How can you prevent trench cave-ins?

[Ask the following questions and give time for answers.]

What are the hazards? Bodily or equipment entrapment in soil.

What are the results? Broken or crushed limbs and bones, entrapment, suffocation, head injury, internal damage, and death.

What should we look for? Stable rock and soil type (A, B, C), depth of excavation, cave-ins, water in trench, weather conditions (rain, frost), water table, protective systems, competent person, operation of heavy equipment near excavation, barricades and falling loads.

The unfortunate reality—67 workers lost their lives during calendar year 2015 as a result of caught in between related incidents. This category includes construction employees killed when caught-in or compressed by equipment or objects, and struck, caught, or crushed in collapsing structures, equipment, or material.

The Focus Four Hazard of caught in/between accounts for 7.2% of all construction fatalities in 2015.
How can you prevent trench cave-ins? (continued)

[Ask the following question and ensure every item is covered.]

Let’s talk about this site now.

☐ How can you prevent cave-ins? Shoring, shielding and sloping. At what depth is cave-in protection required? 5 feet (or less depending on an assessment by a competent person).

☐ Name some conditions that can increase cave-ins. Rain, heavy equipment, etc.

[Ask the following question and ensure every item is covered.]

How do we prevent these results?

☐ A competent person must evaluate excavations daily. Excavations should be re-evaluated after events such as rain.

☐ Use safety equipment such as shoring or sloping for excavations greater than 5 feet or for any depth a competent person deems needed.

☐ Examine protective systems in accordance with manufacturer’s recommendations and remove damaged systems from service.

☐ Understand soil types: A-most stable(clay, hardpan), B-next most stable(silt, loam, unstable dry-rock), C-least stable(gravel, loamy sand).

☐ Excavated material/other objects must be kept at least 2 feet from edge.

Source:
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OSHA and our construction industry partners, such as the Mid-Atlantic Construction Safety Council, have initiated a “Focus Four Hazards” campaign throughout OSHA’s Region III’s jurisdiction. The goal of this campaign is to raise awareness in the recognition, evaluation, and control of these hazards. Focus Four Hazards account for the vast majority of injuries and fatalities in the construction industry.