# Dig Deep for Trenching and Excavation Safety



## What's at Stake?

The fatality rate for excavation work is more than 100 percent higher than the rate for general construction work. On average, two workers are killed every month in trench collapses.

# What's the Danger?

An excavation is any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal. This can include excavations for anything from cellars to highways. A trench is defined as a narrow underground excavation that is deeper than it is wide. Trench and excavation workers face numerous hazards, including:

- Falls and falling loads.
- Being struck by or caught between moving equipment and fixed objects.
- Hazardous atmospheres, including oxygen-deficient and explosive atmospheres.
- Drowning.
- Electrocution from contact with underground utilities.

Cave-ins are the most common and most feared trenching hazard, with good reason. Just one cubic yard or one cubic metre of soil can weigh as much as a car. If you were buried under that type of weight during a trench collapse, the crushing force of the dirt would suffocate you in as little as three minutes, even if you were only buried chest deep.

When a trench or excavation is cut into the earth it is never a matter of if it will collapse but when it will collapse. Unless it's solid rock, an unsupported trench or excavation will always pose a cave-in risk.

## How to Protect Yourself

- Locate underground utilities prior to digging.
- Never go into an open dig that does not have a safe way in and out.
  - Ladders, steps or ramps should be provided for all trenches.
  - ∘ If you don't see a safe way in and out, don't go in.
  - Check with federal, state and provincial laws for exact requirements for safe means of access and egress.

- Never go into an open trench or excavation that does not have a protective system such as sloping, shoring or a prefabricated support system (a trench box or shield).
- Stay alert to these hazards:
  - Moving equipment and vehicle traffic
  - Trip hazards, such as rocks, tools and cords
  - ∘ Standing or rushing water
  - Underground and overhead utilities
- Confirm that a competent person has inspected the trench or excavation daily and whenever conditions change—for example, after it rains or when the dig area is exposed to vibration from heavy equipment.
- Equipment and piles of dirt and rock should be kept at least three feet, or one metre, away from the edge of the excavation or trench.
- Always wear all required personal protective equipment (PPE).

## Final Word

Don't get buried under your work. Dig deep and work safely in trenches and excavations.