



MAVERICK POLES AND STRUCTURE, LLC  
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## Key to Selecting Pole Standards

**RTSP - 30 - 77 - E2 - AB - FP(WH) - DM19 - XX**

Category	Pole Height	Wall Thickness	Finish	Standard Drilling Patterns	Optional Features**
<b>RTSP</b> – Round Tapered Steel Pole  <b>RNSP</b> – Round Non-tapered Steel Pole  <b>STSP</b> – Square Tapered Steel Pole  <b>SNSP</b> – Square Non-tapered Steel Pole  <b>STHP</b> – Square Tapered Hinged Pole  <b>SNHP</b> – Square Non-tapered Hinged Pole	10 = 10' 20 = 20' 25 = 25' 30 = 30' 35 = 35' 40 = 40' 45 = 45' 50 = 50' 60 = 60' 70 = 70'  <b>Base Diameter or Width</b> 63 – 6.3" 70 – 7.0" 77 – 7.7" 84 – 8.4" 90 – 9.0" 10 – 10.0" etc....	E – 0.1196" B – 0.1560" N – 0.1793" V – 0.1875" H – 0.2500"  <b>Material Yield Strength</b> 1 – 65 ksi 2 – 55 ksi 3 – 46 ksi  <b>Base Type</b> AB – Anchor Base EM – Embedded LAB – Less Anchor Bolts+	GV – Galvanized *FP – Finish Painted *GP – Galv and Paint  <b>*Standard Colors</b> WH – White DB – Dark Bronze MB – Med Bronze AL – Aluminum BL – Black SP – Special	DM19 – 1 @ 90° DM28 – 2 @ 180° DM29 – 2 @ 90° DM32 – 3 @ 120° DM39 – 3 @ 90° DM49 – 4 @ 90°  <b>Standard Tenons</b> T20R – TEN-20-R5 T25R – TEN-25-R5 T30R – TEN-30-R5 T35R – TEN-35-R5 T30S – TEN-30-S5 T35S – TEN-35-S5 T40S – TEN-40-S5 T45S – TEN-45-S5	UP – Upswept Arm bracket SP – Spoke bracket FE – Festoon Box DU – Duplex receptacle GF – Ground Fault Interrupt VB – Vibration Damper BC – Breakaway couplings TB – Transformer Base FB – Full Base Cover NC – Nut Covers CA – Cross Arm BH – Bullhorn Bracket LP – Lightning Protection OL – Obstruction Lights

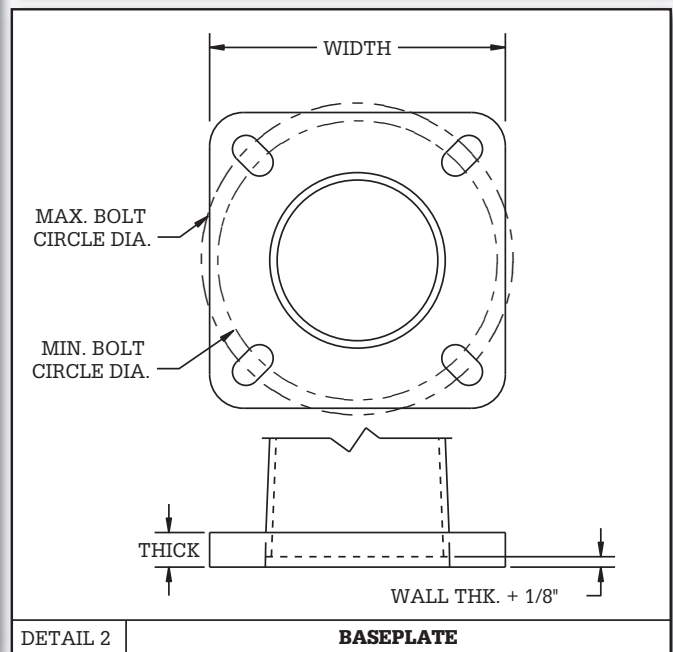
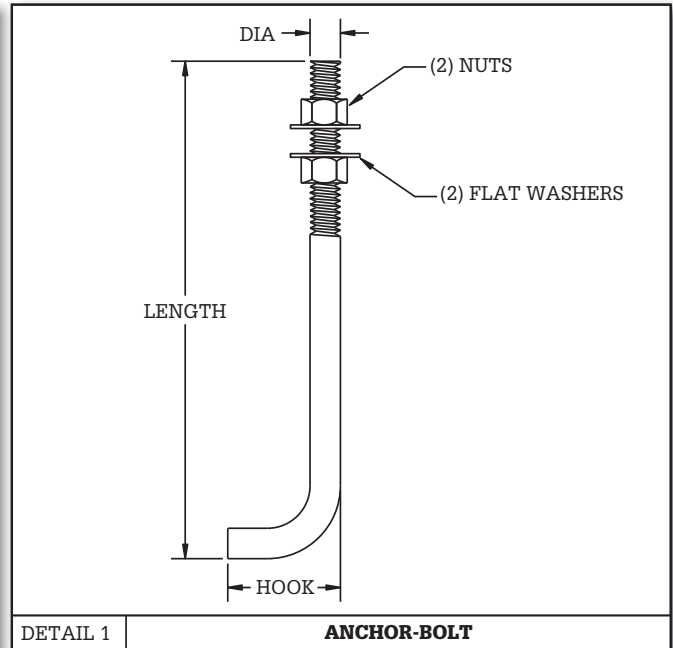
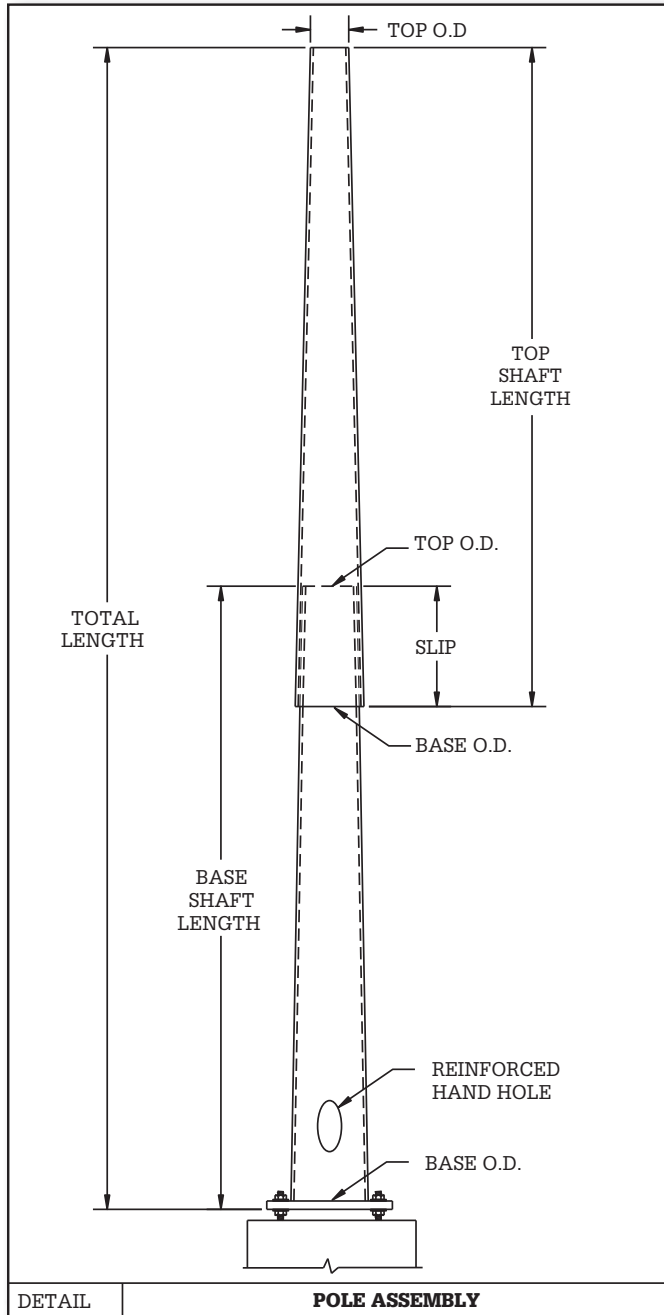
\*\* Please order accessories per catalog number as a separate line item. Also, please specify quantities, mounting heights and orientations as necessary.

+ Please specify existing situation or special circumstance.

### SIX FACTORS ESSENTIAL TO SELECTING THE OPTIMUM STANDARD

- Pole Height** – The pole height will be determined by the lighting requirements as specified by the project designer. These lighting requirements will cause variance in the pole height, which is dependent upon fixture types, lighting level and uniformity requirements.
- Wind Velocity** - The wind velocity shall be determined from either the project specifications or the wind velocity map on page 4-1. This wind velocity map is based upon a 50-year mean recurrence interval. The wind values shown on this map represent wind velocities at 30 feet above the ground. When a project location is sited between adjacent wind zones, the wind zone with the greater wind velocity should be used. Also, please be aware that special wind conditions may exist around mountainous areas or locations with unique terrain. Special design consideration should be given to such areas.
- EPA** - The EPA (Effective Projected Area) of the system should be computed by summing all of the EPA's of the external appurtenances, which are mounted on the pole. The EPA for lighting fixtures can be determined by referencing the appropriate manufacturer's catalog. EPA values for all brackets can be found in the appropriate table located in this catalog.
- Weight** – The weight of the system should be computed by summing all of the weights of the external appurtenances mounted on the pole. Weights of fixtures and brackets can be determined from the appropriate lighting fixture manufacturer's catalog and the appropriate table in this catalog respectively.
- Pole Duty Rating** - The pole duty rating should be determined by comparing the system EPA and weight with the EPA and weight capacities listed in the appropriate maximum loading table located within this catalog. The values detailed in this table reflect the maximum capacities of the respective poles and are based upon a loading centroid located at the top of the pole.
- Pole Base** - The pole base (Anchor Bolt or Embedded) is typically determined by the project specifications.

## Round Tapered (Anchor Base)



Note: Only 60' and 70' designs require two shaft sections.  
Refer to Structure Data for specific design information.



## Round Tapered (Anchor Base)

STRUCTURE DATA											
Catalog Number	Gross Weight (Lbs)	Pole Shaft Data					Base Plate Data			Anchor Bolt Data	
		Section	Base O.D. (in)	Top O.D. (in)	Wall Thk. (in)	Shaft Length (ft)	Bolt Circle Range (in)			Dia x Lgth x Hk	
RTSP-20-59-E2-AB	116	Base	5.9	3.1	0.1196	20	8.5 - 9.5			1 x 36 x 4	
RTSP-20-65-E2-AB	157	Base	6.5	3.7	0.1196	20	9 - 10			1 x 36 x 4	
RTSP-25-59-E2-AB	156	Base	5.9	2.4	0.1196	25	8.5 - 9.5			1 x 36 x 4	
RTSP-25-70-E2-AB	204	Base	7.0	3.5	0.1196	25	9.5 - 10.5			1 x 36 x 4	
RTSP-30-66-E2-AB	207	Base	6.6	2.4	0.1196	30	9 - 10			1 x 36 x 4	
RTSP-30-80-E2-AB	259	Base	7.7	3.5	0.1196	30	10.5 - 11.5			1 x 36 x 4	
RTSP-35-73-E2-AB	260	Base	7.3	2.4	0.1196	35	10 - 11			1 x 36 x 4	
RTSP-35-85-E2-AB	316	Base	8.4	3.5	0.1196	35	11 - 12			1 x 36 x 4	
RTSP-35-95-E2-AB	381	Base	9.5	2.4	0.1875	35	12.5 - 13.5			1 x 36 x 4	
RTSP-40-80-E2-AB	310	Base	8.0	2.4	0.1196	39	10.5 - 11.5			1 x 36 x 4	
RTSP-40-90-E2-AB	371	Base	9.0	3.5	0.1196	39	12 - 13			1 x 36 x 4	
RTSP-40-80-V1-AB	461	Base	8.0	2.4	0.1875	39	10.5 - 11.5			1 x 36 x 4	
RTSP-40-90-V1-AB	554	Base	9.0	3.5	0.1875	39	12 - 13			1.25 x 42 x 6	
RTSP-40-10-V1-AB	643	Base	10.0	4.5	0.1875	39	13 - 14			1.25 x 42 x 6	



STRUCTURE LOADING CAPACITIES																
Catalog Number	Maximum Loading															
	90 mph		100 mph		110 mph		120 mph		90 mph		100 mph		110 mph		120 mph	
	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)	EPA (ft²)	Wt. (lbs)
RTSP-20-52-E2-AB					13.5	338	10.5	263	8.5	213	7	175				
RTSP-20-63-E2-AB					21.5	538	17.5	438	14.5	363	12.0	300				
RTSP-25-59-E2-AB					12.0	300	9.5	238	7.5	188	6.0	150				
RTSP-25-70-E2-AB					19.0	475	15.5	388	12.5	313	10.5	263				
RTSP-30-66-E2-AB					11.0	275	8.5	213	7.0	175	6.0	150				
RTSP-30-77-E2-AB					17.5	438	14.0	350	11.5	288	9.5	238				
RTSP-35-73-E2-AB					10.5	263	8.5	213	6.5	163	5.5	138				
RTSP-35-84-E2-AB					16.5	413	13.5	338	11.0	275	9.0	225				
RTSP-35-73-V1-AB					20.0	500	16.5	413	13.5	338	11.5	288				
RTSP-35-90-V1-AB					37.5	938	30.5	763	25.0	625	20.5	513				
RTSP-40-80-E2-AB					10.0	250	8.0	200	6.5	163	5.5	138				
RTSP-40-90-E2-AB					16.0	400	13.0	325	10.5	263	8.5	213				
RTSP-40-80-V1-AB					19.0	475	16.0	400	13.0	325	11.0	275				
RTSP-40-90-V1-AB					30.0	750	24.5	613	20.0	500	16.5	413				
RTSP-40-10-V1-AB					43.0	1075	35.0	875	28.5	713	23.5	588				



## Round Tapered (Anchor Base)

FOUNDATIONS (RTSP-AB)								
Catalog Number	Foundation Data						Anchor Bolt Data	
	Caisson Diameter (in)	Caisson Depth (ft)	Vert Rebar Qty	Vert Rebar Size	Concrete Volume (Cu Yds)	Steel Weight (lbs)	Dia x Lgth x Hk	Bolt Circle Range (in)
RTSP-20-52-E2-AB	24	5.00	8	#5	0.58	59	0.75 x 30 x 3	8.0 to 9.0
RTSP-20-63-E2-AB	24	5.00	8	#5	0.58	59	1.00 x 36 x 4	9.5 to 10.5
RTSP-25-59-E2-AB	24	5.00	8	#5	0.58	59	0.75 x 30 x 3	8.5 to 9.5
RTSP-25-70-E2-AB	24	5.00	8	#5	0.58	59	1.00 x 36 x 4	10 to 11
RTSP-30-66-E2-AB	24	5.00	8	#5	0.58	59	1.00 x 36 x 4	9.5 to 10.5
RTSP-30-77-E2-AB	24	5.00	8	#5	0.58	59	1.00 x 36 x 4	11 to 12
RTSP-35-73-E2-AB	24	6.00	8	#6	0.70	91	1.00 x 36 x 4	10.5 to 11.5
RTSP-35-84-E2-AB	24	6.00	8	#6	0.70	91	1.00 x 36 x 4	11.5 to 12.5
RTSP-35-73-V1-AB	30	6.00	8	#6	1.09	98	1.25 x 42 x 6	11 to 12
RTSP-35-90-V1-AB	30	6.00	8	#6	1.09	98	1.25 x 42 x 6	12.5 to 13.5
RTSP-40-80-E2-AB	30	7.00	8	#6	1.27	115	1.00 x 36 x 4	11 to 12
RTSP-40-90-E2-AB	30	7.00	8	#6	1.27	115	1.00 x 36 x 4	12 to 13
RTSP-40-80-V1-AB	30	7.00	8	#6	1.27	115	1.25 x 42 x 6	11 to 12
RTSP-40-90-V1-AB	30	7.00	8	#6	1.27	115	1.25 x 42 x 6	12.5 to 13.5
RTSP-40-10-V1-AB	30	7.00	8	#6	1.27	115	1.50 x 54 x 6	13.5 to 14.5

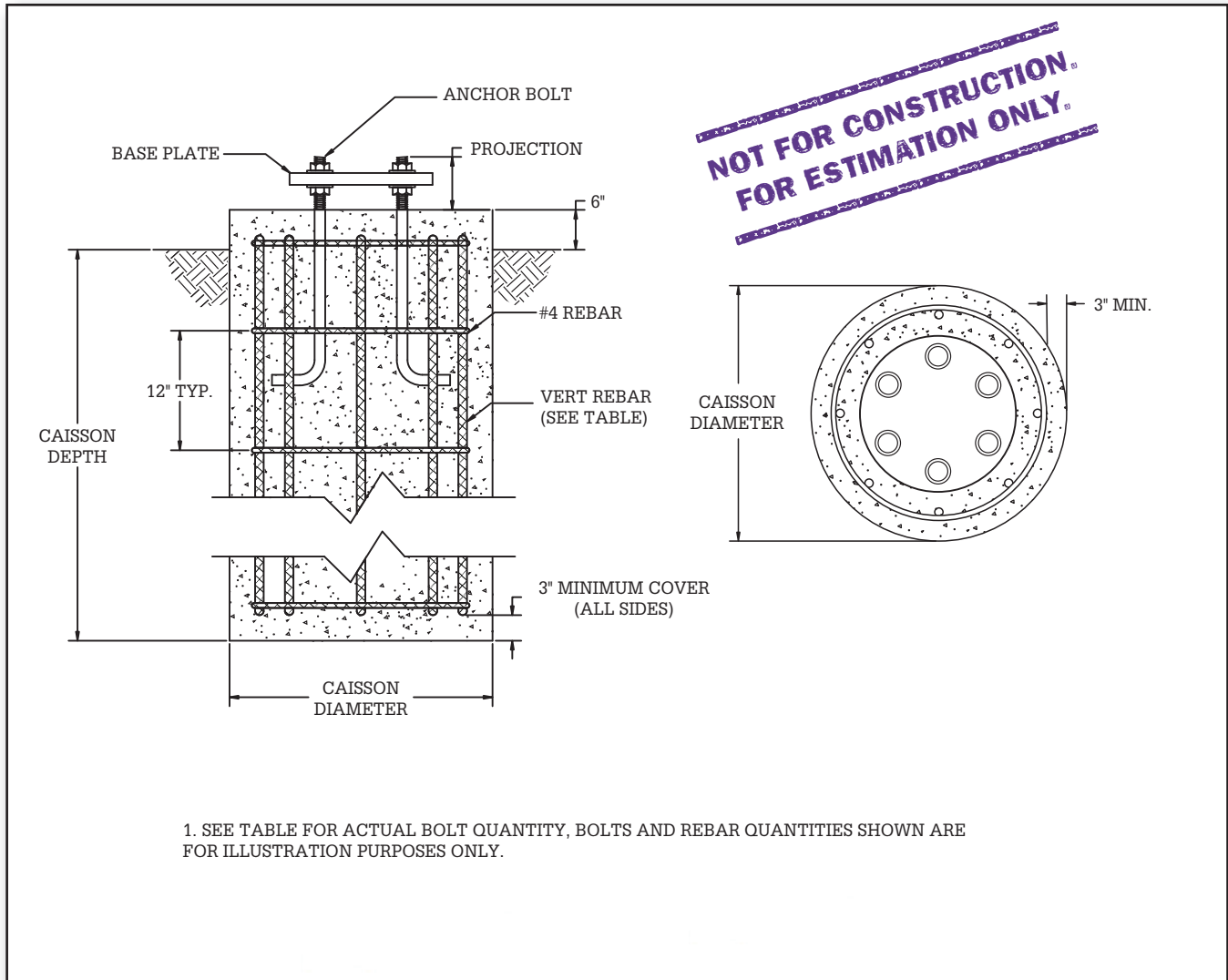


- Notes:
- The above information is for estimating purposes only. Do not use for construction.
  - Analysis is based upon Brom's method of foundation design.
  - All of the designs are based upon the following soil parameters:
    - Soil is homogeneous, non-cohesive
    - $\phi = 30$  degrees
    - $\gamma = 110$  pcf.
    - Water table is below bottom of foundation.
    - Site grade is 7H:1V or flatter.
  - Concrete 28 day compressive strength = 3000 psi.
  - Concrete design is in accordance with ACI 318-95.
  - Concrete is cast against undisturbed soil.

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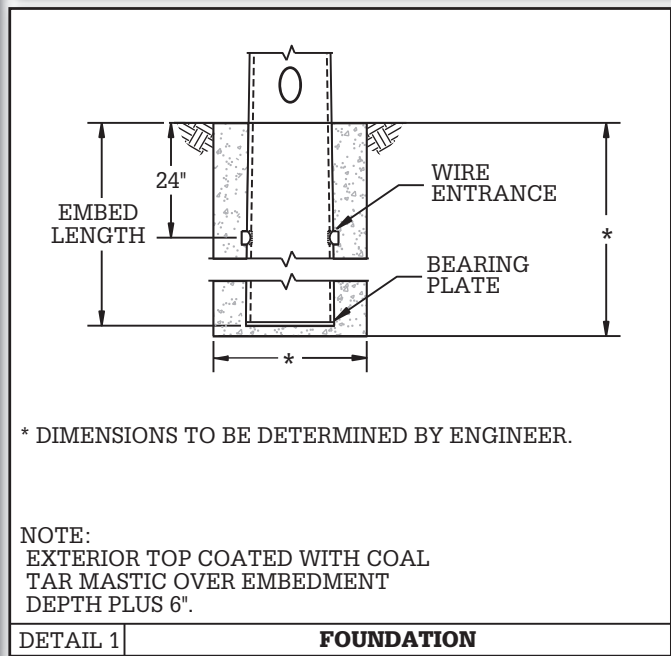
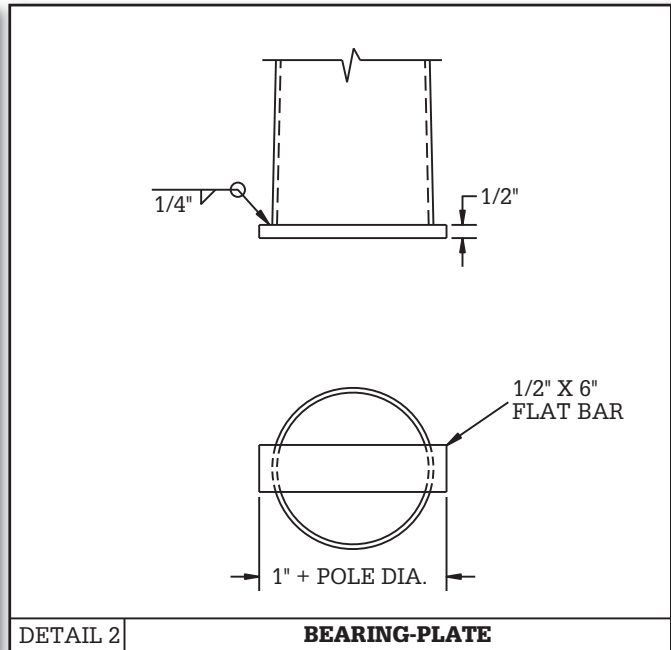
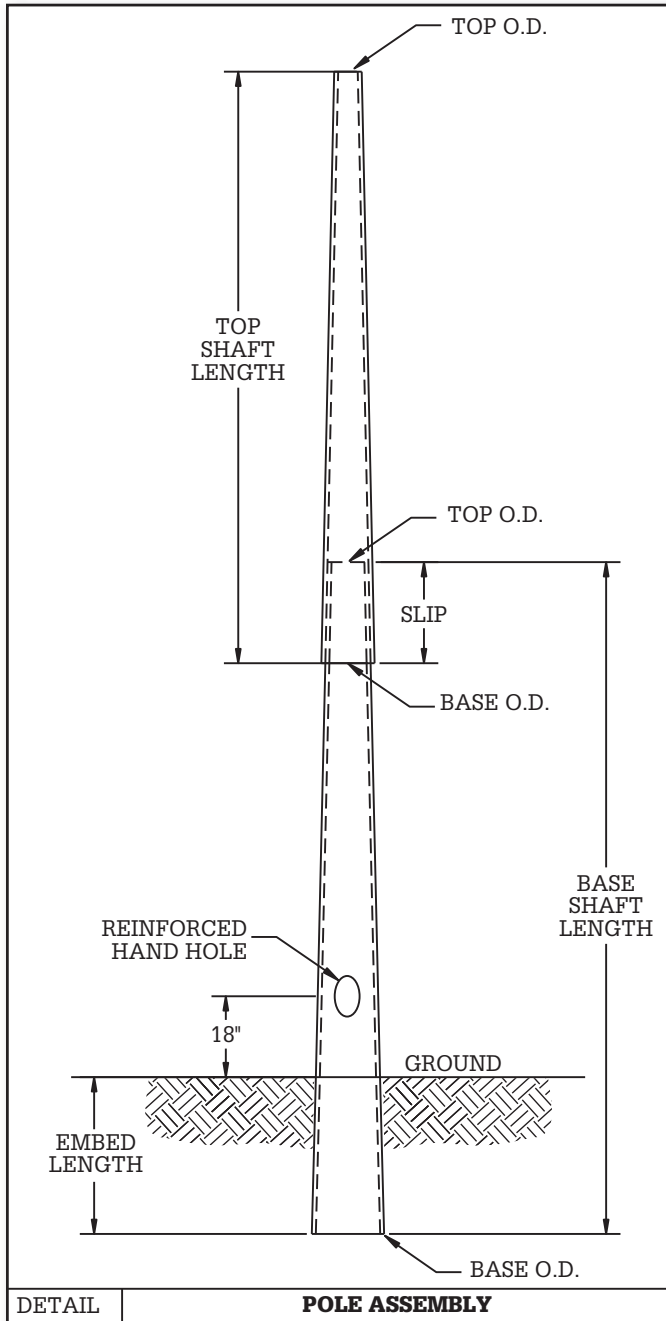
## Round Tapered (Anchor Base)



The information above is provided for preliminary estimating use only and may not be used as final or construction designs.



## Round Tapered (Embedded)



Note: Only 45', 50' and 60' designs require two shaft sections.  
 Refer to Structure Data for specific design information.



A complete library of drawings is available electronically. Please contact Maverick Poles for further information.



## Round Tapered (Embedded)

STRUCTURE DATA							
Catalog Number	Gross Weight (Lbs)	Pole Shaft Data					
		Section	Base O.D. (in)	Top O.D. (in)	Wall Thk. (in)	Shaft Length (ft)	Embed Length (ft)
RTSP-20-70-E2-EM	173	Base	7.00	3.50	0.1196	25.00	5.00
RTSP-25-77-E2-EM	221	Base	7.70	3.50	0.1196	30.00	5.00
RTSP-30-84-E2-EM	274	Base	8.40	3.50	0.1196	35.00	5.00
RTSP-30-90-E2-EM	316	Base	9.00	4.10	0.1196	35.00	5.00
RTSP-35-10-E2-EM	427	Base	10.00	4.26	0.1196	41.00	6.00
RTSP-35-10-V1-EM	649	Base	10.00	4.26	0.1875	41.00	6.00
RTSP-40-10-E2-EM	460	Base	10.00	3.56	0.1196	46.00	6.00
RTSP-40-10-V1-EM	698	Base	10.00	3.56	0.1875	46.00	6.00
RTSP-40-11-V1-EM	752	Base	11.00	4.56	0.1875	46.00	6.00
RTSP-40-12-V1-EM	851	Base	12.00	5.56	0.1875	46.00	6.00
RTSP-45-12-E2-EM	631	Base	12.00	7.47	0.1196	32.36	7.00
		Top	8.00	4.96	0.1196	21.72	
RTSP-45-12-V1-EM	964	Base	12.00	7.34	0.1875	33.32	7.00
		Top	8.00	5.09	0.1875	20.75	
RTSP-50-12-E2-EM	662	Base	12.00	7.47	0.1196	32.36	7.00
		Top	8.00	4.26	0.1196	26.72	
RTSP-50-12-V1-EM	1012	Base	12.00	7.34	0.1875	33.32	7.00
		Top	8.00	4.39	0.1875	25.75	
RTSP-60-13-V1-EM	1215	Base	13.00	5.58	0.1875	53.00	8.00
		Top	6.21	3.85	0.1875	16.84	

STRUCTURE LOADING CAPACITIES												
Catalog Number	Maximum Loading											
	70 mph		80 mph		90 mph		100 mph		110 mph		120 mph	
	EPA (ft <sup>2</sup> )	Wt. (lbs)	EPA (ft <sup>2</sup> )	Wt. (lbs)	EPA (ft <sup>2</sup> )	Wt. (lbs)	EPA (ft <sup>2</sup> )	Wt. (lbs)	EPA (ft <sup>2</sup> )	Wt. (lbs)	EPA (ft <sup>2</sup> )	Wt. (lbs)
RTSP-20-70-E2-EM					21.5	538	17.5	438	14.5	363	12.0	300
RTSP-25-77-E2-EM					19.0	475	15.5	388	12.5	313	10.5	263
RTSP-30-84-E2-EM					17.5	438	14.0	350	11.5	288	9.5	238
RTSP-30-90-E2-EM					21.0	525	17.0	425	14.0	350	11.5	288
RTSP-35-10-E2-EM					22.0	550	17.5	438	14.0	350	11.0	275
RTSP-35-10-V1-EM					43.0	1075	34.5	863	28.5	713	23.5	588
RTSP-40-10-E2-EM					17.5	438	13.5	338	11.0	275	8.5	213
RTSP-40-10-V1-EM					35.0	875	28.0	700	23.0	575	19.0	475
RTSP-40-11-V1-EM					42.5	1063	34.5	863	28.5	713	23.5	588
RTSP-40-12-V1-EM					54.0	1350	43.0	1075	35.0	875	29.0	725
RTSP-45-12-E2-EM					22.0	550	17.0	425	13.5	338	10.5	263
RTSP-45-12-V1-EM					42.5	1063	34.5	863	28.5	713	23.0	575
RTSP-50-12-E2-EM					17.5	438	14.0	350	11.0	275	8.5	213
RTSP-50-12-V1-EM					34.0	850	28.0	700	23.0	575	19.0	475
RTSP-60-13-V1-EM					27.0	675	22.5	563	18.5	463	15.5	388



## Round Tapered (Embedded)

FOUNDATIONS (RTSP-EM)									
Catalog Number	Pole Shaft Data						Foundation Data		
	Gross Weight (Lbs)	Base O.D. (in)	Top O.D. (in)	Wall Thk. (in)	Shaft Length (ft)	Embed Length (ft)	Caisson Diameter (in)	Caisson Depth (ft)	Concrete Volume (Cu Yds)
RTSP-20-70-E2-EM	173	7.00	3.50	0.1196	25.00	5.00	24	5.00	0.58
RTSP-25-77-E2-EM	221	7.70	3.50	0.1196	30.00	5.00	24	5.00	0.58
RTSP-30-84-E2-EM	274	8.40	3.50	0.1196	35.00	5.00	24	5.00	0.58
RTSP-30-90-E2-EM	316	9.00	4.10	0.1196	35.00	5.00	24	5.00	0.58
RTSP-35-10-E2-EM	427	10.00	5.08	0.1196	41.00	6.00	30	6.00	1.09
RTSP-35-10-V1-EM	649	10.00	5.08	0.1875	41.00	6.00	30	6.00	1.09
RTSP-40-10-E2-EM	460	10.00	4.48	0.1196	46.00	6.00	30	6.00	1.09
RTSP-40-10-V1-EM	698	10.00	4.48	0.1875	46.00	6.00	30	6.00	1.09
RTSP-40-11-V1-EM	752	11.00	4.56	0.1875	46.00	6.00	30	6.00	1.09
RTSP-40-12-V1-EM	851	12.00	5.56	0.1875	46.00	6.00	30	6.00	1.09
RTSP-45-12-E2-EM	631	12.00	7.47	0.1196	32.36	7.00	30	7.00	1.27
RTSP-45-12-V1-EM	964	12.00	7.34	0.1875	33.32	7.00	30	7.00	1.27
RTSP-50-12-E2-EM	662	12.00	7.47	0.1196	32.36	7.00	30	7.00	1.27
RTSP-50-12-V1-EM	1012	12.00	7.34	0.1875	33.32	7.00	30	7.00	1.27
RTSP-60-13-V1-EM	1247	13.00	8.32	0.1875	33.44	8.00	30	8.00	1.45

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 a. Soil is homogeneous, non-cohesive  
 b.  $\phi = 30$  degrees  
 c.  $\gamma = 110$  pcf.  
 d. Water table is below bottom of foundation.  
 e. Site grade is 7H:1V or flatter.  
 4. Concrete 28 day compressive strength = 3000 psi.  
 5. Concrete design is in accordance with ACI 318-95.  
 6. Concrete is cast against undisturbed soil.

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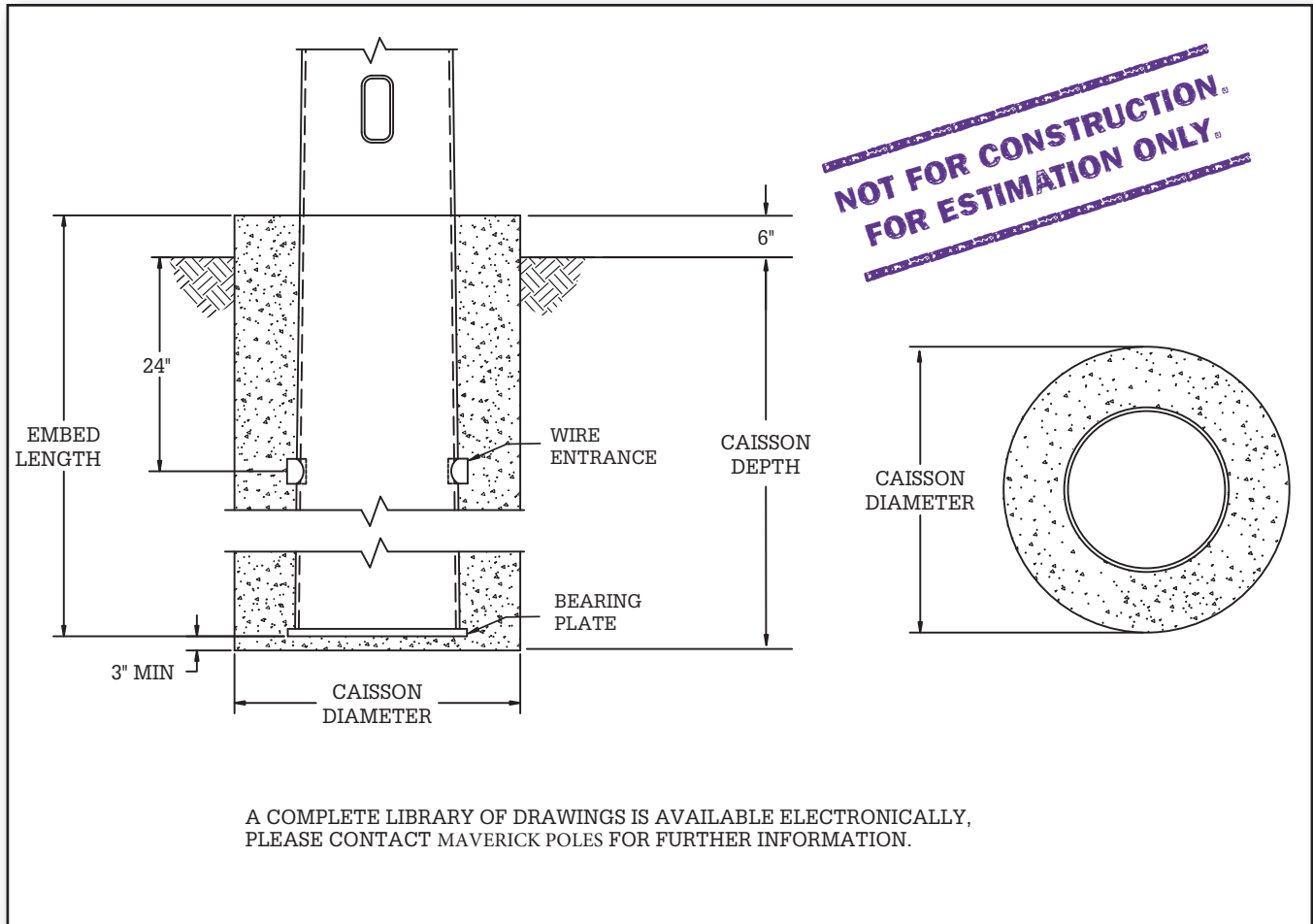
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