

GNM45

TOWER DESIGN CRITERIA

WIND DESIGN CODE SABS 0160-1989
 STRUCTURAL CODE SABS 0162-1993
 ALTITUDE 1000m
 TERRAIN CATEGORY 2, CLASS B
 BASIC WIND SPEED 40 m/sec (143 km/hr)
 MEAN RETURN 50 Years

TOWER DESIGN PERFORMANCE

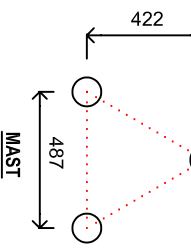
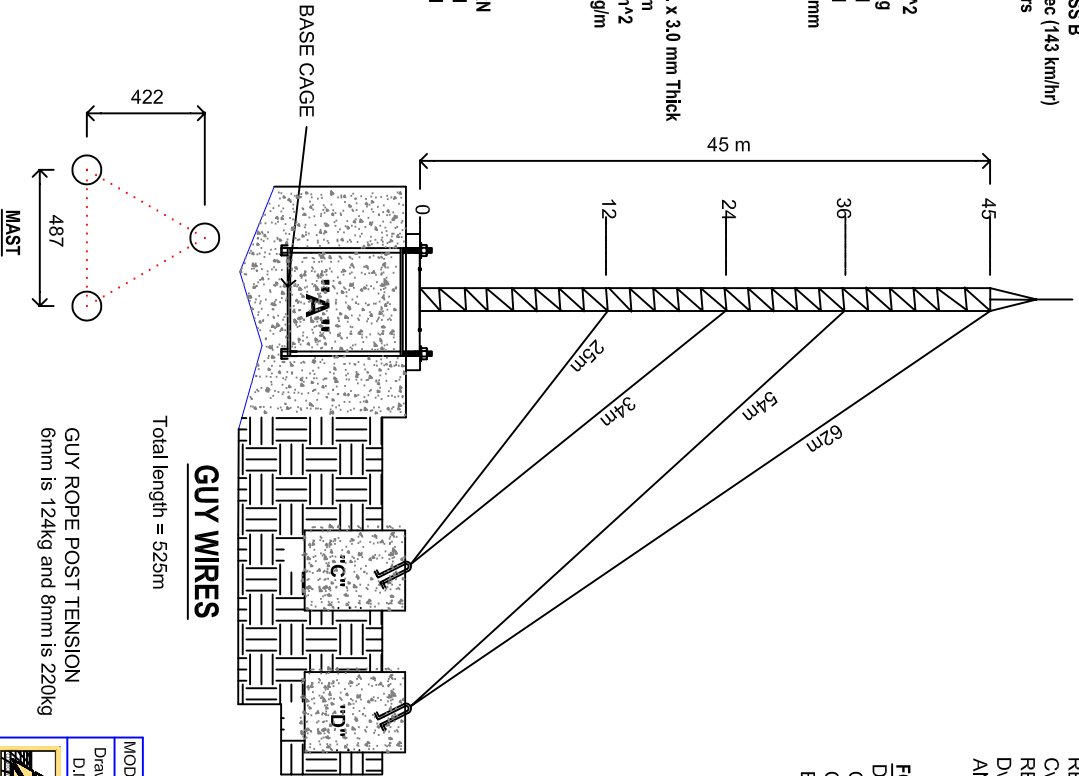
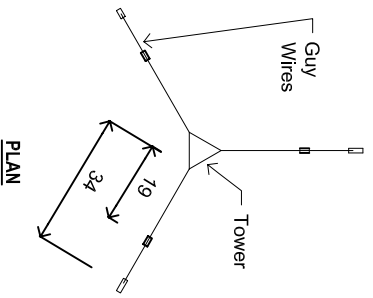
ANTENNA LOADING:
 MAX. AREA OF EACH 1.50 m²
 MAX. MASS OF EACH 33.18 kg
 WIND LOAD @ 45M 1.66 kN
 WIND LOAD @ 42M 1.64 kN
 DEFLECTION @ TOP 106.46 mm
 ROTATION @ TOP 0.56°

TOWER DESIGN DATA

MAST PROPERTIES
 LEG SIZE 38 DIA. x 3.0 mm Thick
 BRACING Ø12 mm
 EFF. FACE AREA 0.101 m²
 MASS/M OF MAST 14.18 kg/m

FOUNDATION LOADINGS

LOADING AS PER LEG
 MAX. VERTICAL LOAD 27.40 kN
 MAX. UPLIFT 6.48 kN
 MAX. HORIZONTAL SHEAR 0.49 kN

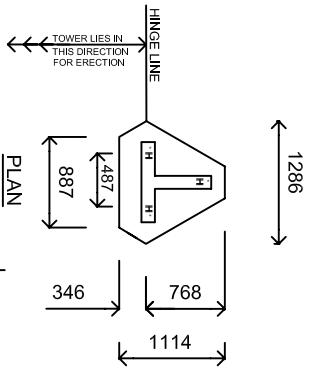


GUY WIRES
 Total length = 525m
 GUY ROPE POST TENSION
 6mm is 124kg and 8mm is 220kg

RevNo	Revision note	Date	Checked
			X

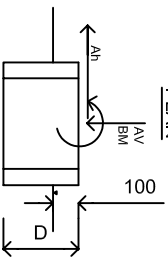
FOUNDATION LOADINGS

REACTIONS @ 'A'
 Av = 26.00 kN
 Bending Moment 2.87 kNm
 Ah = 0.68 kN
 Ch = 4.65 kN
 Cv = 4.37 kN
 Reaction @ 'D'
 Dv = 7.93 kN
 Dh = 7.70 kNm
 ANGLE OF REPOSE = 30.00°



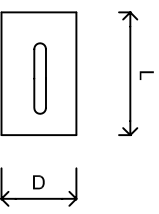
FOUNDATION TYPE 'A'

DEPTH = 0.50 m
 CONCRETE VOLUME = 0.51 m³
 CONCRETE MASS = 12.28 kN
 BEARING PRESSURE = 50.58 kN/m²



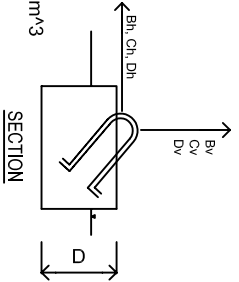
FOUNDATION TYPE 'C'

L = 0.95 m
 D = 0.60 m
 CONCRETE VOLUME = 0.37 m³
 CONCRETE MASS = 8.89 kN
 BEARING PRESSURE = 36.87 kN/m³




FOUNDATION TYPE 'D'

L = 1.05 m
 D = 0.70 m
 CONCRETE VOLUME = 0.62 m³
 CONCRETE MASS = 14.99 kN
 BEARING PRESSURE = 45.93 kN/m³



TOTAL VOLUME of CONCRETE = 3.50 m³

MODEL No:	GNM45	Description:	45m GALAXY PARALLEL MAST	Client:	GALAXY-MAST
Drawn by	DMOKOENA	Checked by	A.J.PEACEFUL	File name	
Approved by	- date	2001/07/01	Date	Scale	N.T.S
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