Vacuum Excavation
Best Practices & Examples
The story of APC Vacuum Excavation

Started in 1975 in Braintree, Massachusetts

Industrial Services Contractor for Coal Power Plants in Northeast

Began Vacuum Excavation services in early 90s, during Boston’s Big Dig
What is Vacuum Excavation?

Using a vacuum truck & high pressure water or compressed air to remove soil and avoid damaging utilities.
Reasons to use Vacuum Trucks

Locate Utilities

Aid Engineering Process

Remove Soil in Hard to access places

Avoid Utility Strikes
Hydro Excavation is more common method.

Hydro works well in thick clay material.

Main drawback to hydro is disposing of muddy soil.

Air is less common method, most trucks don’t have Air Compressors.

Main advantage is that soil can be used to backfill.
Hydro vs. Air Excavation
Supermarket Air Excavation

Neat & Clean compared to Hydro excavation.
Who uses APC Vac Trucks?

Gas Transmission Companies
Local Gas Companies & Utility Contractors
Engineering Firms & Surveying Companies
4 applications for Vacuum Excavation

-1. Utility Locating-
-2. Outlining Excavation Area
-3. Trenching
-4. Digging around utilities
Technique 1: Potholing: LNG Facility
LNG Storage Facility Dorchester, MA

Site dates back to 1860

Site has upgraded electric and solar fields over time

Accuracy of construction plans was unclear, due to the age and amount of upgrades.
Pot-holing Pictures
Advantage: Locating exact depth and diameter of utilities, rather than relying on outdated plans.
Technique 2 Outlining:
Technique 3: Trenching
Trenching:

Easily avoid existing underground utilities and duct banks.
Technique 4: Digging Around Utilities

Method used when digging close to utilities. Safest way to avoid hitting utility. Provides better access than typical construction equipment.
Dig in Places that Excavators Can’t!
Thank You