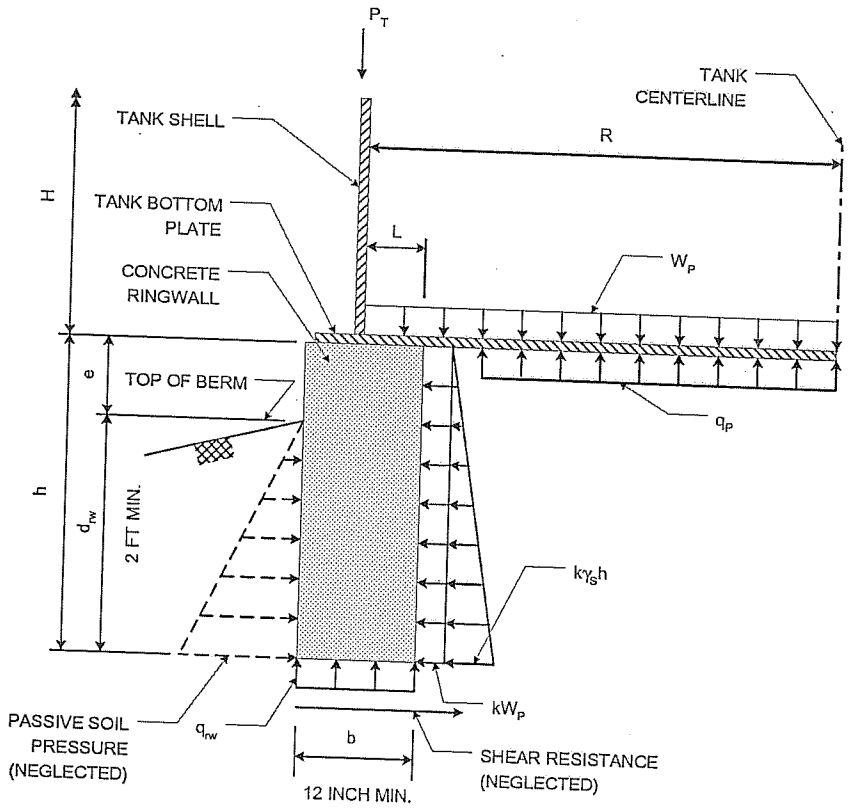
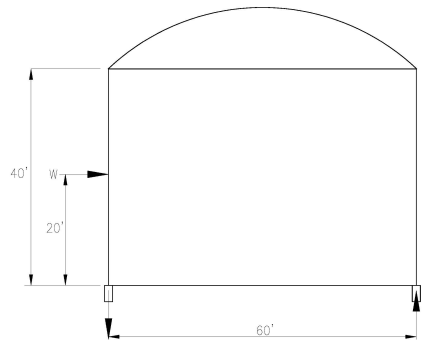


Figure 3. Ringwall Loading for Unanchored Tank

Legend:



R = tank radius, ft

H = tank height, ft

b = width of ringwall, ft (should be 12 inches minimum)

h = height of ringwall, ft

drw = depth of ringwall below grade, ft

L = distance from tank shell to inside edge of ringwall, ft

γc = unit weight of concrete, pcf

γs = unit weight of soil, pcf

e = distance of top of ringwall from top of berm, ft

k = coefficient of lateral earth pressure in accordance with Section 5.1.8

PT = total load on tank shell, lb/ft

Wp = product load on tank bottom, psf

q_p = net soil bearing under tank inside ringwall, psf

q_{rw} = net soil bearing under ringwall, psf

q^a = net allowable soil bearing under ringwall determined by the geotechnical engineer, psf

M_T = applied uniform twist moment on the ringwall, kip-ft/ft

T_h = hoop tension, kips

fy = yield strength of reinforcing steel, psi

f'c = compressive strength of concrete, psi