Engineering Online America
Structural Engineers & Solution Developers
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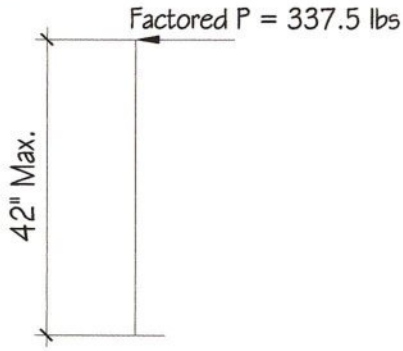
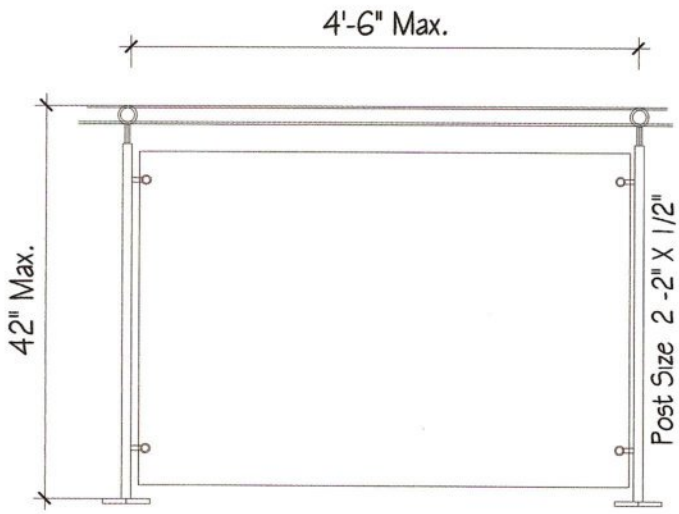
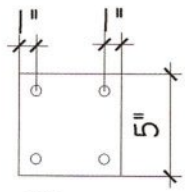
Job
Sheet # 2 of 2
Calculated By Date
Reviewed by Date

Material SS 316, Fy = 35 ksi
Guard rail height = 42" Max.
Post Spacing = 4'-6" Max
Post Size 2- 2" X 1/2" Combined Sx = 0.67"^3
Loading as per OBC
1 KN (225 lbs) Horizontal at top rail, or 0.75 kn/meter (50 lbs/lin ft) Whichever cause greater effect.



Factored Loading = 1.5 X 225 lbs = 337.5 lbs point load or 75 lbs/lin. ft
Max possible M = 14175"lbs
Max possible Bending Stress = 21.2 ksi
Allowable Bending = 31.5ksi
Post Size Shall be adequate.
Hand rail Size = 2" Ø 0.09" Wall Thickness
Max possible M on Hand rail = 2290"lbs
Hand Rail Size Shall be adequate.





4 1/2" Ø is OK

Base Pl. = 5"X1/2"X5"
4 1/2" Ø A.B
Min. Bolt Tension Capacity = 2500 lbs