SAFETY AWARENESS

Brief Topic Safety Refresher Training For Associates

Preventing Trench Collapse

Keep the Surface Clean

Trench collapse occurs when the trench walls cannot contain the pressure put on them by the surrounding soil. While this can be a problem at any depth, it is made worse when excavated materials are piled at the edge of the trench. To reduce the pressure put on trench walls:

- Pile all excavated materials at least 2 feet back from the edge of the trench. If there is not enough room to allow at least 2 feet, remove excavated materials from the immediate location.
- Do not work around the edge of the trench when others are below.
- Keep equipment away from the trench edge. Not only can it cause cave-ins but there is also a chance that it could fall on those working below.

Slope for Stability

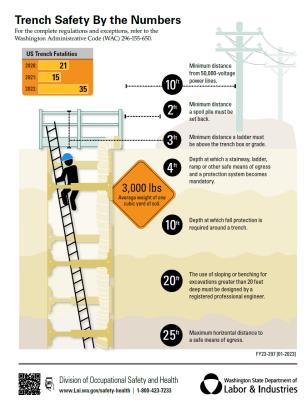
Another way to reduce the pressure put on trench walls is to use a sloping or benching system.

- Sloped Walls A 34-degree slope should be used when digging to prevent a section near the top from giving out and burying the bottom of the trench.
- Benching When there is enough space available, benching allows a trench to be dug in a series of steps that slowly descend to the deepest point.

Reinforce Trench Walls

Once a trench has been dug, the walls should be braced in a way that will protect those working in the area if a cave-in does occur.

- Construct a support system made with posts, beams, shores or planking and hydraulic jacks.
- Never excavate more than 2 feet past the bottom of the support system.
- Make sure there is always a safe exit route within 25 feet of where you are working in the trench.



Trench Boxes

A trench box can be used as a convenient alternative to building a support system directly into a trench. However, for it to provide the proper protection, it must be used properly.

- Always place the trench box before entering the trench. Enter directly into the box.
- Never move the box while workers are in the trench.
- Never perform work in the trench outside of the box.

Trenching and Excavating Rules by the Numbers

On average, two workers are killed every month in trench collapses. To ensure your health and safety, it's important for employees to have an understanding of various rules related to trenching safety. Let's examine some of the trenching and excavating rules by the numbers:

- 1) The 18-inch rule—In situations where sloping is being used in combination with protective systems, but the protective system does not reach ground level, shoring or shielding must extend a minimum of 18 inches above the vertical side of the trench.
- 2) The 2-foot rule—Those working around a trench must keep soil piles and heavy equipment at least 2 feet away from the edge of trenches. This helps to prevent cave-ins and crushing injuries.
- 3) The 4-foot rule—For your safety, access and egress to all excavations will be provided, including ladders, steps, ramps or other safe means of exit for employees working in trench excavations 4 feet or deeper. These devices will be located within 25 feet of you at all times to ensure you can exit a trench quickly in an emergency.
- 4) The 5-foot rule—Trenches 5 feet deep or greater require a protective system, unless the excavation is made entirely in stable rock. Protective systems are determined by the designated competent person and refer to sloping, shoring and shielding. If the trench is less than 5 feet deep, a competent person may determine that a protective system is not required. If you have questions regarding who the employer-designated competent person is, ask your supervisor.
- 5) The 20-foot rule—Trenches 20 feet deep or greater require protective systems designed by a registered professional engineer.

While it's the competent person's responsibility to do formal inspections of the trenches, employees should speak up if they notice worksite issues.

Name	Signature	Name	Signature