



Shoring things up

Use required protective systems when working in a trench

The accident: Two laborers were installing conduit in an 8-foot-deep by two-foot-wide trench. The crew leader, who was digging the trench with a backhoe, left the area to go to the company trailer. The two laborers continued to work alone. A short time later, another member of the crew found that the trench had collapsed, covering the two men. Emergency workers responded to the jobsite and uncovered the laborers, who could not be revived. The cause of death was listed as skull fractures.

The bottom line: A post-accident investigation determined, due to the depth of the trench and the sandy composition of the soil, shoring and shielding should have been used. No protective system had been placed at any point in the trench. Also, the contractor had hired nearly two dozen new employees who started work the day of the incident. None of the new hires had received any orientation or training by the company, and the employer had no formal safety program.

Take the right steps

The fatality rate for excavation work is much higher than that of the general industry, with crushing injuries as the largest single cause of death. Without appropriate protective systems, trench walls can collapse and cave in at any time. Whenever an excavation is greater than 5 feet in depth, the use of a protective system is required. When working in a pit deeper than 5 feet, take the following precautions before entering the trench:

- Ensure the outside perimeter is barricaded, and post safety signs.
- Check the protective system used before entering



Illustration by Don Lomax

the excavation. The side walls must be stabilized with shoring materials made of wood and/or metal.

- Check the edges of the excavation for cracks or weak areas. Don't place heavy materials such as spoils or equipment on the edge.
- Make sure you enter and exit the pit properly. Never jump into an excavation.
- After the work is complete, back-fill as soon as possible.
- Know your company's emergency response plan.

Trench safety should be addressed in depth during your training. For more information on the topic, view the National Institute for Occupational Safety and Health's web-based training at <http://www.cdc.gov/niosh/docs/2006-133d/> and click on "View the Trench Safety Awareness Web-based training." A tips card you can share with fellow workers can be found on the OSHA website here: http://www.osha.gov/Publications/trench/trench_safety_tips_card.pdf. You can also download toolbox talks on the subject from Caterpillar's Safety website at https://safety.cat.com/cda/files/673688/7/Excavations+and+Pits_V0311.1.pdf.

Information for this Safety Watch is from an accident report, SAFETY.CAT.COM, OSHA's Safety and Health Regulations for Construction, the Center for Disease Control's NIOSH Fatality

Assessment and Control Evaluation Program and web-based training program. It is for general information only.