ECLIPSE ENGINEERING

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Project Number: 23-04-088

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As requested, Eclipse Engineering (EEPC) has compiled two tables for determining the maximum allowable post height for a given post section in different loading conditions. The post section in question is a 5 ½" x 5 ½" square tube with a wall thickness of 0.108". The post material is Q235 steel with a yield strength of 34 ksi. The post is assumed to be continuous, plumb, and without punched holes, other than for connectors at the top and base. The post is considered to be unbraced between the base and top. No lateral loads were considered in the calculations.

The attached Table 1 tabulates the maximum post heights under concentric loading. This includes conditions where a beam or beams bear on top of the post, or beams connect to both sides of the post. The attached Table 2 tabulates the maximum post heights under eccentric loading. This includes conditions where a beam connects to one side of the post.

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Attachment: Post Span Tables
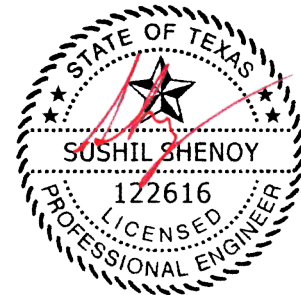
Firm Number: F-13054

Seal is for projects in TX ONLY

Table 1: Maximum Post Height - Concentric Loading

Load (psf)	Tributary Area (ft^2)				
	50	100	150	200	250
	Maximum Post Height (ft)				
50	20'	20'	20'	20'	20'
75	20'	20'	20'	20'	20'
100	20'	20'	20'	20'	18'
125	20'	20'	20'	18'	13'
150	20'	20'	20'	15'	
200	20'	20'	15'		

Table 2: Maximum Post Height - Eccentric Loading

Load (psf)	Tributary Area (ft^2)				
	50	100	150	200	250
	Maximum Post Height (ft)				
50	20'	20'	20'	20'	20'
75	20'	20'	20'	10'	
100	20'	20'	10'		
125	20'	20'			
150	20'	10'			
200	20'				