

Truss Diagonal Splices	
Bolted Splice Design	
Maximum Axial Force in Diagonal =	8.11 kips
Bolt Dia. =	0.000 inches
Bolt Area =	#N/A inches
Number of Bolts =	0
Allowable Shear stress =	15 ksi (AASHTO Table 10.32.3C) Galvanized surface
Allowable Load on Connection =	#N/A kips (single shear)
Welded Splice Design	
Maximum Axial Force in Diagonal =	8.11 kips
Capacity of 1/4" weld =	6.72 kips per inch (double weld)
Required Length of Weld =	1.207 inches (based on 2 welds)
Minimum for angles =	6.0 inches (based on 2 welds 3" long)
Minimum for plates =	12.0 inches (based on 4 welds 3" long)
Minimum Weld Length =	6.0 inches
Connection Plate Design	
Total Force in 1/2 Plate =	8.11 kips
Stress in plate =	2.16 ksi
Allowable stress =	30.00 ksi
Connection Plate Weld	
Force per inch of weld =	0.81 kips per inch
Capacity of 1/4" weld =	6.72 kips per inch (double weld)

Post Diagonal Connections	
Bolted Splice Design	
NA - Single Post Design	
Maximum Axial Force in Diagonal =	0.00 kips
Bolt Dia. =	0.875 inches
Bolt Area =	0.601 inches
Number of Bolts =	0
Allowable Shear stress =	15 ksi (AASHTO Table 10.32.3C) Galvanized surface
Allowable Load on Connection =	0.00 kips (single shear)
Welded Splice Design	
Maximum Axial Force in Diagonal =	0.00 kips
Capacity of 1/4" weld =	6.72 kips per inch (double weld)
Required Length of Weld =	0.000 inches (based on 2 welds)
Minimum for angles =	6.0 inches (based on 2 welds 3" long)
Minimum for plates =	12.0 inches (based on 4 welds 3" long)
Minimum Weld Length =	12.0 inches
Connection Plate Design	
Total Force in 1/2 Plate =	0.00 kips
Stress in plate =	0.00 ksi
Allowable stress =	30.00 ksi
Connection Plate Weld	
Force per inch of weld =	0.00 kips per inch
Capacity of 1/4" weld =	6.72 kips per inch (double weld)

Truss Support Connection (use W6x8.5)	
NA - See Connection Below	
Maximum Reaction =	4.03 kips (half reaction)
Capacity of 1/4" weld =	3.36 kips per inch (single weld)
Length of Weld Required =	0.600 inches (based on double weld)
Length of Weld Provided =	19.00 inches
Shear Capacity of W6x8.5 =	11.87 kips

Truss Support Connection (Single or Double pole) - Tri - Chord Only			
Maximum Reaction (Vert) =	4.03 kips (max of left or right corr.)	Number of Chords =	3
Maximum Weld Load (Horiz) =	3.22 kips (max of left or right corr.)	Plates (per end) =	1
Reaction per chord connection (Vert) =	2.02 kips	# of Connections =	2
Reaction per chord connection (Horiz) =	2.61 kips	Weld Size =	0.10 in
Area of Weld =	8.48 in ²		
Welds =	22.62 in ²		
n =	0.24 ksi		
St =	1.72 ksi		
S =	0.31 ksi		
(M ² +B ² +H ²)/12 =	2.06 ksi		
Allowable stress of welds =	15 ksi		

Monotube Support Connection (Single Vertical Pole)	
NA - See Connection Above	
Max Shear =	2.50 kips
Monotube Dia =	44.00 in
U-bolt Leg Dia =	0.75 in
Area of U-bolt Leg =	0.354 in ²
Tension in U-bolt Legs =	0.54 kips
Stress in U-bolt =	1.63 ksi
Allowable U-bolt stress =	15 ksi
Stress Check	OK