

# SAFETY TALK

## [trenching – protection]

Here is some simple advice to follow when working with and around trenches.

Never enter any trench more than 4 feet deep unless it's:

- Sloped
- Shored
- Protected by a trench box

Those are the three basic methods of protecting you against cave-ins.

Unless the walls of the trench are solid rock, it should be sloped, shored, or boxed before you get into it.

### **Sloping**

Sloping the walls is one way to keep a trench from collapsing.

The trench or excavation must be sloped or benched to within 1.2 metres of the bottom, with the slope or bench not exceeding 1 metre vertical rise to each 1 metre of horizontal run.

If the trench or excavation is cut in solid rock that is not stable, the walls and crests must be supported by rock bolts, wire mesh, shoring, or a method that provides equivalent support.

### **Shoring**

Shoring is a system that shores up, or supports, walls in order to prevent soil movement. It also helps to support underground utilities, roadways, and foundations.

The two types of shoring most commonly used are timber and hydraulic. Both consist of posts, wales, struts, and sheathing.

One major advantage of hydraulic shoring is that you don't have to enter the trench to install the system. Installation can be done from the top of the trench.

Whenever possible, shoring should be installed as excavation proceeds. If there's any delay between digging and shoring, no one should enter the unprotected trench.

## **Trench Boxes**

Trench boxes aren't really meant to shore up or support trench walls. They're only meant to protect workers in case of a cave-in.

Boxes are capable of supporting trench walls if the space between the box and the trench wall is backfilled. Otherwise, a cave-in or collapse may cause the trench box to tilt or turn over. It's also easier to enter the box if soil comes right up next to it.

Trench boxes are commonly used in open areas away from utilities, roadways, and foundations.

As long as you're in the trench, you should stay inside the box and leave only when the box has to be moved.

## **Ladders**

Whether the trench is sloped, shored, or protected by a trench box, you need a way to climb in and out of it safely.

Trenches must be provided with ladders in the areas protected by shoring or trench boxes. The ladder must be securely tied off at the top, extend above the shoring or box by at least 1 metre or 3 feet, and be inspected regularly for damage.

A ladder should be placed as close as possible to where you are working and never more than 15 metres or 50 feet or away.

*[Review protective system(s) used on site. Check condition of sloping, shoring, or trench box. Are ladders provided for getting in and out?]*

In New Brunswick, the law regarding trenches can be found in *General Regulation 91-191* under the *Occupational Health and Safety Act*, sections 180-188.