

Trenching and excavation projects can be hazardous if proper safety precautions and planning aren't performed. Two cubic yards of soil weigh about 6,000 pounds; a trench collapse can suffocate someone in less than three minutes. Failure to plan and provide protective systems or equipment while working in trenches or excavations could result in the following additional hazards: falls, crushing injuries, exposure to toxic fumes, fire, or even drowning.

### **How to Avoid Trenching/Excavation Hazards**

Pre-job planning is vital to accident-free trenching; safety can't be improvised as work progresses. These items must be addressed by the **competent person**:

- Complete pre-job planning. Resources, such as form *LC1720: Pre-Job Planning*, help identify potential hazards including, but not limited to:
  - ✓ Evaluate the size and scope of the excavation/trench; those five feet or deeper require protection from cave-ins.
  - ✓ Contact utilities (gas, electric, etc.) to locate underground lines.
  - ✓ Plan for traffic control if or when necessary.
  - ✓ Have emergency preparedness plans.
  - ✓ Determine proximity to structures that could affect choice of protective system.
- Evaluate the soil conditions and select the appropriate protective systems. See form *LC1765: Trenching & Excavation Protective Systems*.
- Construct protective systems in accordance with OSHA standard [29 CFR 1926.652].
- Ensure adequate ventilation and/or provide respiratory protection if necessary.
  - ✓ Test for low oxygen, hazardous fumes, toxic gases, and/or when the dirt has been contaminated by leaking lines or storage tanks. For example, when using powered water pumps/generators.
- Provide safe access/egress in to and out of the excavation.
- Ensure appropriate protections in place if water accumulation is a problem.
- Keep excavations open the minimum amount of time needed to complete operations.
- Properly safeguard excavation opening from access when site needs to be kept open overnight.

**Inspect the site daily at the start of each shift, following a rainstorm, or after any other hazard-increasing event with form *LC1790: Daily Excavation Inspection Checklist*.**