

INCIDENT FACTS

REPORT #:

71-240-2023

REPORT DATE:

May 29, 2023

INCIDENT DATE:

July 4, 2022

WORKERS:

66 and 32 years old

INDUSTRY:

New Single-Family Housing
Construction

OCCUPATIONS:

Contractor and laborer

SCENE:

Residence

EVENT TYPE:

Trench collapse



Unbraced steel shoring plate resting against trench wall.

[For a slideshow version, click here.](#)



Contractor and Laborer Buried in Trench Collapse

SUMMARY

A 66-year-old contractor and a 32-year-old laborer died when the trench they were working in collapsed, burying them. The contractor and three employees had been working at a residence for a week to replace a sewer line. The contractor was the competent person on the site. To replace the sewer line they used an excavator to dig a trench that was 26-feet long and 24-feet deep. It was 24-feet wide at the top and 8-feet wide at the bottom. The sides of the trench were steep and nearly vertical. They dug the trench in unstable Type C soil and did not use protective systems such as shoring, shields, trench boxes or sloping and benching of the sides. The day before the incident, the trench collapsed after a rainstorm.

On the morning of the incident, one of the workers used the large excavator to scoop out the collapsed soil. Another worker used a smaller excavator to push the spoils pile back from the trench edge. The contractor and a laborer then used an extension ladder to enter a 10-foot deep ditch in the larger trench. The contractor located the sewer line. He then told the other workers he was going to replace a section of the old line. A few moments later, the trench wall collapsed, burying him and the laborer. The two workers died of asphyxia due to suffocation.

Following the incident, investigators found:

- Trench protection (shoring, shielding, benching, and sloping) was not used.
- There was some shoring equipment on site, but it was not adequate for the trench.
- No safe means of egress from trench.
- The employer had previous safety violations, including having workers in unprotected trenches and no ladder as a means of access and egress in a trench.

REQUIREMENTS

- Trenches must have adequate cave-in protective systems. See [WAC 296-155-657\(1\)\(a\)](#)
- Ensure there is a safe way to exit a trench that is four feet or more in depth. See [WAC 296-155-655\(3\)\(b\)](#)
- A competent person must inspect trenches at the start of each shift and as needed during the shift and after a rainstorm to ensure that conditions are safe for employees. Remove employees from hazardous areas until precautions have been taken to ensure their safety. See [WAC 296-155-655\(11\)\(a\)\(b\)](#)
- Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer. See Appendix B—Sloping and benching, Table N-1, Note 2 [WAC 296-155-66403\(3\)\(d\)](#)
- For additional requirements: See Part N—Excavation, Trenching, and Shoring [WAC 296-155-650](#)

RECOMMENDATIONS

FACE investigators concluded that to help prevent similar occurrences:

- Never enter a trench or excavation that does not have an adequate protective system in place.
- Inspect the trench or excavation before entering.
- Do not assume there will be a warning sign before a cave-in or that you will have time to escape.

RESOURCES

[Trenching and Excavation](#). Washington State Department of Labor & Industries
[Preventing Worker Deaths from Trench Cave-ins](#). NIOSH



The yellow circle shows the ditch inside the trench where the contractor and laborer were buried.