

**Connection Design** Number of Posts per end = 1

**Baseplate and Anchor Bolt Input**

Baseplate Thickness	Yield Str.	No. of Bolts	Diameter of Bolts	Yield Str.	Bot Circle Dia. (in)	Baseplate Dia. (in)	Socket Weld Design	Embedment	Anchor Bolt	Baseplate Bending Capacity
inches	ksi		inches	(ksi)*	(in)	(in)	Length (in)	inches	inches	kip-ft
2.25	50.0	4	2.50	55	22.00	32.00	0.374	17.99	36.10	45.000
			1.6 or 1.8						1.0	37.50
									OK	See Note

\* Normal Yield Strengths (36, 55, 110 ksi)  
AASHTO M14

Note: If Base plate bending stress exceeded, add vertical stiffeners.  
Length of required 1/4" weld on each leg of each stiffener = 3.00 inches

**Truss Chord Splice Connection Input**

Conn. Plate Thickness	Yield Str.	Conn. Plate Dia.	Conn. Plate Dia.	AB22 Bolt	Number of Bolts
inches	ksi	inches	inches	inches	
0.750	50.00	0.750			6

Input this area for monotubes also

**Analysis Results**

Bot Circle Dia. (in)	Conn. Plate Dia. (in)	Weld Size (inches)	Total Weld Length (in)	Bot Spacing (in)	Bot D/C	Conn. Ch. Bending
7.00	10.00	0.750	25.13	0.67	7.70	Actual
				2.25	1.0	37.50
				OK	OK	OK

**Truss Diagonal Connection Input (for 1/2 connection)**

Conn. Plate Thickness	Yield Str.	Conn. Plate Dia.	Conn. Plate Dia.	AB22 Bolt	Number of Bolts
inches	ksi	inches	inches	inches	
0.375	10.000	0.375			0

Note: Enter zero for welded connection

**Analysis Results**

Diagonal Bolt Force (kips)	Conn. Plate Stress (ksi)	Diagonal Weld Length (in)	Chord Weld Connection
N/A	1.95	0.0	OK
N/A	30.00	1.089	Capacity required
			OK

**Post Diagonal Connection Input (for 1/2 connection)**

Conn. Plate Thickness	Yield Str.	Conn. Plate Dia.	Conn. Plate Dia.	AB22 Bolt	Number of Bolts
inches	ksi	inches	inches	inches	
0.500	10.000	0.500			0

Note: SINGLE POST USED

**Analysis Results**

Diagonal Bolt Force (kips)	Conn. Plate Stress (ksi)	Diagonal Weld Length (in)	Post Weld Connection
N/A	0.00	0.0	OK
N/A	30.00	0.000	Capacity required
			OK

**Truss Support Connection (use W Shape)**

Section	Web Thickness	Web Depth	Member Depth	Yield Str.	End Shear Load	End Shear Capacity	Bot Dia.	n	Threads	A <sub>net</sub>	A <sub>gross</sub>
	inches	inches	inches	ksi	kip	kip	inches		inches	sq. inches	sq. inches
W16x5	0.312	3.375	3.000	50.0	11.87	11.87	0.500	10	0.142	0.188	0.507
					15.0	15.0	0.750	10	0.334	0.442	1.001
					15.0	15.0	0.750	9	0.462	0.601	1.394
					15.0	15.0	0.750	8	0.608	0.785	1.944
					15.0	15.0	0.750	7	0.763	0.994	2.527
					15.0	15.0	0.750	6	0.928	1.207	3.142
					15.0	15.0	0.750	5	1.103	1.436	3.791
					15.0	15.0	0.750	4	1.388	1.816	4.484
					15.0	15.0	0.750	3	1.783	2.331	5.221
					15.0	15.0	0.750	2	2.288	2.984	6.004
					15.0	15.0	0.750	1	2.903	3.785	7.045
					15.0	15.0	0.750	0	3.628	4.734	8.354

Note: SINGLE POST USED

**Truss Support Connection (For T-Chord)**

Dist. from edge of post to CL of chord	Depth of Plate	Plate of Plate	Yield Str.	Actual Capacity	Required Capacity
inches	inches	inches	ksi	kip	kip
0.000	18.000	18.000	50.0	15.00	15.00
				OK	OK

**Monotube Connection at Pole**

Di. of U-tube	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.	Post Top Dia.
inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
3.75	15	15	15	15	15	15	15	15	15

**Analysis Results**

U-tube Stress (ksi)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)	U-tube Capacity (kip)
3.260	4	7.029	8.206	3.260	4	8.329	9.621	3.260	4
4.000	4	11.003	12.506	4.000	4	12.607	14.196	4.000	4
4.800	4	14.229	15.904	4.800	4	16.660	17.721	4.800	4
5.600	4	17.789	19.635	5.600	4	19.444	21.211	5.600	4

**General Information**

Post Dia.	Thickness	Di. of U-tube	Thickness
inches	inches	inches	inches
14.00	0.50	4.00	0.250