

# **DESIGN SPECIFICATIONS:**

REFER TO SIGN COMPANY'S DRAWINGS FOR MORE DETAILS. ALL DESIGNS, DETAILING FABRICATION AND CONSTRUCTION SHALL CONFORM TO:

> 2012 IBC ACI

**AISC** 

AMERICAN WELDING SOCIETY

LOCAL BUILDING CODES & ORDINANCES

CONCRETE: 2500 PSI @ 28 DAYS

STD. STEEL PIPE SECTION: ASTM A53 GRADE B (Fy=35 KSI), U.N.O.

STEEL PIPE SECTION (> 20" Ø): ASTM A252 GRADE 3 (Fy=42 KSI MIN.) U.N.O.

HSS ROUND SECTION: ASTM A500 GRADE B (Fy=42 KSI) U.N.O.

HSS SQUARE/RECTANGULAR SECTION: ASTM A500 GRADE B (Fy=46 KSI)

ANCHOR BOLTS: ASTM F1554 GRADE 36 U.N.O. (ALTERNATES GRADE 55 & 105)

CONNECTION BOLTS: ASTM A325

THREADED RODS: ASTM A193 GRADE B7

STEEL ANGLES, CHANNELS, STRUCTURAL SHAPES & PLATES ASTM A36

REINFORCING: GRADE 60 ASTM A615

PROVIDE A MINIMUM OF THREE INCHES OF CONCRETE COVER OVER EMBEDDED STEEL.

THE CONTRACTOR (INSTALLER) IS RESPONSIBLE FOR THE MEANS & METHODS OF CONSTRUCTION IN REGARDS TO JOBSITE SAFETY.

NO FIELD HEATING FOR BENDING OR CUTTING OF STEEL SHALL BE ALLOWED WITHOUT THE ENGINEER'S APPROVAL.

WELDING ELECTRODES: E70XX

ALLOWABLE SOIL BEARING PRESSURE ASSUMED: 2000 PSF

ASSUMED HORIZONTAL (PASSIVE PRESSURE) ASSUMED AT 150 PSF/FT OF DEPTH. ISOLATED LATERAL BEARING FOUNDATIONS FOR SIGNS NOT ADVERSELY AFFECTED

A 1/2" MOTION AT THE GROUND SURFACE DUE TO SHORT TERM LATERAL LOADS SHALL BE PERMITTED TO BE DESIGNED USING TWO TIMES THE TABULATED CODE VALUES.

ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED RESIDUAL SOIL AND/OR ENGINEERED EARTH.

FILL COMPACTED TO 98% OF ITS MAXIMUM DRY DENSITY AS PER ASTM D 698-70 (STANDARD PROCTOR) UNLESS NOTED OTHERWISE. THE SOIL BEARING CAPACITY IS TO BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION. IF ALLOWABLE BEARING AND/OR LATERAL PRESSURE IS LESS THAN THE ABOVE ASSUMED AND/OR CALCULATED PRESSURES, THE ENGINEER SHOULD BE CONTACTED FOR RE-EVALUATION.

EXCAVATION SHALL BE FREE OF LOOSE SOIL BEFORE POURING CONCRETE. WELDERS SHALL BE CERTIFIED FOR THE TYPE OF WELDING.

ADEQUATELY BRACE POLE(S) UNTIL CONCRETE HAS SET UP FOR 14 DAYS. GROUT UNDER BASE PLATES WITH NON-SHRINK GROUT.

THIS ENGINEER DOES NOT WARRANT THE ACCURACY OF DIMENSIONS FURNISHED BY OTHERS.

ALL EXPOSED STEEL SHALL BE PAINTED WITH AN ENAMEL PAINT TO INHIBIT CORROSION.

THIS DESIGN IS FOR THE INDICATED ADDRESS ONLY, AND SHOULD NOT BE USED AT OTHER LOCATIONS WITHOUT WRITTEN PERMISSION OF THE ENGINEER. DESIGN OF DETAILS AND STRUCTURAL MEMBERS NOT SHOWN, BY OTHERS.

	W	ND	DATA
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GEOMETRY INPUT

WIND DATA					
Building Code	2012 IBC	Importance Factor, I	1.0	Damping Ratio, B	0.005
Wind Load Criteria	ASCE 7-10	Directionality Factor, K, (2)	0.85	Natural Frequency, n	8.76 Hz
Wind Speed, V	140 mph	Topography Factor, Kat	1.0	Gust Effect Factor, G	0.85
Exposure Category	C	Base Pressure, y(q,/K,)	25.6 psf	ASD Wind Load Factor, y (3)	0.6
Wind Pressure Override per	0		Notes:	(1) Loading values in chart below are	
Jurisdiction Regulrement	0 psf			calculated on hidden sheet using decir	

**Deflection Limit** eflection at 0.7\*W

0.11 in eflection Ratio

**DEFLECTION ANALYSIS** 

n average K , values for each segment. Actual values are calculated on hidden sheet using derived V-M equations. Chart is provided for information purposes only. (2) Wind directionality (K  $_d$ ) factor is 0.95 for Single Pole (Round) segments instead of 0.85. The C  $_f$  value

No. of Po	les	1 No. of Faotings	1				(3) Win	d pressures	listed be	ow have	already be	en multipl	jor this vi ied by the	ariation. ASD Wind	Lood Fac	tor v	
Cortion	Location	*	Height	Width	Horiz.	Area	Тор	Centroid			Wind		ort Pole			ooting Lo	ads
section	Location	Туре			Offset		Elev.		K	Cf	Press.	Trib.	Shear	Moment	Trib.	Shear	Momen
			ft	ft	ft	sq ft	ft	ft			psf	Factor	kips	k-ft	Factor	kips	k-ft
1	Base	Single Pole (Not Round)	8.00	0.50		4.0	8.0	4.0	0.85	1.79	33.0	1.0	0.1	0.5	1.0	0.1	0.5
2		Single Pole w/ Cabinet	0.93	9.49	4.60	8.8	8.9	8.5	0.85	1.88	34.8	1.0	0.3	2.6	1.0		
3		None				0.0	8.9	8.9	0.85	1.46	27.0	0.0	0.0	0.0		0.3	2.6
4		None		100		0,0	8.9	8.9	0.85	1.46	27.0	0.0	0.0		0.0	0.0	0.0
5		None				0.0	8.9	8.9	0.85	1.46	27.0			0.0	0.0	0.0	0.0
6		None				0.0	8.9	8.9	0.85	1.46		0.0	0.0	0.0	0.0	0.0	0.0
7		None				0.0	8.9	8.9			27.0	0.0	0.0	0.0	0.0	0.0	0.0
8		None							0.85	1,46	27.0	0.0	0.0	0.0	0.0	0.0	0.0
9			-			0.0	8.9	8.9	0.85	1.46	27.0	0.0	0.0	0.0	0.0	0.0	0.0
		None				0.0	8.9	8.9	0.85	1.46	27.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Top	None			in the state of	0.0	8.9	8.9	0.85	1,46	27.0	0.0	0.0	0.0	0.0	0.0	0.0
		Overall Height:	8.93 ft			Series.		nmation ba					0.4	3.1		0.4	3.1
						Act	ual base	reactions be	ised upo	n V-M eg	uations:		0.4	3.1		0.4	3.1

#### SUPPORT POLE DESIGN SUMMARY

Base Elev			Requ	ired Stren	gth Values	(ASD)	Allow	able Stren	gth Value	s (ASD)		Unity	Ratios		Interact	ion Ratios	
	Section	Axis	V,	M,	T,	P,	V <sub>c</sub>	M <sub>c</sub>	T <sub>c</sub>	P,	V. A.	Total Control	Tarana 1	0 VS	micciaci	lon natios	Status
ft			kips	kip-ft	kip-ft	kips	kips	kip-ft	kip-ft	kips	V,/V,	M,/Mc	T <sub>r</sub> /T <sub>c</sub>	P <sub>r</sub> /P <sub>c</sub>	P-M	P-M-V-T	Status
0.00	HSS6X6X1/4	Strong	0.4	3.1	2.0	0.3	45.5	25.7	21.2	82.1	1.0%	12.2%	9.6%	0.3%	12.5%	0.0%	- 5
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	_	4
0.00	None	Strong	0.4	3.1	2.0	0,3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%		0.0%	4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	- 4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%		0.0%	0.0%	4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%		0.0%	0.0%	0.0%	4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0	0.0	0.0%		0.0%	0.0%	0.0%	0.0%	-4
0.00	None	Strong	0.4	3.1	2.0	0.3	0.0	0.0	0.0			0.0%	0.0%	0.0%	0.0%	0.0%	1
	- Committee	During	0.7	314	2.0	0,5	0.0	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1

### ELEMENT DESIGN LOCATIONS, LOADS AND DISPLACEMENTS

Element -	Elev.	Type	V,	M,	T,	Ρ,	0.7*0	0.7*δ	Fla	Elev.	5	V.	M.	T	D	0.780	0.7*8
	ft	1,100	kips	kip-ft	kip-ft	kips	radians	in	Element	ft	Туре	kips	kin-ft	kin-ft	kips	radians	in
1	0.00	Base Plate	0.4	3.1	2.0	0.3	0.0	0.0	3	0.00	Match Plate 2	0.4	3.1	2.0	0.3	0.000	
2	0.00	Match Plate 1	0.4	3.1	2.0	0.3	0.0	0.0	4	0.00	Torsion Tube	0.4	3.1	2.0	0.3	0.000	0.00

## PLATE DESIGN SUMMARY

		Plate Di	mensions						Во	olts			W	eld	
Туре	N	В	D	t	Number	db	N <sub>edge</sub>	Bedge	Circle Diamete		Embed in Calsson / Vertical Slab	Embed in	Size	Gussets	Status
	in	in	in	in		in	in	in	in		In	in	in	Gussels	10
✓ Rectangular Base Plate	12	12	722	0.75	4	1	1.75	1.75		F1554 Grade 36	20	N/A	0.1875	Yes	ОК
Circular Base Plate										6.		100000		145	Oil
Match Plate 1 (Lower)						14.6									
Match Plate 1 (Upper)															_
Match Plate 2 (Lower)												_			
Match Plate 2 (Upper)															

### **FOUNDATION DESIGN SUMMARY**

Туре	Diameter ft	Width	Thickness ft	Length ft	Depth ft	Volume	Reinforcing	Status
✓ Caisson	2.00	**	-		4.75	0.55	(4) #5 Vert, w/ #3 Ties @ 12 in o.c. and (3) @ 3 in o.c. Top	OK
Vertical Slab								
Spread								

DRAWN BY:

JAM

### NOTES

- 1.) SEE MANUFACTURERS DRAWINGS FOR ADDITIONAL DETAILS AND DIMENSIONS.
- 2.) SIGN CABINET AND CONNECTION BY DANIELS WHOLESALE.
- NOTE: THIS FOOTING HAS BEEN DESIGNED ON THE ASSUMPTION THAT THE SOIL IS SUITABLE FOR BEARING AND IS NON-EXPANSIVE. OWNER TO VERIFY SOIL CONDITIONS PRIOR TO CONSTRUCTION.
- \* CLIENT DANIELS WHOLESALE
- \* 2012 IBC
- \* 140 MPH WIND SPEED, EXP. C
- \* (1) POLE, (1) FOOTING

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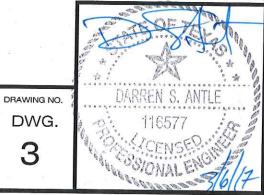
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DRAWN BY

DWG.



Single Post Canopy