

# Why Vacuum Excavation?

Encountering buried utilities, marked or unmarked, can be both very dangerous and very costly. Hand digging when working around buried utilities has been common practice for a long time but it isn't always feasible because of buried cobbles, debris, or other hard subsurface conditions. Today many major petroleum companies are requiring their contractors to follow new safety protocols at their jobsites. **Vacuum Excavation** is the answer for corporations and government entities wishing to drill safely, cost effectively, and limit their liability.

## How Vacuum Excavation Works

Vacuum excavation utilizes highly pressurized air to penetrate the pore spaces between the grains in soil where it then expands and tears the soil apart... literally! The steel/PVC casing or concrete used to house commercial and residential utilities is non-porous, therefore immune to the cutting action of air excavation. No longer will you have to worry about damage to underground facilities, including product lines and fiber optic cable!

The following are excerpts from the safe digging/Pre-Drilling Protocols for three major petroleum companies that have retail operations in the Midwestern United States.

- Always hand or air excavate **110% the width** of the proposed hole to **at least 5 feet** below grade surface.
- The soil in the borehole should be excavated to a diameter of at least **3 inches greater than the diameter of the drill bit** on the lead auger

or drill stem that is to be used, and **to a depth of at least 5 feet** below the surface.

- Should drilling be required **within 10 feet** of USTs, pump islands or the tank field, an “**air knife**” should be utilized to a depth of at least 10 feet below grade surface.
- Vacuum digging has proven to be a very effective and safe means of digging and is recommended instead of probing and digging with hand tools.