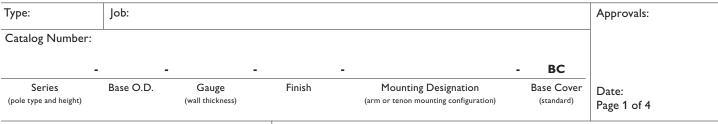
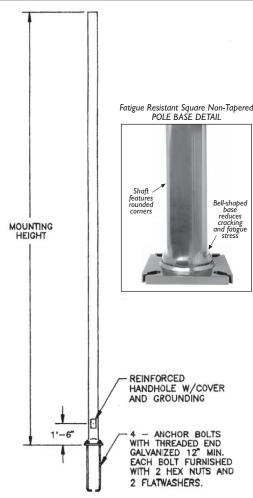
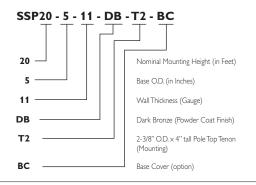
Straight Square Steel Pole





Straight Square Steel Pole (SSP)

See below for ordering example to specify a 20' Straight Square Steel Pole, having a 5.00" O.D. Base dimension, 11 gauge wall thickness, Dark Bronze powder coat Finish, with an optional 2-3/8" O.D. x 4" tall pole top tenon, and the standard base cover.



Specifications

Anchor Bolts

Anchor bolts are fabricated from carbon steel conforming to AASHTO M314 Grade-55 or ASTM F1554 Grade-55. Bolts have an "L" bend on one end and are galvanized a minimum of 12 inches on the threaded end. Four anchor bolts are provided per pole. Each anchor bolt is furnished with two hex nuts and two flat washers.

Anchor Base

The anchor base (base plate) is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate telescopes the pole shaft and is circumferentially welded top and bottom. The base is provided with a slotted anchor bolt opening that enables a range of bolt circles to be utilized. Corresponding bolt circles for each pole type are listed in the Pole Information Chart. See Pole Base Detail.

Pole Shaft

The pole shaft is fabricated from weldable grade hot rolled commercial quality carbon steel and is supplied in 11 gauge (0.1196") or 7 gauge (0.1793") material thickness having a guaranteed minimum yield strength of 55,000 psi. Shafts are of one-piece construction with a full length longitudinal high frequency electric resistance weld. The shaft is uniformly square in cross section with flat sides, rounded corners (.75" per corner), and no taper:

Fatigue Resistant Feature

The unique bell-shaped base minimizes the effects of pole vibration by improving the fatigue performance of the shaft to base plate connection. Square poles, by the very nature of their shape, are more susceptible to fatigue at this critical joint than other pole designs. By flaring out the shaft and creating a round section at this critical welded connection point, the stress and resulting fatigue occurring at this point is more evenly distributed, thus enhancing the structure's longevity and overall performance.

Handhole

The reinforcing handhole rim consists of a rectangular shaped tubing material having a nominal $2.5" \times 5"$ opening. It is provided with a steel attachment bar, steel cover, and one round head machine screw. The handhole is welded in the pole shaft and is located 1'-6" above the base.

Electrical Ground

A nut holder is provided near the handhole and includes a 0.5"-13 UNC hex head bolt and nut.

Nut Covers

Nut covers for anchor bolts are standard and are zinc die cast. Each cover is fastened to the shaft by a 0.25" stainless steel, self-tapping, hex head screw.

Full Base Cover

A full base cover is standard and is fabricated from ABS plastic. It is a two-piece cover secured together with two plastic hand push rivets.

Pole Top Cap and Arm Mounting

A removeable top cap is standard and is used in conjunction with drilled pole shafts for accommodation of a direct mounted luminaire arm attachment. Specify choice of drill mounting (D1 through D6) for luminaire arm mounting configuration required. Specify appropriate Drill Template (Y) for intended luminaire mounting type.

Pole Top Tenon

Pole top tenons are standard and are fabricated from structural quality hot rolled carbon steel with a guaranteed minimum yield strength of 30,000 psi. A pole top plate and tenon of weldable grade hot rolled commercial quality carbon steel is circumferentially welded to the top of the pole shaft. This plate provides an internal weather resistant wiring raceway into the pole top tenon. Standard tenon sizes are 2-3/8" O.D. \times 4" tall (T2), 3.0" O.D. \times 5-5/8" tall (T3), or 4" O.D. \times 5-5/8" tall (T4) vertical pipe tenon. Bullhorn accessories are available.

Finish

Standard available finishes are hot-dip galvanized (GV) and polyester powder coat, electrostatically applied and oven cured, in the colors listed.

Fastening Hardware

All structural fasteners are galvanized high strength carbon steel. All other fasteners are galvanized or zinc plated carbon steel or stainless steel.

Design

Consult Wind Velocity Map to ensure suitability for location and application.

Standards (poles) are designed to withstand dead loads and theoretical dynamic loads developed by variable wind speeds, as charted, with an appropriate gust factor under the following conditions:

Wind velocities are based on 10 mph increments from 80 mph through 100 mph.

Note: Standards (poles) to be located in areas of known abnormal conditions require special consideration. For example: coastal areas, airports, and areas of special winds such as the Chinook Winds along the eastern slope of the Rocky Mountains.

Standards (poles) are designed for ground mounted applications. Consult factory for special consideration for mounting on structures (such as bridges and buildings). Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated into the standard.



Straight Square Steel Pole

Туре: Јо		Job:											Page 2 of 4	1	
Series/Pole Height (1)		Base Gauge			nisł	า		Mounting Designation Options							
□ SSP10 □ SSP12 □ SSP14 □ SSP16 □ SSP18 □ SSP20 □ SSP25 □ SSP30 □ SSP35	10' pol- 12' pol- 14' pol- 16' pol- 20' pol- 25' pol- 30' pol- 35' pol-	e e e e e e e	□ 4 (2) □ 5 (3) □ 6 (4)	11 (5) 7 (6)	0		DB BLK	Galvanize Gray (7) Satin Aluminum (7) Dark Bronze (7) Black (7) White (7)	Arr	m Mount D1-DT D2-DT D4-DT D5-DT D6-DT non Moun T2 T3	Configu (Y) (Y) (Y) (Y) (Y) (Y) t Config 2.375" (3.0" O.E		rill template (Y) drill template (Y) rill template (Y) rill template (Y) rill template (Y) 'tall tenon (10) tall tenon		
☐ SSP40	40' pol	e							"		1.0 O.L	J. X J.023 (J-5/0)	tail telloll		

- (1) Square Straight Steel Fatigue Resistant Pole Series. Consult Pole Information Chart for corresponding available base outside dimension and material thickness (gauge).
- (2) 4" Base (outside dimension of pole shaft) available for 10' 30' poles.
- (3) 5" Base (outside dimension of pole shaft) available for 20' 35' poles.
- (4) 6" Base (outside dimension of pole shaft) available for 30' 40' poles.
- (5) 11 gauge (0.1196") pole shaft material. Not available for 35' or 40' poles.
- (6) 7 gauge (0.1793") pole shaft material. Not available for 10', 12', 14', 16', or 18' poles.
 (7) Powder coat finish. Consult factory for special colors or finishes.
- (8) Drill Mounting patterns for Square Pole. D3 (3@120°) not available with square poles. Specify appropriate Drill Template (Y) for intended luminaire to be arm mounted.
- (9) Standard Pole Top Pipe Tenon options listed. Consult factory to specify custom size.
- (10) 4-1/2" tall tenon available as special order. Consult factory when specifying with PTRD or PTSQ (EAL post top mounting options).

Pole Information Chart (1, 2, 3)

Nominal	Pole S	Pole Base				Anchor Bolts	80 MPH w/1.3 Gust		90 MPH w/1.3 Gust		100 MPH w/1.3 Gust				
Mounting Height (ft)	Catalog Number	Base O.D. (in)	Wall Thickness (ga)	Struct. Weight (lbs)	Bolt (Dia. (in)	Circle ± (in)	Square (in)	Thk. (in)	Dia. x Lngth x Hk. (in)	Max. EPA (ft²)	Max. Weight (lbs)	Max. EPA (ft²)	Max. Weight (lbs)	Max. EPA (ft²)	Max. Weight (lbs)
10	SSP10- 4 - 11 -XXX-XX-BC	4.00	11	75	8.5	0.5	8.25	0.75	.75 x 17 x 3	30.6	765	23.8	595	18.9	473
12	SSP12- 4 - 11 -XXX-XX-BC	4.00	11	90	8.5	0.5	8.25	0.75	.75 x 17 x 3	24.4	610	18.8	470	14.8	370
14	SSP14- 4 - 11 -XXX-XX-BC	4.00	11	100	8.5	0.5	8.25	0.75	.75 x 17 x 3	19.9	498	15.1	378	11.7	293
16	SSP16- 4 - 11 -XXX-XX-BC	4.00	11	115	8.5	0.5	8.25	0.75	.75 x 17 x 3	15.9	398	11.8	295	8.9	223
18	SSP18- 4 - 11 -XXX-XX-BC	4.00	11	125	8.5	0.5	8.25	0.75	.75 x 17 x 3	12.6	315	9.2	230	6.7	168
20	SSP20- 4 - 11 -XXX-XX-BC	4.00	11	140	8.5	0.5	8.25	0.75	.75 x 17 x 3	9.6	240	6.7	167	4.5	150
	SSP20- 5 - 11 -XXX-XX-BC	5.00	11	185	11.0	1.0	11.00	1.00	.75 x 17 x 3	17.7	443	12.7	343	9.4	235
	SSP20- 5 - 7 -XXX-XX-BC	5.00	7	265	11.0	1.0	11.00	1.00	.75 x 17 x 3	28.1	703	21.4	535	16.2	405
25	SSP25- 4 - 11 -XXX-XX-BC	4.00	11	170	8.5	0.5	8.25	0.75	.75 x 17 x 3	4.8	150	2.6	100	1.0	50
	SSP25-4-7-XXX-XX-BC	4.00	7	245	8.5	0.5	8.25	0.88	.75 x 17 x 3	10.8	270	7.7	188	5.4	135
	SSP25- 5 - 11 -XXX-XX-BC	5.00	11	225	11.0	1.0	11.00	1.00	.75 x 17 x 3	9.8	245	6.3	157	3.7	150
	SSP25- 5 - 7 -XXX-XX-BC	5.00	7	360	11.0	1.0	11.00	1.00	.75 x 17 x 3	18.5	463	13.3	333	9.5	238
30	SSP30- 4 - 7 -XXX-XX-BC	4.00	7	291	8.5	0.5	8.25	0.75	.75 x 17 x 3	6.7	168	4.4	110	2.6	65
	SSP30- 5 - 11 -XXX-XX-BC	5.00	11	265	11.0	1.0	11.00	1.00	.75 x 17 x 3	4.7	150	2.0	50	-	-
	SSP30- 5 - 7 -XXX-XX-BC	5.00	7	380	11.0	1.0	11.00	1.00	.75 x 17 x 3	10.7	267	6.7	167	3.9	100
	SSP30- 6 - 7 -XXX-XX-BC	6.00	7	520	12.0	1.0	12.50	1.00	1.00 x 36 x 4	19.0	475	13.2	330	9.0	225
35	SSP35- 5 - 7 -XXX-XX-BC	5.00	7	440	11.0	1.0	11.00	1.00	.75 x 17 x 3	5.9	150	2.5	100	-	-
	SSP35- 6 - 7 -XXX-XX-BC	6.00	7	540	12.0	1.0	12.50	1.00	1.00 x 36 x 4	12.4	310	7.6	190	4.2	105
40	SSP40- 6 - 7 -XXX-XX-BC	6.00	7	605	12.0	1.0	12.50	1.00	1.00 x 36 x 4	7.2	180	3.0	75	-	-

Pole Information Chart Notes:

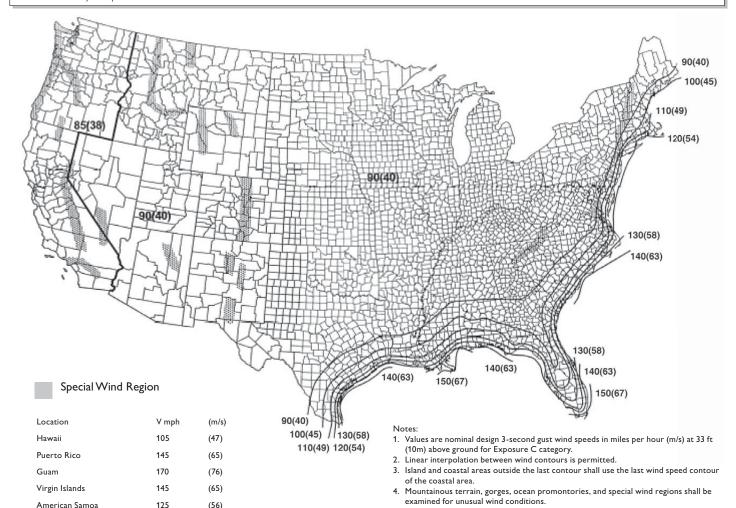
- (1) Poles provided with 2.5" x 5" nominal handhole.
- (2) Structure weight is a nominal value which includes the pole shaft and base plate only.
- (3) Maximum weight and EPA values are based on side mounted fixtures only. Consult factory regarding loading criteria for pole top mounted luminaires and /or brackets.

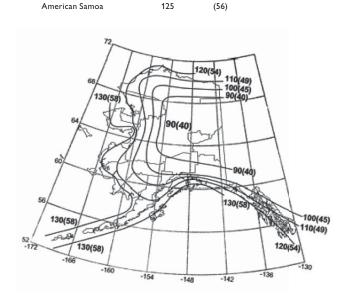


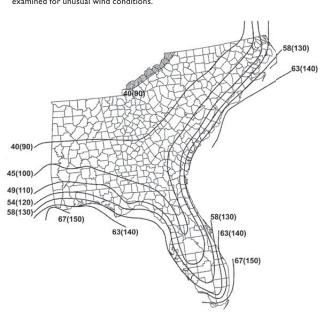
Straight Square Steel Pole

Type: Job: Page 3 of 4

Wind Velocity Map









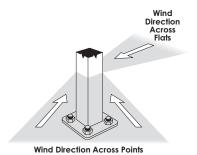
Straight Square Steel Pole

Type: Job: Page 4 of 4

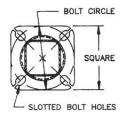
Wind Direction detail

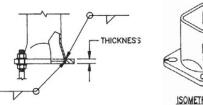
Maximum weight and EPA values are determined by analyzing stress from two wind directions as shown.

Due to the increased area and reduced section properties, stress levels across the points generally control the allowable loads.



Pole Base detail

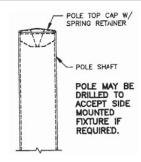


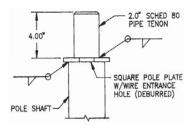




standard Pole Top Cap detail

T2 Pole Top Tenon detail





Notes