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Emphasis

ON CONSTRUCTION

Deep danger

Safety measures are critical with trench work

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Construction is a dangerous business, and where safety is concerned, there's no question about if an accident will happen — it's when.

Despite the best efforts of contractors, cuts happen, falls happen and broken bones happen, but OSHA statistics say one of the top causes of construction deaths is when a trench collapses on workers.

Almost any construction project will have a trench dug, and any trench will eventually collapse, according to David Dow, vice president of Trench Safety, a Memphis company that specializes in educating contractors and their employees on trench safety.

"Trenches are one of the highest risk areas in terms of numbers of accidents," Dow says. "If a guy is in a trench that's only 6-8 feet deep, and they're buried alive, that's still extremely dangerous. A cubic yard of dirt can weigh 3,000 pounds, and if they get a couple of yards of dirt on their backs, they're killed instantly."

Despite a better understanding by contractors and workers, safety can easily be taken for granted and an accident will still happen, says Mike Carpenter, president of the West Tennessee Chapter of Associated Builders and Contractors, Inc. But falling, smashing your finger with a hammer or getting burned with a welding torch are accidents you can walk away from.

"It's probably the most dangerous task you can perform in construction," Carpenter says. "Particularly in a trench that doesn't appear to be all that deep, you still have to be aware of where you are in relation to the equipment because you can just as easily be overcome by fumes."

Dow says most of the time during a cave-in, a worker is killed instantly by the sheer weight of the dirt on their backs. If they survive the cave-in, most likely they'll suffocate before rescuers can reach them.

Dow says a shoring device, while not capable of preventing a cave in, can keep workers inside the perimeter safe, and that's what's most important.

Trench Safety offers eight-hour classes that help



COURTESY DAVID V. DOW / WWW.TRENCHSAFETY.COM

Trench shields like this one used in Germantown protect workers underground.



When this trench collapsed in East Arkansas, a shield protected workers.



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A slide rail shoring system protects workers in a 24-foot deep trench.

TRENCH: Clay in Memphis dirt reduces cave-in risk, but trench accidents can still happen

contractors meet OSHA standards of having at least one competent person on site who knows about trench safety. The company also sells and rents shoring systems that can be dropped into a trench to protect workers from cave-ins. The company provided work on the FedExForum, but Dow says most of the work they did was at the very beginning.

Even though trench accidents still happen sometimes, and those accidents may result in fatalities, some area contractors admit things are improving.

“We’re not hearing as many fatalities as we have in the past because contractors are starting to take open excavation a lot more serious than they used to,” says Bill Funderburk, director of safety for Jameson Gibson Construction Co., Inc.

OSHA standards for safer trench digging usually falls under one of three acceptable methods. One method would be to dig trenches at an angle depending on the soil type. The angle would be determined by the competent person on site, but Dow says the best way would be to either use hydraulics to hold up the trench walls or use shoring devices.

Those shoring devices, if used properly, can be the difference between life and death for workers if a trench collapses.

“If you’ve got employees on the site and even if you’ve outlined the safety standards, you’ll still have people that don’t go along with the program,” he says. “Employers still

have to take steps to make sure everything is safe. There are contractors in jail right now because a trench collapsed.”

Dow says the safety methods used in trench digging are the option of a contractor, but advances in trench safety have made safer practices the better option price wise as well.

“It all comes down to money,” Funderburk says.

Like so many areas in construction, there are things that were done years ago that were typical, but in hindsight, Dow says those methods would be considered extremely dangerous today.

“Construction has evolved to where people recognize safety and welfare goes hand in hand with getting jobs completed on time and on budget,” he says. “Cost of injury, including financial costs and the mental toll of dealing with employees that are hurt are huge. Most contractors don’t want that for whatever reason.”

Any project will have to have a trench dug either to lay pipe for drainage purposes or to repair underground phone lines, according to Dow, and the difference between digging a gargantuan hole to make workers safer or using shoring devices in a smaller hole can help a contractor’s wallet in time and labor. There are also shorelines and water involved with projects and storm drains to deal with.

“On bigger projects you’ll have deep footings and foundations, but that’s particularly early in the process,” he says.

Montgomery Martin, president of Montgomery Martin Contractors, says contractors have to plan for safety costs at the beginning of a project because anything can happen during the course of a project. It’s better to spend a little more on the front end or take the extra time to be safe to not lose time, due to injury, he says.

“Laying pipe is easy and digging a hole is easy, but digging a safe hole is another story,” he says. “You have to be ready when you spend that kind of money.”

Martin says the high presence of clay in the soil in Memphis reduces the number of cave-ins locally, and that translates to lower insurance costs, but accidents can still happen and contractors still need to be prepared.

“Better to be safe than sorry,” he says. “We have to be because we care a lot about our people and want to prevent pain and suffering if something happens.”

Dow says contractors just have to be as prepared as possible and take steps to make sure their workers end their days like they began them — alive. He says a contractor that doesn’t pay the proper amount of attention to trench safety is playing Russian Roulette.

“When you’ve got that bullet in the gun, it may not go off the first time or maybe even the third time,” he says. “But it’ll go off eventually.”

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