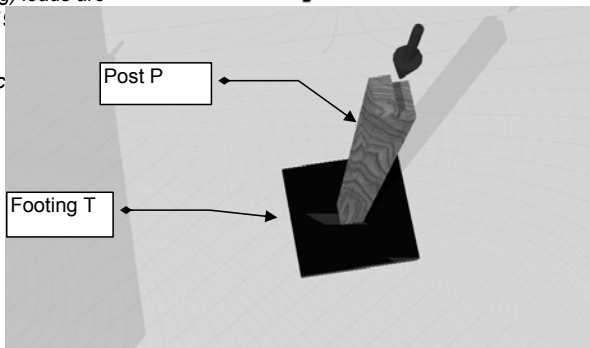


Square Footing Calculator



Assumptions: 1. Load is applied to the center of footing. 2. No uplift or moment (bending) loads are applied. 3. Soil over the footing is the only surcharge load applied. 4. Design based on 1: Code. 5. All rebar is properly spaced and not epoxy-coated

Disclaimer: All users of this software shall comply with State Engineering Law; which specifies the practice of engineering.



Job Name	2-story example
Footing I.D.	Footing T
Other Info	Load from post P

Applied Footing Loads		Live, psf	Dead, psf	Tributary Length, ft	Tributary Width, ft.	Live Load, lbs	Reduced Live Load, lbs.	Dead Load, lbs
Other point load: all Live, all Dead, or some of each, lbs.			Descrip'n, opt'l:	From Post P		10,025 lb		6,603 lb
Total service load: P _{serv} =						16,628 lb		

Soil and Footing Input		RESULTS	
Soil Bearing Capacity	q _s = 1,500 psf	<p>There will be a 4" slab over this footing. The equivalent soil weight can be approximated by multiplying the concrete thickness by 3.</p>	
Permit Soil Bearing Capacity Increase For Size and Depth?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
Depth to bottom of footing, ft.	D _{br} = 1.00 ft		
Depth of soil over top of footing, ft.	D _{tr} = 1.00 ft		
Square Footing Width, ft.	b = 3.25 ft		
Footing Depth, inches	z = 8.00 in		
Post or Bearing Plate Narrowest Dimension, inches	w = 7.25 in	<p>Design Now</p>	

Concrete and Rebar Input		RESULTS	
Concrete Strength, psi	f _c = 2,500 psi	Footing size based on allowable soil pressure:	Footing Size Okay, 19% oversized for soil bearing
Steel Yield Strength, psi	F _y = 40,000 psi	Temp. & Shrinkage Rebar:	Ok
Rebar Cover, inches	cov = 3.00 in	Rebar check for bending:	Ok 85% extra flexural rebar provided
Rebar Size	# 4 ▼	One-Way Shear Check:	Footing Thickness Ok
No. of Bars (Each Direction)	n = 5	Punching Shear:	Footing Thickness Ok
FINAL DESIGN		Rebar Development Length:	Ok
Use 3.25 ft. x 3.25 ft. x 8 in. footing, with 2500 psi min. concrete strength, 3 in. min. concrete cover, and (5) #4 GR 40 rebar each way.		Satisfactory Design	

Miscellaneous Report Detail

Maximum applied soil pressure: 1,771 psf	Allowable soil pressure used for design: 2,100 psf
Weight of footing only: 1,056 lb	Weight of footing plus surcharge: 2,076 lb
Ultimate applied moment in footing: 7,078 ft-lb	Allowable moment in footing (phi*Mn): 12,776 ft-lb
Ultimate applied one-way shear in footing: 7,667 lb	Allowable one-way shear (phi*Vn): 14,918 lb