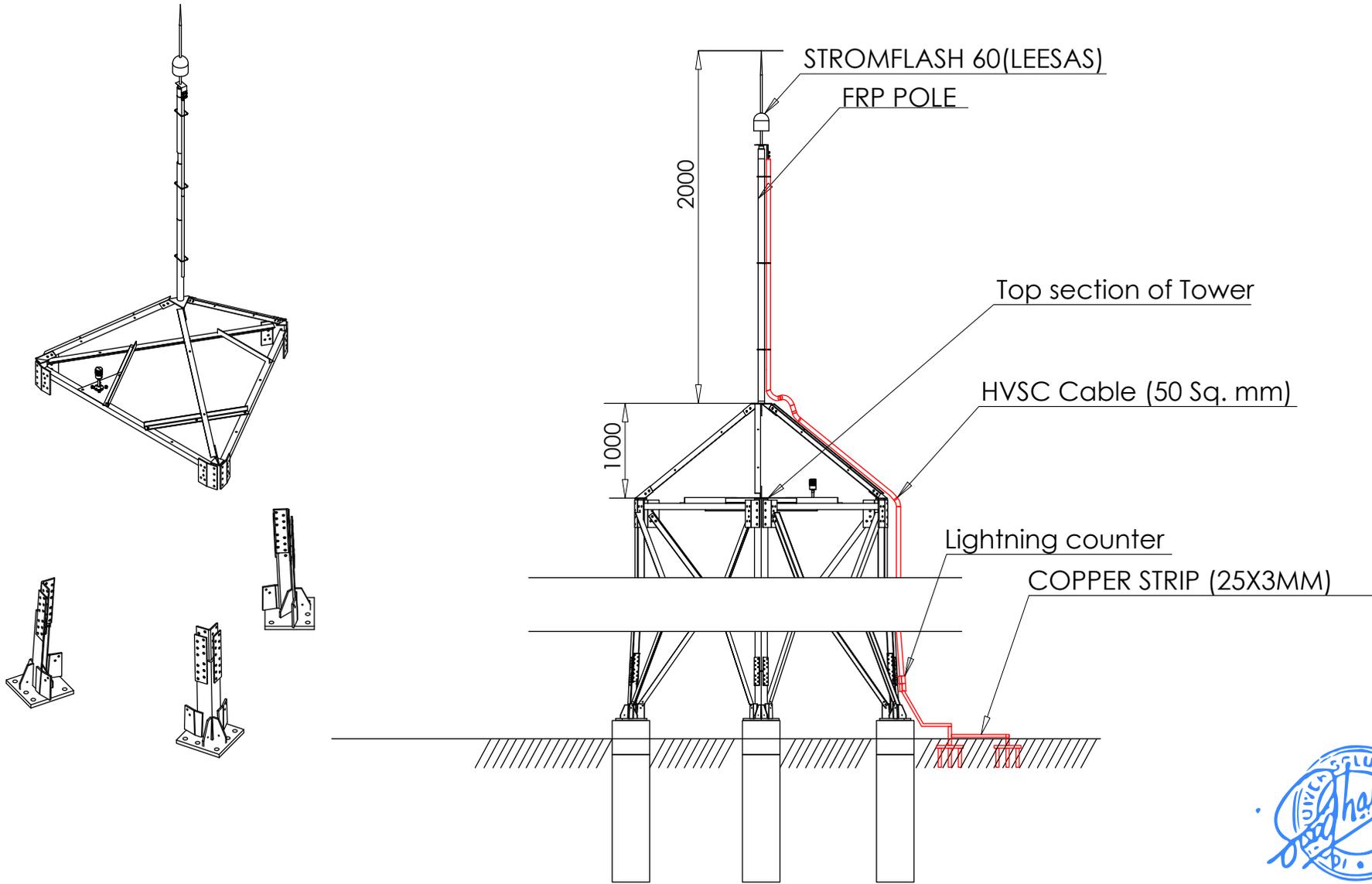
112 113, Sector 5, IMT Manesar, Gurgaon - 122050, Haryana

Technical Specification sheet of 30MTR 3 Legged Triangular Tower

S.No.	DESCRIPTION	DETAILS	REMARK
1	DESIGN SPECIFICATION	(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	Obstruction Light System		
2.1	No .Of Obstruction Light Lamp&Watts	1 No. LED Type	
2.2	Power Cable Type&Length	2.5 Sqmm x 40 mtr. Length	2 core armoured
3	Lighting Protection & Earthing System(Grounding system)		
3.1	Lightning Arrestor	Lightning Arrestor (ESE) STORMFLASH 60 (LEESAS)	1 nos with FRP mast and HVSC cable & Counter
4	4.1 Structure Of Tower	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	22.5 & 27.5 Mtr
	Rest	1 Nos.	10 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 ASTM A 153	
	5.3 Size	As per Design Specs.	
6	6.0 Hot Dipped Galvanization	As per Standard ISO 1461	85 Microns
7	<u>Others to be specified</u>		
	7.1 Weight Per Tower	5250 Kg	(+/-) 5%
	7.2 Drawing No.	IPS-30M-3L-BT-6G2M	

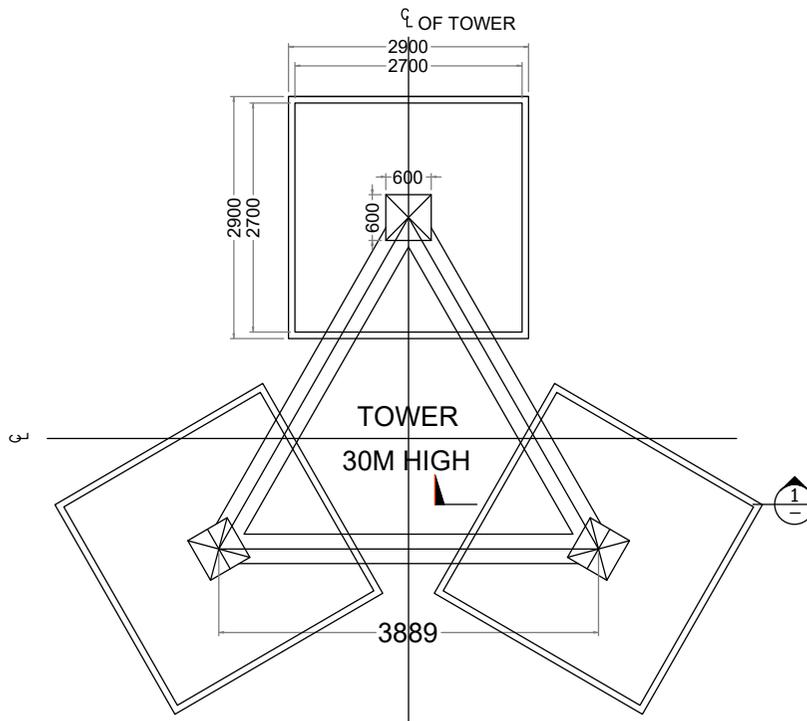
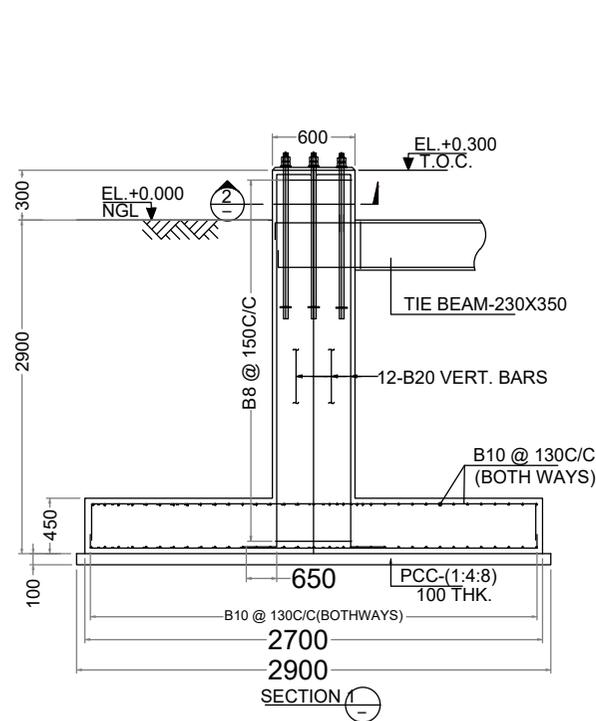


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	NAME	SIGNATURE	DATE	CHANGES	NAME	SIGNATURE	DATE	NO:	TOLERANCE:	SCALE: 1:50	DRW. NO:	DRW. NAME:
DRAWN BY:	PANKAJ	PANKAJ	03-12-2025						X ±		LA-ASSY-3LEG TOWER	LIGHTING ARRESTOR MOUNTING ARRANGEMENT-3LEG
DESIGNED BY:	SUJITH	SUJITH	03-12-2025					X.X ±	REV		SHEET NO:	PROJECT NAME:
CHECKED BY:	SUJITH	SUJITH	03-12-2025					X.XX ±	0			BHUTAN TELECOM LTD 2026
								X.XXX ±			A4	
								ANGLES ±				


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



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	12.84
STEEL-Fe415	KG	1101.34

CHAIRS SHALL BE PROVIDED WHEREEVER REQUIRED



REVISION NOTES

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

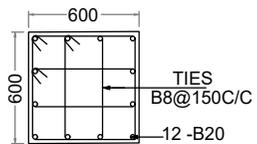
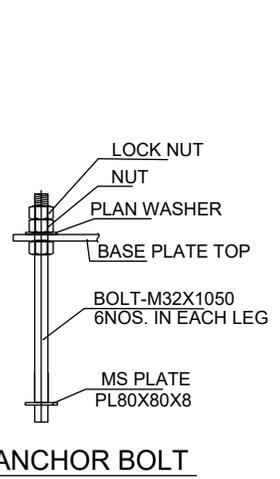
CLIENT: **BHUTAN TELECOM**

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

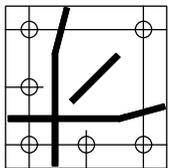
PROJECT: **NETWORK EXPANSION 2025**

TITLE : **FOUNDATION DETAILS FOR 30M HIGH TRIANGULAR TOWER**
SBC : 10 T/SQM

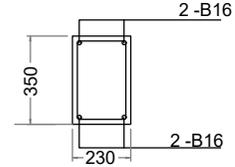
DRAWING No.	SH. NO.	REV.
IPS-30M-3L-BT-6G2M	1 OF 2	01



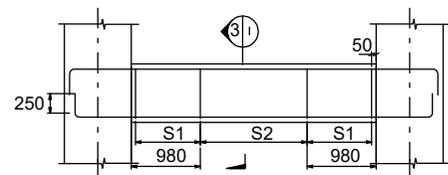
SECTION 2
COLUMN 600X600



BASE PLATE



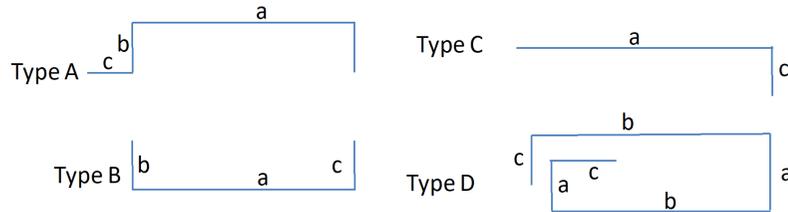
SECTION 3



TIE BEAM (TYP DETAILS)

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

IPS-30M-3L-BT-6G2M Tower Bar Bending Schedule



Cover Slab 50 mm

Column 40 mm

Beam 25 mm

Item	Position	Type	Dia. Of Rebar	Size	Size	Size	Length	Qty in Nos both ways or total	Unit wt	Total Weight of
				a	b	c				
				(mm)	(mm)	(mm)	(mm)			(kg)
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	3889	250	250	4389	6	1.58	41.61
	Bottom	B	B16	3889	250	250	4389	6	1.58	41.61
	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
Total										1101.34

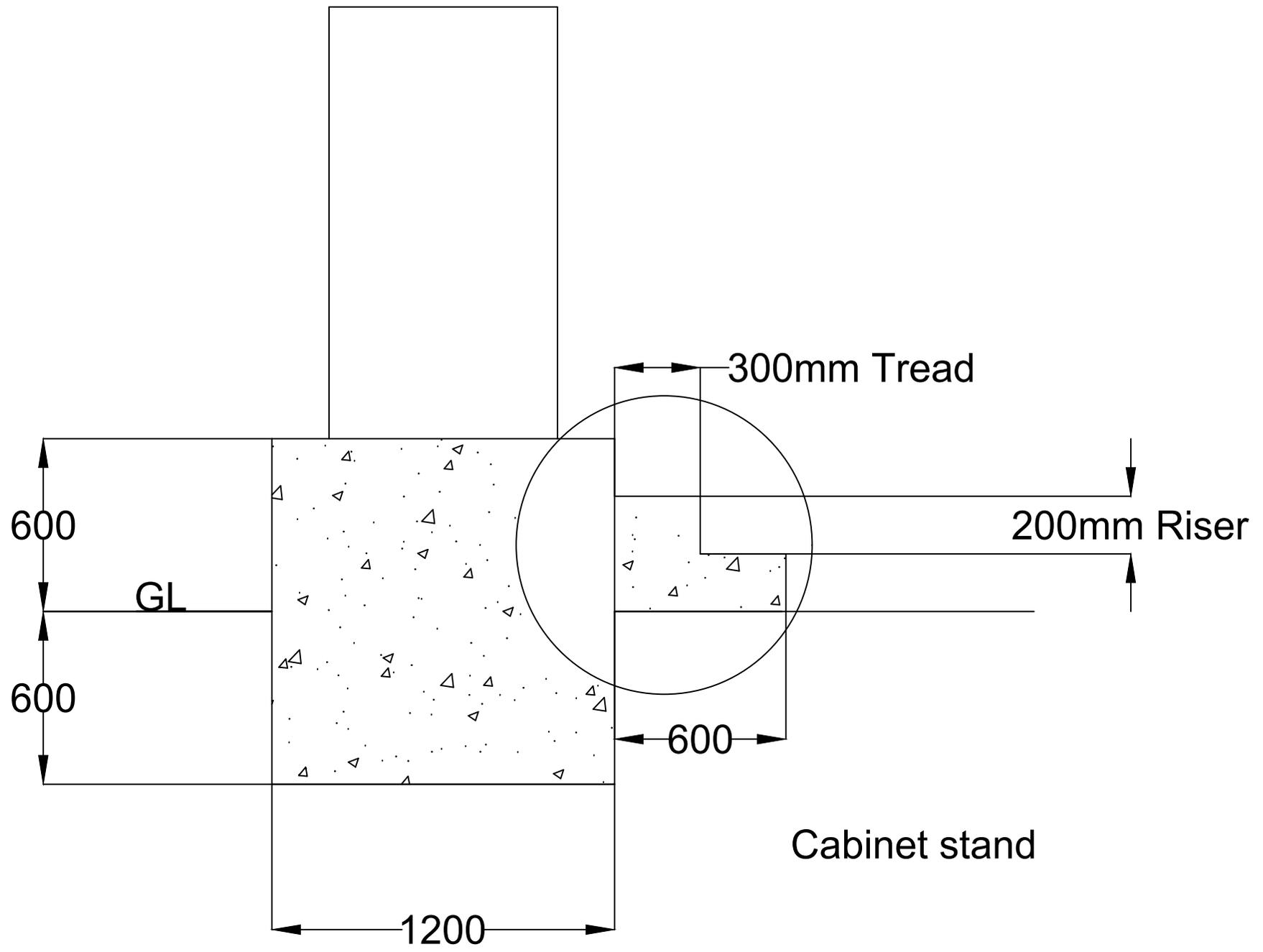


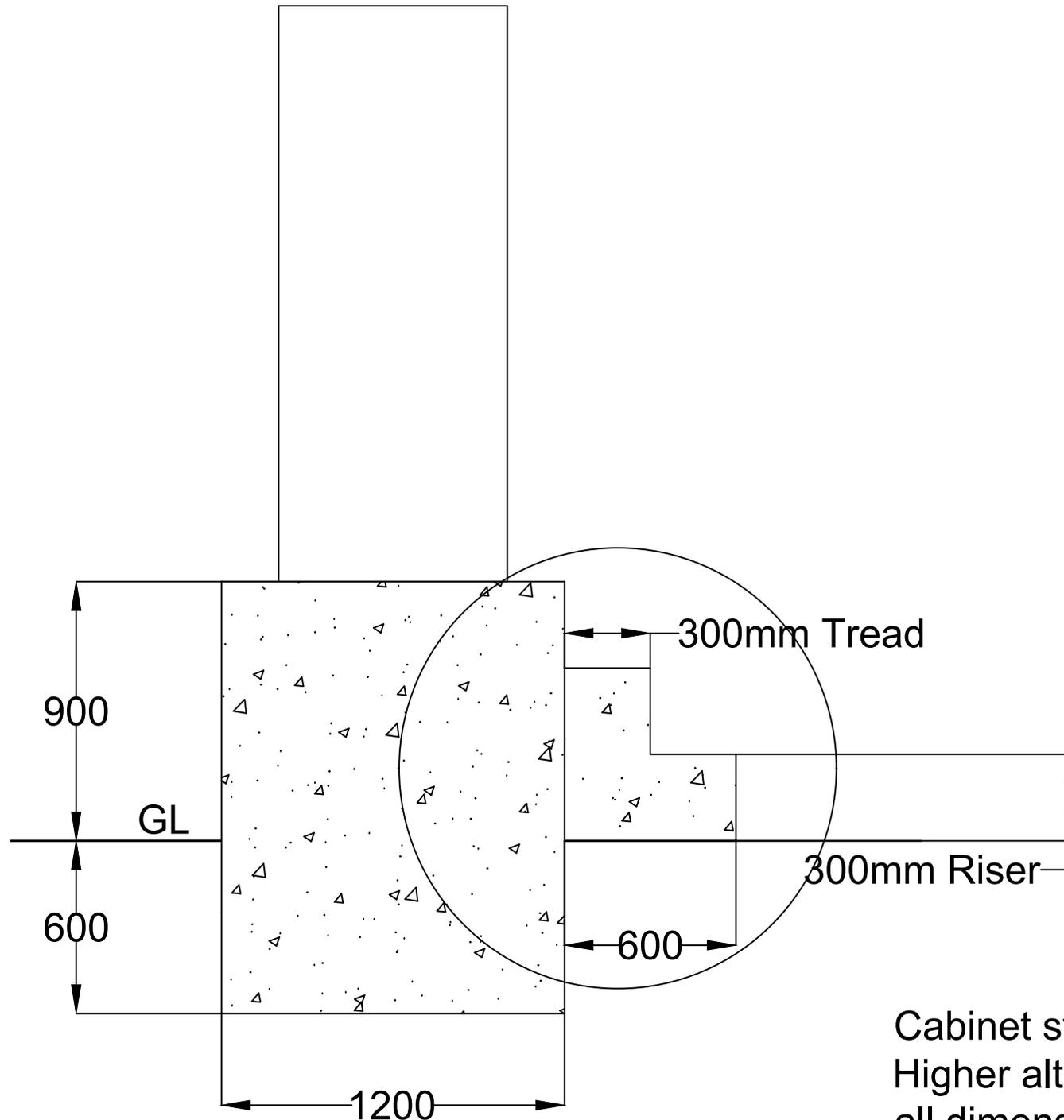
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REV. NO.	DESCRIPTION		DATE	SIGN.
DRAWN	CHECKED	APPROVED	DATE	SCALE
HEMANT	SUJITH	SUJITH	01-12-2025	NTS
CLIENT: BHUTAN TELECOM				
DESIGN BY: ICON POWER SOLUTIONS PVT. LTD. GURGAON				
PROJECT: NETWORK EXPANSION 2025				
TITLE : FOUNDATION DETAILS FOR 30M HIGH TRIANGULAR TOWER SBC : 10 T/SQM				
DRAWING No.		SH. NO.	REV.	
IPS-30M-3L-BT-6G2M		2 OF 2	01	

* Chairs Shall be Provided whenever required

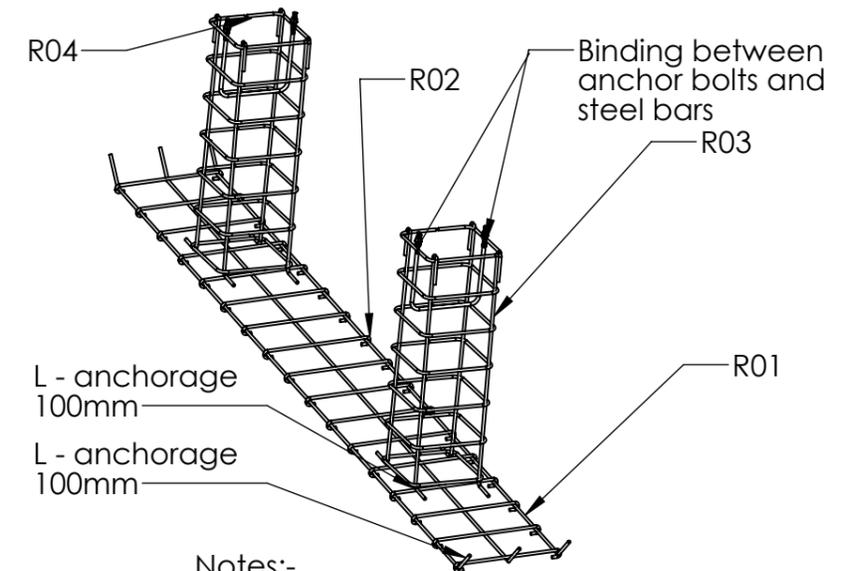
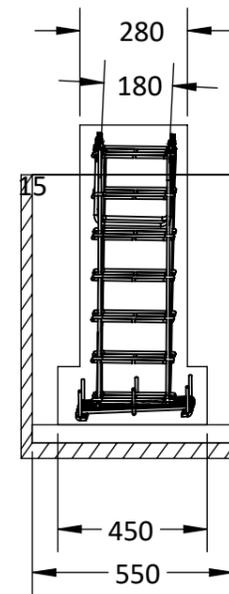
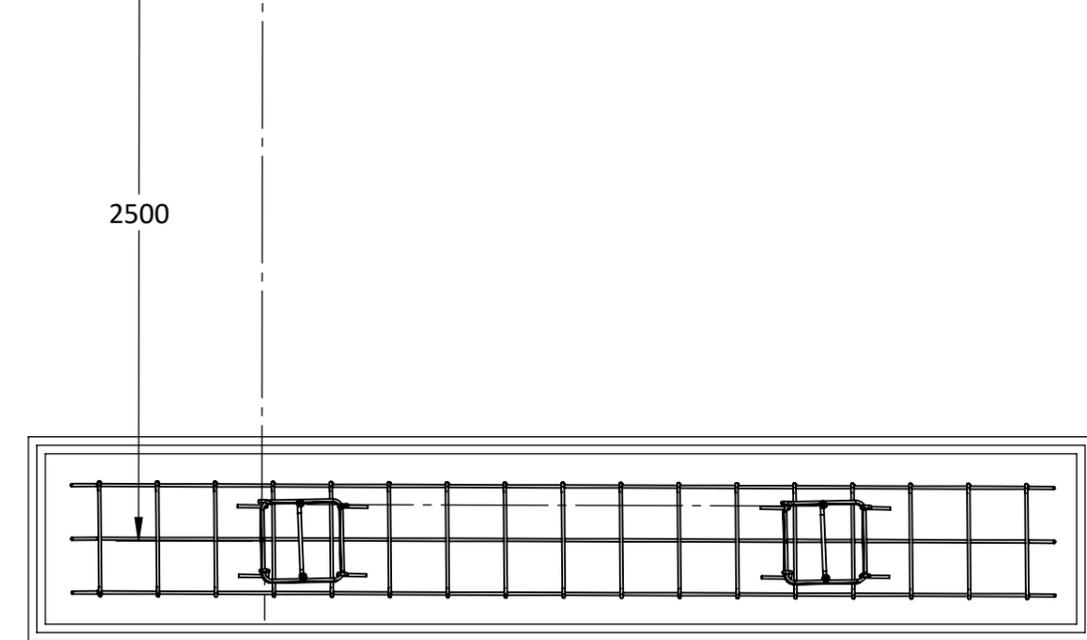
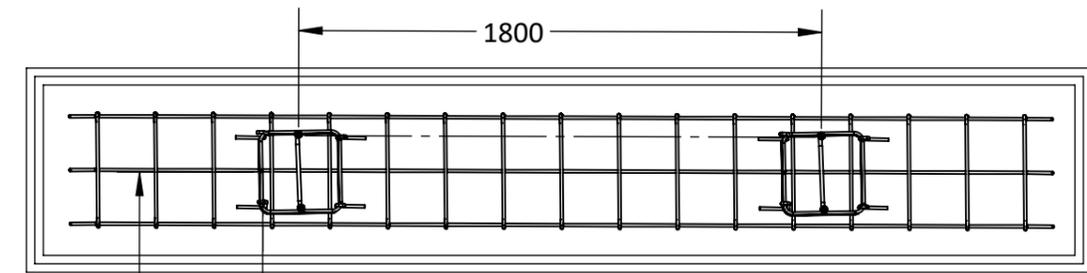
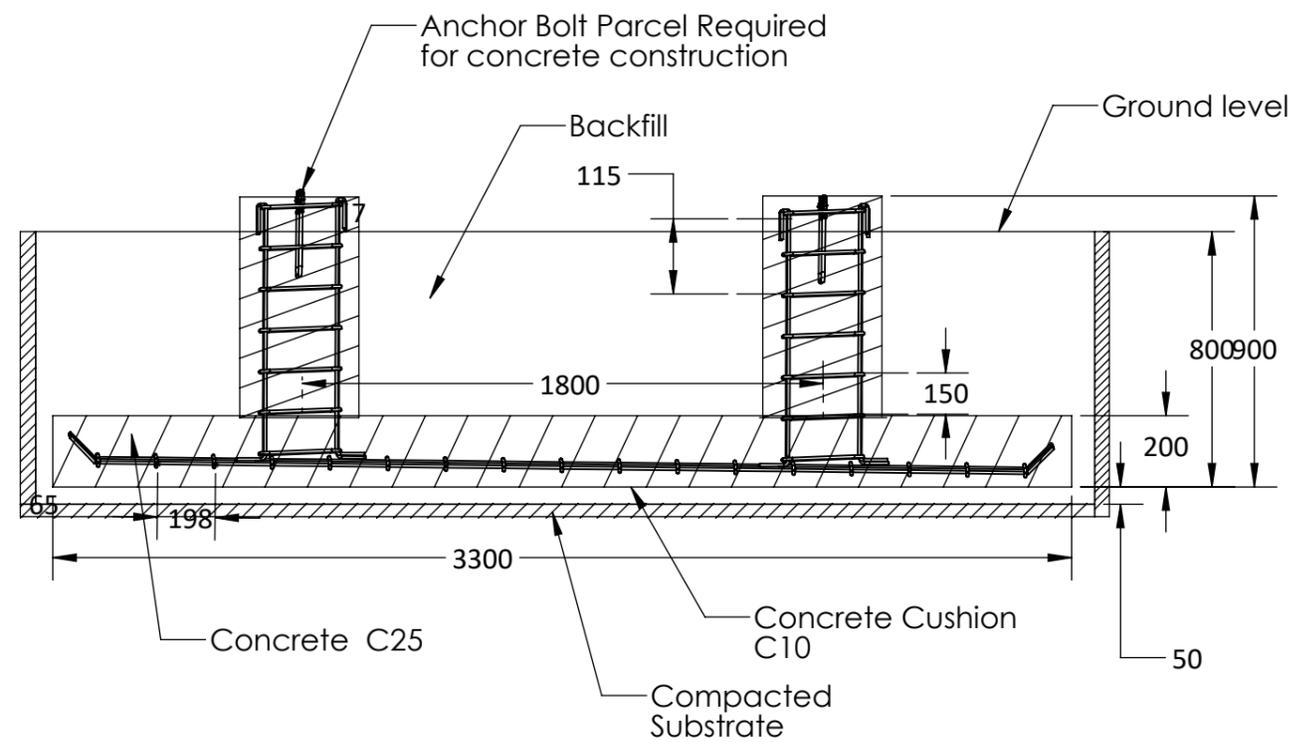
Notes :

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





Cabinet stand for
Higher altitude
all dimension in mm



Notes:-

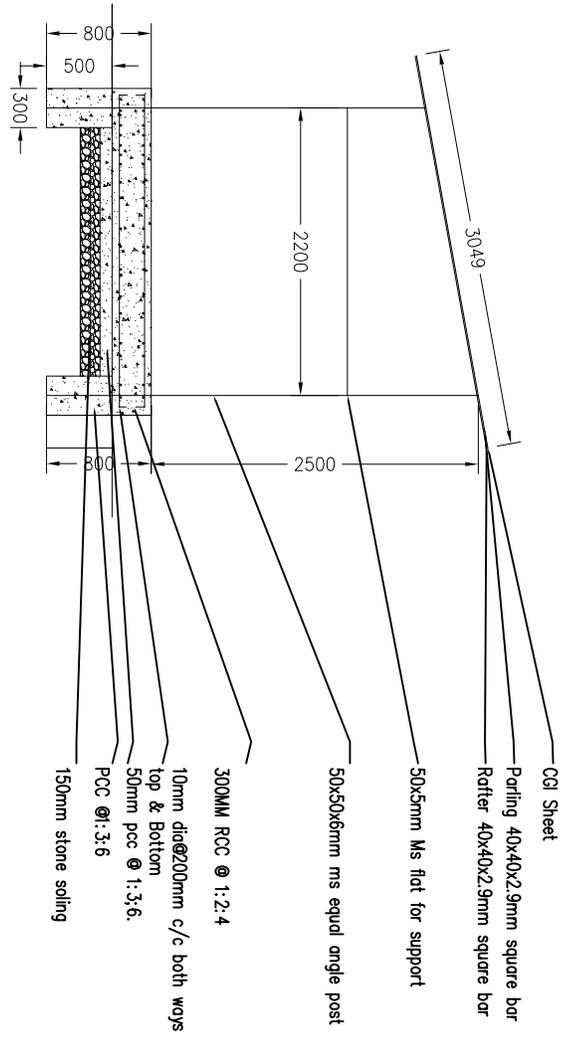
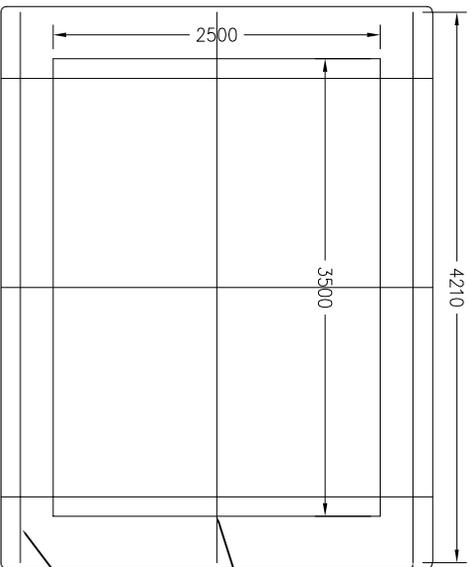
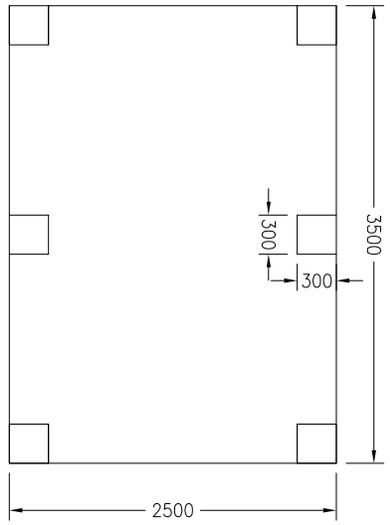
1. Allow scope of Construction error $\pm 3\text{mm}$
2. The design basic wind speed is related to the elevation angle. Basal soil bearing Capacity (f_{ak}) should be more than 100Kpa
3. All dimensions are millimeter unless otherwise stated.
4. Yield strength (yield point) of steel 335Mpa ($d=10\text{mm}$)
5. Concrete of Foundation C25, Concrete Cushion C10
6. Thickness of Concrete cover is 100mm unless otherwise stated
7. Verify base dimension before casting concrete
8. Vibration of concrete should be performed during pouring concrete.
9. Concrete Surface should be kept wet for 3 days after casting
10. Anchor bolt could be fixed on R04

Steel Bar List of Each Foundation

No.	Dia d(mm)	Spacing (mm)	A (mm)	B (mm)	C (mm)	Length (mm)	Quantity (mm)	Total length (mm)	Weight Kg/m	Total weight (Kg)
R01	10	175	50	3200	50	3300	3	9.9	.62	19.53
R02	10	198	50	350	50	450	17	7.7	.62	19.53
R03	12	190	50	800	50	900	8	7.2	.62	19.53
R04	8	150	210	210	70	560	12	6.7	.62	19.53

Material:	COLOUR:-	This drawing and any information or descriptive material set out on it are the confidential and copyright property of Fujiyama Power System Ltd. © and MUST NOT BE DISCLOSED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Fujiyama Power System Ltd.	Title:- FOUNDATION DRAWING	
Finish:	THICKNESS:-		Part Name :-	
Unless Otherwise Stated: Linear Tol.: ± 0.2 , Angular Tol.: $0^\circ 15'$ Surface Finish: $0.8\mu\text{m}$ All Dimensions: mm	Drawing Scale: 1:1	Document Type:	Drawn by: MANISH KUMAR	Drawn Date: 02-03-2026
Approx Weight: Kg	Projection Method: THIRD ANGLE	Company Confidential	Checked/Approved by: SHASHANK SHEKHAR	Checked/Approved Date:
Sheet Size: A3	Legal Owner:  Fujiyama Power System Ltd.	Part Number:	Drawing Number:	Sheet: 1 of 1
				Revision: 00

DG Shed and platform



Parling 40x40x2.9mm square bar

CGI Sheet

Parling 40x40x2.9mm square bar

Rafter 40x40x2.9mm square bar

50x5mm Ms flat for support

50x50x6mm ms equal angle post

300MM RCC @ 1:2:4

10mm dia@200mm c/c both ways

50mm poc @ 1:3:6.

PCC @ 1:3:6

150mm stone soiling