# Trenching and Shoring Stats and Facts



## FACTS

The most dangerous forms of construction work involve trenching and shoring.

1. **Trench cave-ins and collapses.** Trench collapse, or cave-in, was the most frequent cause of fatal occupational injury in the confined spaces category of ditches, channels, trenches and excavations.
2. **Falls into excavations and falling loads.** Workers and work equipment or materials falling into trenches represents a safety hazard.
3. **Hazardous atmospheres in trenches.** Not only can excavated areas sometimes have diminished oxygen levels, but a trenched area's atmosphere can also be contaminated with toxic gases and chemicals.
4. **Mobile equipment on the construction site.** Accidents on the construction site, with vehicles like dump trucks or backhoe loaders, are also one of the common excavation hazards.
5. **Hitting utility lines while excavating.** Trenching hazards also include electrocution and natural gas leaks from hitting utility lines.

## STATS

- Bureau of Labor Statistics data show that about 25 workers are killed each year in trench-related mishaps.  Cave-ins cause about three out of every four fatalities; the remainder are commonly due to struck-by or electrocutions.
- The main reason trenches collapse is that they are not properly protected. Protective systems were properly employed in only 24 % of the trenches.  In the remainder, a protective system was either improperly used (24%), available but not in use (12%) or simply unavailable (64%).
- Despite the fact that environmental conditions were a contributing factor in 68 % of the fatalities, the competent person was not onsite when the fatality occurred 86 % of the time.  Most of the time (65%) the employer had not identified the soil type even though soil type is a factor in trench cave-ins.
- A disproportionate number of fatalities (36%) occurred on Mondays, because rain or other factors changed conditions over the weekend.
- The OSHA investigations showed that schedule time was more important than safety in 88 % of the incidents. 72 % of the fatalities occurred in trenches less than 9 feet deep.  Only nine percent occurred deeper than 15 feet.
- Just over half the employers had a written safety and health program, but, of these, only 40 % covered trenching.  65 % provided no trench safety training. Most employers (71%) had never been inspected by OSHA, but 21 % had been

previously cited by OSHA for trench safety violations.

- About three in every four fatalities occurred at residential worksites.  Most companies were small; 42 % had fewer than 10 employees.  Though, typically, five or less workers were present on the site when the incident occurred, most of the projects (52%) involved contracts worth $100,000 or more.