



# Trenching and Excavation

Working in trenches and excavations can be hazardous if the proper procedures are not in place or followed. Parts XXVII and XXVIII of the provincial OHS regulations specifies the requirements for excavating and trenching operations.

## What is a Trench & Excavation?

According to the provincial OHS regulations, a “trench” means an excavation less than 3.7 metres wide at the bottom, more than 1.2 metres deep, and of any length. An “excavation” on the other hand, means a cut, cavity, trench, or depression in the earth’s surface resulting from rock or soil removal.

## Hazards

One of the main hazards associated with trenching and excavation work is cave-ins. An unsecured trench wall can collapse without notice, killing or injuring workers by suffocation or crushing. The stability of any trench or excavation wall can be affected by any of the following factors:

- no support system such as a trench box;
- soil type;
- moisture content;
- weather;
- vibration from equipment;
- the depth of the excavation;
- length of time the excavation is left open
- surcharge (excessive weight near the excavation);
- nearby buildings and structures;
- existing foundations; and
- previous soil disturbances.

Additional hazards associated with trenching and excavating work include the following:

- slips, trips, and falls while working in or around the excavation;
- contact with overhead or underground utilities;
- materials handling and housekeeping;
- confined spaces and hazardous atmospheres;
- workers being struck by material and equipment;
- vehicles falling into excavations or trenches;
- improper storage of excavated material; and
- flooding or other water-related issues.

## Control Measures

The following are several control measures that you can put in place prior to conducting any trenching and excavating work:

- Determine and mark the location of underground service facilities and communicate the location to employees.
- Place ladders in the immediate work area & ensure that they extend at least 0.91 metres above the top of the excavation.
- Ensure that a worker does not enter an excavation over 1.22 metres deep unless the sides have been sloped to a safe angle, shored, or a trench box is utilized.
- Secure or removed trees, boulders or other unsecured material located within 1.83 metres of the area to be excavated.
- Place railings or barriers around excavations to prevent workers from falling in them.
- Prevent the accumulation of water.
- Place excavated material at least 1.22 meters away from the edge of the trench and at least 1.52 meters away from the edge of a pit-type excavation.