

**Units to be defined for the calculations to follow.**

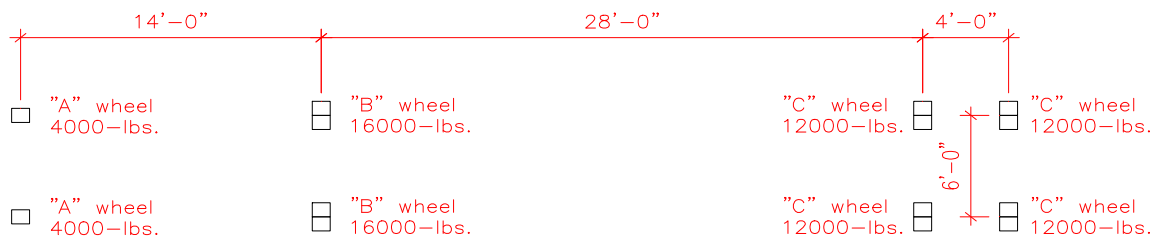
kip = 1000-lb sf = ft<sup>2</sup> cf = ft<sup>3</sup>

pli =  $\frac{\text{lb}}{\text{in}}$  plf =  $\frac{\text{lb}}{\text{ft}}$  kli = 1000·pli klf = 1000·plf psi =  $\frac{\text{lb}}{\text{in}^2}$  psf =  $\frac{\text{lb}}{\text{ft}^2}$  ksi = 1000·psi ksf = 1000·psf  
pci =  $\frac{\text{lb}}{\text{in}^3}$  pcf =  $\frac{\text{lb}}{\text{ft}^3}$  kci = 1000·pci kcf = 1000·pcf

**3000 Gallon Pinnacle Tank Lid. Job 2907-08**

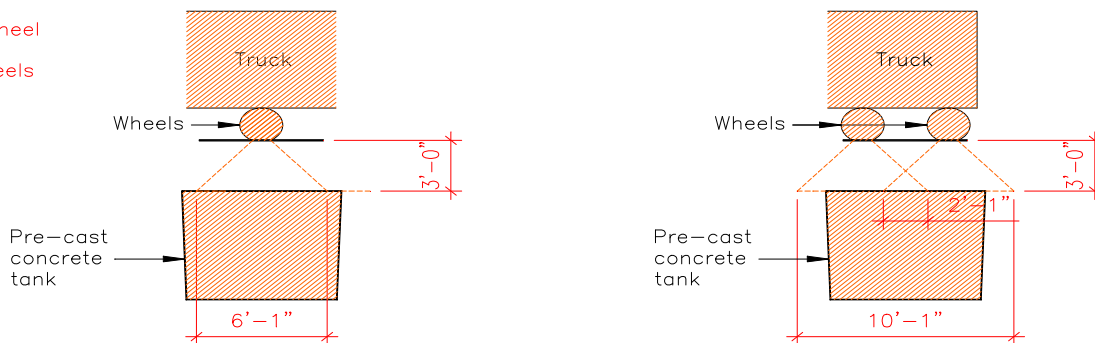
**HS20-44 (A-16) Loading per ASTM C 890-06**

**Based on Figure 1 (dual wheels)**



Interstate Truck (ASTM C 890-06, HS20-44 Loading)

- Single wheel
- Dual wheels



$H_{\text{soil}} := 3 \cdot \text{ft}$      $1.75 \cdot H_{\text{soil}} = 5.25 \text{ ft}$     This value is prescribed in ASTM C 890-06

**Case 1: Back wheel loading (two closely spaced dual wheels).**

$P_{\text{LL, wheel}} := 12000 \cdot \text{lb}$

$w_{\text{wheel}} := 10 \cdot \text{in}$      $l_{\text{wheel}} := 20 \cdot \text{in}$     Dual wheels are 20 inch wide  
Single wheels are 10 inch wide

$\text{quantity}_{\text{dual, wheels}} := 2$     Two dual wheels closely spaced at back of interstate truck trailer

$\text{distance}_{\text{apart}} := 4 \cdot \text{ft} - w_{\text{wheel}}$      $\text{distance}_{\text{apart}} = 3.167 \text{ ft}$