



## Broadband Pole Design Properties

### 50 Ft. AGL Standard Tapered Steel Poles

Physical Properties for 50 Ft. Tapered Steel Poles			
	Light	Medium	Heavy
Design Number	T50LA	T50MA	T50HA
Tip OD, in.	6.50	9.00	12.00
OD @ grade, in.	13.00	15.50	18.50
Butt OD, in.	15.11	17.75	20.89
Number Sides	12	16	18
Δ Dia, in/ft	0.1406	0.1407	0.1407
Side Taper, in/ft	0.0703	0.0704	0.0704
Embedment, ft.	15	16	17
Auger Dia, ft.	2.5	2.5	3.0
Backfill Type	Aggregate	Aggregate	Aggregate
Total Length, ft.	65	66	67
Bare Pole Wt, lbs.	1,515	1,903	2,392
No. of Sections	2	2	2

EPA (ft <sup>2</sup> ) for 50 Ft. Tapered Steel Poles										
Wind Speed, MPH		Light			Medium			Heavy		
Fastest Mile	3-sec Gust	Sway Limit			Sway Limit			Sway Limit		
		4°	3°	2°	4°	3°	2°	4°	3°	2°
70	85	69	49	29	110	108	68	170	170	143
80	100	52	49	29	80	80	68	126	126	126
90	110	38	38	29	59	59	59	95	95	95
100	120	27	27	27	44	44	44	74	74	74
110	130	19	19	19	32	32	32	57	57	57
120	140	13	13	13	24	24	24	45	45	45

#### Notes

1. The tabulated EPA values represent the total EPA capacity of the pole. The capacity is based on the assumption that 80% of the total EPA is located at the top of the pole and the remaining 20% is located 20 ft. below the top. When all loading is located at the top of the pole, the tabulated EPA capacity must be reduced by 20%. Refer to *Antenna Index* for the EPA values and sway limitations for specific antenna types.
2. The dash (—) in the table indicates that the pole is not adequate to support antennas for the indicated wind speed.
3. Bare pole weight represents the weight of the pole without accessories.
4. Designs are based on a maximum of (6) ½" internally routed coax per elevation, 90 lbs per elevation for mounts, and antenna weights in pounds equal to 6 times the tabulated EPA values.
5. Pole embedment is based on ANSI/TIA/EIA-222-F normal soil conditions.

Designed By: Mar  
Date: 7/31/07

Checked By: HHA  
Date: 7/31/07

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 Section Data

Section No.		Light	Medium	Heavy
	Design Number	T50LA	T50MA	T50HA
1 (top)	Length, ft.	21.42	21.75	22.17
	Galv. Wt., lbs	364	484	636
	Min. Splice, in.	12.5	16.0	20.50
	Max. Splice, in.	18.0	22.5	28.00
2 (bottom)	Length, ft.	45.00	46	47
	Galv. Wt., lbs	1,151	1,419	1,755
	Min. Splice, in.	—	—	—
	Max. Splice, in.	—	—	—

	Maximum Reactions		
	Light	Medium	Heavy
Download, kips	2.8	3.4	4.9
OTM, ft-kips	106.4	148.0	210.6
Shear, kips	3.7	4.7	5.9

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