



Trenching

Trench cave-ins are more likely than other excavation-related accidents to result in injuries and fatalities.

Trench Safety Tips

- Do NOT enter an unprotected trench. Inspect the trench at start of each shift.
- Always use a protective system for trenches 5 feet deep or deeper.
- Employ a registered professional engineer to design a protective system for trenches 20 feet deep or greater.
- Excavated or other materials must be kept at least 2 feet from the trench's edge.
- A ladder, stairway or ramp must be provided within 25 feet of workers in a trench.
- Trenches must be inspected by a competent person before any workers can enter and after any hazard-increasing event such as a rain, vibrations or the dumping of large loads of excavated soil near the trench wall.
- Keep heavy equipment away from trench edges.
- Know where underground utilities are located.
- Test and monitor for low oxygen, hazardous fumes and toxic gases.
- Do not work under raised loads.

Protective Trench Systems

There are different types of protective systems.

- **Benching** means a method of protecting workers from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels. Benching cannot be done in Type C soil.
- **Sloping** involves cutting back the trench wall at an angle inclined away from the excavation.
- **Shoring** requires installing aluminum hydraulic or other types of supports to prevent soil movement and cave-ins.
- **Shielding protects** workers by using trench boxes or other types of supports to prevent soil cave-ins. Designing a protective system can be complex because you must consider many factors: soil classification, depth of cut, water content of soil, changes caused by weather or climate, surcharge loads (e.g., spoil, other materials to be used in the trench) and other operations in the vicinity.

Guidelines for Safe Trenching

Employees play a critical role in keeping the jobsite safe. Work on a trenching site should not start until employees understand and follow all established relevant safety and health procedures, policies and practices.

Workers should follow these safety practices to help reduce the risk of on-the-job injuries:

- Remove or minimize surface obstacles that may create hazards.
- Wear appropriate personal protective equipment (PPE) correctly.
- Operate equipment only if trained properly and know potential hazards.

Source: OSHA

Safety tips developed based on generally accepted safety standards believed to be reliable at the date of publication. Information is for general guidance only and should not be relied upon for legal compliance purposes.

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