

Trenching Safety

Preventing Cave-ins



Trenching work is risky; cave-ins occur suddenly and bring lasting, tragic consequences. Safety preplanning, oversight, and training are key to ensuring work is set up and performed safely in trenches.

Protective Systems

Protective systems prevent cave-ins and protect workers from falling materials. There are three types:

- **Sloping and benching** removes soil to eliminate the chance of cave-ins (benching isn't an option for sand, gravel, and other Type C soils).
- **Shoring** uses supports to brace the walls of a trench (e.g., aluminum hydraulic supports).
- **Shielding** protects workers inside of the shielded area (e.g., trench boxes).

Protective systems are required for all trenches four feet or deeper; and for those less than four feet deep if a potential for cave-in exists. Systems for trenches over 20 feet deep must be designed by a registered professional engineer (or designed according to tables, charts, and other tabulated data approved by them).

Competent Person

A competent person is someone who:

- Conducts daily safety inspections of excavation areas, including protective systems, to identify existing and potential hazards.

- Has the knowledge and authority to take immediate corrective measures to eliminate hazards and conditions; and has the authority to remove workers promptly if hazardous conditions are found.

Getting In and Out Safely

Workers must be able to easily and safely enter and exit trenches four feet or deeper. A way in or out must be available every 25 feet.

The most common method for access is a straight ladder or an extension ladder. If a ladder is used, it must extend at least three feet above the landing. Other means could be a stairway or ramp designed by a registered professional engineer.

General Safety Tips

- Don't let workers enter or work inside an unprotected trench four feet or more in depth.
- Never work inside a trench if the spoils pile is less than two feet away from the edge of the trench.
- Stay out of trenches when you spot standing water or if water is accumulating. Use water removal equipment, shoring systems, and other measures (e.g., use of a safety harness and lifeline) monitored by a competent person to control the level of accumulating water.
- Never let workers work under a load while inside a trench.
- Inspect trenches, adjacent areas, and protective systems daily.



Division of Occupational Safety and Health



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Employers: We offer FREE workplace safety and health consultations, risk management assessments, training and technical assistance. For more information: www.Lni.wa.gov/SafetyConsultants.

Employee/employee representatives: You may file a formal complaint when you believe a safety or health hazard exists in your workplace. Go to www.Lni.wa.gov/workers-rights/workplace-complaints/safety-complaints for information in English and Spanish.

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