

# Construction Risk Advisor

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## TRENCHING AND EXCAVATING SAFETY

Excavations are any man-made cuts, cavities, trenches or depressions formed by earth removal. Of these, trenches—narrow excavations made below the surface of the ground—create the most significant workplace hazards, particularly as they relate to:

- Cave-ins
- Hazardous atmospheres (e.g., carbon monoxide, noxious gas, vapors or a lack of oxygen)
- Falls (e.g., a worker accidentally falls into a trench and injures themselves)
- Floods or water accumulation
- Mobile equipment (e.g., equipment operated or stored too close to the excavation site falls into the trench)

Above all, cave-ins present the greatest risk in trenching and are more likely to result in worker fatalities than any other excavation-related accidents. In fact, one cubic yard of soil can weigh as much as a car, leading to serious injuries or even death in the event of a trench collapse. In order to keep workers safe, employers must consider one or more of the following protective systems:

- **Shoring** involves installing aluminum hydraulic or other types of supports to prevent soil movement and cave-ins. Shoring systems typically consist of posts, wales, struts and sheeting.
- **Benching/sloping** is 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. Sloping, if done correctly, removes the risk of cave-ins by sloping the soil of the trench back from the trench bottom.
- **Shielding** protects workers by using trench boxes or other types of supports to prevent soil cave-ins.

For more information on construction safety, contact Hierl Insurance Inc. today.



Excavating is one of the most hazardous construction operations, and approximately **54** workers are killed at excavation sites each year.

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