



# Excavation: Slope, Shore, or Shield

Toolbox Talks are intended to facilitate health and safety discussions. Find more Toolbox Talks on the [Occupational Safety web page](#).

## General Information

Excavation and trenching related injuries and deaths occur every year in the workplace because adequate measures are not taken to protect employees. One component of safe excavation is prevention of trench collapse and cave-ins by sloping, shoring, or shielding the trench.

## Definitions

- Shielding – portable steel or aluminum structure placed in a trench around work area, trench box.
- Shoring – temporary support of trench walls with horizontal props and vertical pilings to prevent trench collapse.
- Sloping – angling the trench walls to the desired depth so the top of the excavation is much wider than the bottom, angle depends on soil classification.
- Benching – excavating a series of angled steps to reach the desired trench depth, like sloping.

## Shielding and Shoring Requirements

- Egress points should be provided within 25 feet of any worker.
- Must support trench walls to 2 feet or less from the bottom of the trench.
- The top of the support should extend 18 inches or more above the top of the trench.

## Sloping Requirements

- Sloping angle or ratio is dependent on the classification of the soil being excavated. Refer to the diagram below.
- Excavated material should be at least 2 feet from the edge of the trench.

Discussion Date:

Supervisor:

Participants:

