Footing Size

Deck Layout
Locate footings, beams, overhangs & dimension

Loading

Live load = 40 PSF
Dead load = 10 PSF
Other = ________ PSF
Total load = ________ PSF

Soil Bearing = ________ PSF²
*soils greater than 2,000 PSF must be verified

PSF=pounds per square foot

Tributary Area
(See Example on Right)

Corner Footing
______ x ________ = __________

Intermediate Footing
______ x ________ = __________
**Tributary load**

Tributary area x total load = tributary load

Use this formula for tube forms, i.e. Sonotubes®

Tributary area x total load + \(150 \left( \frac{\pi r^2 h}{1728} \right) \) = tributary load

Corner footing

- \( \text{Tributary area} \times \left( +150 \left( \frac{\pi r^2 h}{1728} \right) \right) = \text{tributary load} \)

Intermediate footing

- \( \text{Tributary area} \times \left( +150 \left( \frac{\pi r^2 h}{1728} \right) \right) = \text{tributary load} \)

**Footing Area**

\( \text{In}^2 = \text{inches squared} \)

Tributary load ÷ Soil bearing = Load PSF x \(144\) (change to square inches) = Area in \(\text{In}^2\)

Corner footing

- \( \text{Tributary area} \div \text{Soil bearing} = \text{Load PSF} \times 144 = \text{Area in} \text{In}^2 \)

Intermediate footing

- \( \text{Tributary area} \div \text{Soil bearing} = \text{Load PSF} \times 144 = \text{Area in} \text{In}^2 \)

**Round footings**

\( \pi = 3.1416 \)

\(2 \times \sqrt{\text{area}} \div \pi = \text{diameter of footing} \)

((round to nearest inch)

Corner

- \(2 \times \sqrt{\_} \div \pi = \_ \_ \_ \_ \_ \_ \text{inches} \)

Intermediate

- \(2 \times \sqrt{\_} \div \pi = \_ \_ \_ \_ \_ \_ \text{inches} \)

**Square footings**

\(\sqrt{\text{area}} = \text{length of each side} \)

((round to nearest inch)

Corner

- \(\sqrt{\_} = \_ \_ \_ \_ \_ \_ \text{inches} \)

Intermediate

- \(\sqrt{\_} = \_ \_ \_ \_ \_ \_ \text{inches} \)

**Footing thickness\(^2\)**

\((\text{Diameter or length} - \text{post width}) \div 2 = \text{thickness} \)

(in inches)

\(\_ \_ \_ \_ \_ \_ \_ \_ \div 2 = \_ \_ \_ \_ \_ \_ \_ \_ \text{inches} \)

Note: Footings may not be less than 8” thick

\(^2\)Footings thickness formula from American Wood Council. 