

Horizontal Truss Analysis

FALSE

Section 1 - Chords

Unbraced Length (in.)	Pipe Diameter (in.)	Wall Thickness (in.)	Pipe Area (in. ²)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
72.0	4.000	0.226	2.68	42.0	52.70	116.7	53.95	19.67	20.52	0.96

Section 2 - Chords

Unbraced Length (in.)	Pipe Diameter (in.)	Wall Thickness (in.)	Pipe Area (in. ²)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
72.0	4.000	0.226	2.68	42.0	0.00	116.7	53.95	0.00	20.52	0.00

Diagonals - Horizontal

Unbraced Length (in.)	Pipe or Angle	Diagonal Area (in. ²)	R min (in.)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
34.6	ANGLE	0.84	0.39	36.0	8.11	126.1	88.97	8.65	14.32	0.60

Diagonals - Vertical

Unbraced Length (in.)	Pipe or Angle	Diagonal Area (in. ²)	R min (in.)	Chord Yield Str. (ksi)	Max. Axial Force (kips)	Column Slenderness Cc	kL/Rmin	fa Compression (ksi)	Fa Compression (ksi)	RESULT C/D
34.6	ANGLE	0.84	0.39	36.0	3.95	126.1	88.97	4.22	14.32	0.29

Deflections at Mid-Span

	Uniform Load		Point Loads		Mid-Span Deflection (inches)
	Load pif	Load k/inch	Load kips	Dist. A inches	
Span =	696.84	inches			
I =	1751	in ⁴			
Dead Load of Truss	40	0.0032918	1.52	301.20	0.20
Dead Load of Sign 1			0.00	0.00	0.0000
Dead Load of Sign 2			0.00	0.00	0.0000
Dead Load of Sign 3			0.00	0.00	0.0000
Ice on Truss	18	0.0014924	1.25	301.20	0.09
Ice on Sign 1			0.00	0.00	0.0000
Ice on Sign 2			0.00	0.00	0.0000
Ice on Sign 3			0.00	0.00	0.0000

Total Defl. (DL+Ice)	0.66	inches
Allowable Deflection	4.65	inches

Dead Load Deflection	0.40	inches
Extra Camber (L/1000)	0.69684	inches
Total Camber	1.10	inches