

Laborer Partially Buried When Trench Wall Collapses

INCIDENT FACTS

REPORT #: 71-196-2020s

REPORT DATE: June 15, 2020

INCIDENT DATE: March 26, 2019

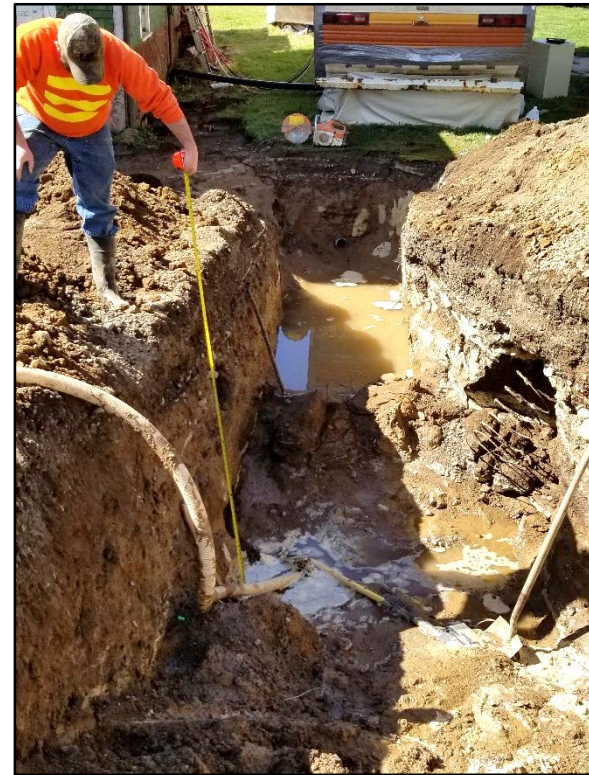
VICTIM: 30 years old

INDUSTRY: Site preparation contractors

OCCUPATION: Laborer

SCENE: Residence yard

EVENT TYPE: Trench collapse/Struck by



A 30-year-old laborer was seriously injured when a sidewall of the trench he was working in collapsed, partially burying him.

The laborer had worked in the construction industry for 12 years. He had received trenching training from his employer, a construction contractor, and had experience working in trenches.

The laborer and a coworker, who was also the site competent person, were working at a residential site to install a new side sewer line.

To access the line, they used excavators to dig a 25-foot-long by four-foot-wide trench. The trench depth varied from five feet to six and a half feet. They did not use a trench protective system, which is required at depths of four feet or more in Washington State.

The laborer had been hand digging in the unprotected trench for two hours to expose a water main.

As he was doing this, a section of the trench sidewall collapsed. He was buried in soil from his waist down.

The coworker entered the trench and attempted to rescue him, but was unable to. He then used an excavator to dig out soil from around the laborer.

The excavator's bucket struck and ruptured a water main, causing the trench to start filling. As the trench rapidly filled with water, bystanders responded. From the side of the trench, they held the laborer's head above the rising water while the coworker used the excavator to dig a side trench to drain the water.

First responders arrived and after 30 minutes freed the laborer. He suffered pelvic fractures and internal injuries.

Investigators found:

1. The trench was not protected from cave-ins by an adequate protective system.
2. Spoil piles three feet high of type C soil were placed within two feet of the trench edge.
3. Spoil piles were positioned on the uphill side of the trench creating a surcharge towards the trench opening.
4. It is possible that the excavators created vibration in the ground and caused the trench side to sluff.

INJURY NARRATIVE



Photo 1. Unprotected trench after a part of its sidewall collapsed, partially burying the laborer. The “x” indicates the laborer’s location.



Photo 2. The “x” indicates the laborer’s location. The water in the trench came from the water main that was ruptured by the excavator the laborer’s coworker was using in an attempt to dig him out after the trench wall sluffed onto him.



Photo 3. The area where the laborer was using a shovel to uncover a water main when the trench sidewall sluffed into the trench, partially burying him. The spoils piles were not set back the required two feet from the trench edge.



Photo 4. Spoils piles sloughing into the trench.



Photo 5. Type C soil material taken from the sidewall of the excavated trench.



Photo 6. The workers did not use a safe means of entering and exiting the trench which was more than four feet in depth. The workers got in and out in this area at the far end of the trench.

Requirements

- Trenches must have adequate cave-in protective systems.
See [WAC 296-155-657\(1\)\(a\)](#).
- Keep excavated or other materials away from the edge of the trench.
See [WAC 296-155-655\(10\)\(b\)](#).
- Ensure that there is a safe way to enter and exit a trench that is four feet or more in depth.
See [WAC 296-155-655\(3\)\(b\)](#).

Requirements

- Never enter a trench unless a competent person has properly inspected it.
See [WAC 296-155-655\(11\)\(a\)](#).
- If a competent person finds evidence that a possible trench cave-in could occur, employees must be removed from the trench until precautions have been taken to ensure their safety.
See [WAC 296-155-655\(11\)\(b\)](#).

Requirements

- Ensure prompt and safe removal of injured employees from trenches and excavations prior to commencement of work. See [WAC 296-155-035\(9\)](#)

Recommendations

- Never enter an unprotected or uninspected trench, even for a short task.
- Do not assume that there will be a warning sign to alert you before a cave-in, or that you will have time to move out of the way.
- Be aware that heavy equipment operating nearby a trench may cause soil distress.

Resources

Resources to promote safe work in trenches, CPWR.

www.cpwr.com/trench-safety

This bulletin was developed to alert employers and employees of a serious traumatic injury of a worker in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the injury.

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