

Spot The Safety Violation: Take 7 Steps to Protect Workers In/Near Trenches



How many safety hazards can you spot in this picture of trenching work'

Trenches and excavations are a necessary evil in some workplaces, particularly in the construction industry. But such digs pose various kinds of safety hazards to workers working in and near them.

For example, [this picture](#) of trenching work depicts several safety hazards. First, the trench, which is approximately 8' deep, doesn't have any shoring to prevent the walls from collapsing onto the two workers inside it.

Second, although workers inside trenches are most at risk, workers outside of excavations can also get hurt if they should [fall into an unprotected trench](#). The trench in this picture doesn't have any barriers, guardrails, fencing, etc.

around its edges to keep workers or others from falling into it or even to warn them of the trench's presence.

Third, [powered mobile equipment](#) such as cranes, back hoes and excavators are often used in and around trenches and excavations. But such equipment must be kept far enough away from a trench's edge or else it could fall onto the workers inside.

In the picture, the backhoe is not only near the trench's edges, it actually appears to be straddling the trench! This precarious position could cause the backhoe to easily roll or fall into the trench, injuring or even killing the worker in the trench right underneath it. In addition, the weight of the backhoe on the trench's edges could cause the walls to collapse.

That's why the OHS laws typically require companies to erect barriers for powered mobile equipment that are high enough to keep such equipment from sliding or rolling into a trench or excavation.

TAKE 7 STEPS TO PROTECT WORKERS IN/NEAR TRENCHES

Canadian OHS regulations contain detailed [requirements for excavations and trenches](#). Taking these seven basic steps will help you comply with these requirements and protect workers in and near excavations and trenches:

Step #1: Classify the soil. Before workers begin work inside a trench or excavation, determine the type of soil in the area to be dug. The soil type will determine the stability of the dig's walls and what safety measures, if any, will be needed.

Step #2: Identify any buried utilities in area. Before workers start excavating, you must identify any buried utilities, such as underground pipes, electrical cables and oil or gas lines, and mark their locations.

Step #3: Safely locate excavated material. It's important that you safely locate the material excavated from the trench so that it doesn't fall back into the excavation. The OHS laws typically bar you from piling excavated material closer than one metre from the excavation's edge. In addition, if the spoil pile is very deep and near the excavation, the shoring you install in the excavation should take into account this additional lateral pressure.

Step #4: Install shoring, if required. Excavations that meet certain criteria must have supports placed within the excavation to 'shore' or hold up the walls. Without adequate shoring or bracing, the walls of the dig can collapse or cave-in, often with fatal results. ([An app](#) can help you assess the safety of a trench's walls.)

Step #5: Provide safe means of entry and exit. Once the excavation or trench has been dug and appropriately shored or braced, make sure there's a safe way for workers to enter and exit it, such as a ladder, stairway or ramp.

Step #6: Ensure atmosphere is safe. The air inside a dig can become toxic, such as if it fills with gas or the oxygen level drops to dangerous levels. And workers may not even realize they're in danger from a toxic atmosphere until it's too late. So the OHS laws require employers to take safety precautions to ensure that the atmosphere in an excavation contains sufficient oxygen and is free from hazardous levels of dust, vapour or gases.

Step #7: Protect workers outside of trench/excavation. As noted above, there are no barriers, guardrails or other safeguards around the edge of the trench in the picture to prevent anyone from falling into it. To protect workers who are outside of a trench or excavation, most OHS laws require excavations to be covered or protected with a barrier, fence or guardrail to prevent workers, visitors and others on the surface from getting too close to the edge and falling into

the dig.

To ensure that your trenches and excavations are safe for workers and compliant, require a '[competent person](#)' to inspect them regularly and keep a log or record of these inspections (see, [trench/excavation inspection checklist](#) and [daily trench/excavation log](#)).