



Proposed Tank cut sheet- 30,000 Gallons

Due to the Lahar Zone (mud or flood flow) the proposed foundation is designed to resist buoyancy of the tank if the area is flooded. See section [3] for discussion of the flood.

Conservative Approach Ignoring Weight of Stored Fuel

Tank Buoyancy Check

Volume of Tank = 30,000 Gallon * 0.134 CF/Gal = 4,020 CF ✓

Buoyancy Displaced Area = 4,020 CF * 62.4 Lb/CF = ~~212,160 LB~~ 250,848#

Weight of LP (assume ~~25%~~^{0%} full) = ~~30,000 Gal * 0.25 * 4.24 LB Per Gal = 31,800 LB~~ 0#

Weight of Tank (7/8" thick Steel - ~~17'~~^{34'} Circumference) = ~~800 Sf * 35.7 Lb/SF = 28K~~ 57,050#

Weight of Skids = 53FT * 2 skids * 26 Lb/FT = 2,756 LB ✓

Minimum Foundation Weight = ~~212,160 LB - 31,800 LB - 28,000 LB - 2,756 LB =~~

~~150,000 LB~~ = 250,848 - 0 - 57,050 - 2,756 = 191,042#

Concrete Weight = 150 PCF, thus ~~1000~~¹²⁷⁴ CF foundation required

Foundation Area = 60' X 12' = 720 SF

Min Thickness = ~~1.34 FT or 16"~~ = 1.8' or 22" deep (Use 60'x12'x2' Fndn)

To ensure floatation and movement of the tank during a Lahar mud flow or significant flood, the tank foundation must be 16" thick, or thicker as required by the Geotech for other loading.