Can You Dig It? The Basics of Trenching Safety

Insights
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Excavations and trenches have become so commonplace on worksites that some employers and employees have developed a sense of complacency with some of the most basic requirements of excavation safety. To counter this, the Occupational Safety and Health Administration ("OSHA") initiated a National Emphasis Program ("NEP") on Trenching and Excavation, on October 1, 2018, to increase OSHA's education and enforcement efforts regarding trenching and excavation operations. Under this NEP, OSHA Compliance Officers can inspect trenching operations whenever they observe an open trench or excavation, regardless of whether there is a violation.

OSHA's Excavation standards can be found at 29 C.F.R. Part 1926, Subpart P, and contain the requirements for excavation and trenching operations. These standards apply to all open excavations, including trenches. An excavation is any man-made cut, cavity, trench, or depression in the Earth's surface formed by earth removal, and a trench is a narrow excavation made below the surface of the ground. Trenching and excavation work continues to be hazardous. With an increased risk of deaths and serious injuries resulting from trenching and excavation incidents, a review of OSHA's trenching and excavation requirements can be useful.

OSHA believes there is a potential for collapse in virtually all excavations

While cave-ins pose the greatest risk in any trenching or excavation operation, there are other hazards associated with these projects, including falling loads, hazardous atmospheres, and hazards from mobile equipment, and are the focus of OSHA's excavation standards. Under these standards, there are several tasks that must be performed by a competent person, such as classifying soil, inspecting protective systems, designing structural ramps, monitoring water removal equipment, and conducting site inspections. OSHA's standards define a competent person is an individual, designated by the employer, who can identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to workers, and who is authorized to take prompt corrective measures to eliminate them.

OSHA requirements to prevent cave-ins

OSHA's excavation standards contain several requirements regarding sloping and benching the sides of an excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area to prevent cave -ins. Sloping the sides of the excavation to an angle not steeper than 1 ½ : 1, for every foot of depth, the trench must slope back 1 ½ feet. Designing a

protective system requires consideration of many factors, including soil classification, depth of cut, water content of soil, weather and climate, and other operations in the area, and typically involves using a trench box or shield approved by a registered professional engineer.

The standards also require support systems for structures adjacent to an excavation like buildings, walls, sidewalks and pavements so they remain stable. And any protective systems used must be maintained free from damage and safety defects.

However, the excavation standards do not require a protective system when an excavation is made entirely in stable rock or when an excavation is less than 5 feet deep and a competent person has examined the ground and found no indication of potential cave-in.

Protect workers from loose material rolling into an excavation

The excavation standards also require protecting employees working within an excavation or trench. Employers must prevent employees from working on the slopes of the excavations above workers within the excavation. Employers must also prohibit employees in the trench from working under suspended loads and must keep materials and equipment at least 2 feet from the edge of the excavation.

Prevent water from accumulating in an excavation

Water can undermine the sides of an excavation and contribute to or cause a trench collapse. OSHA's excavation standards require the use of a pump to remove water or control water accumulations, and any water removal equipment must be monitored by a competent person. Drainage from the excavation must be maintained, and employers can use diversion ditches or dikes to prevent surface water from entering the excavation. A competent person should inspect excavations after heavy rains.

Hazardous atmospheres inside excavations

Atmospheric testing is required in excavations deeper than 4 feet where oxygen deficiencies or hazardous atmospheres are present or could reasonably be expected. The excavation standards require employers to prevent employee exposure by using proper ventilation and respiratory protection. If there are hazardous atmospheres present in an excavation, emergency rescue equipment, breathing apparatus and safety harness and line must be used. In some instances, there could be confined space or permit-required confined spaces in an excavation.

Access and egress

OSHA's excavation standards require ladders, steps, ramps, or other safe means of egress for workers working in a trench deeper than 4 feet and must be located 25 feet or less from workers in the excavation. Any access or egress must be designed by a competent person.

Conduct site inspections

The excavation standards require competent persons to examine excavations, adjacent areas and protective systems. These examinations should be conducted daily and prior to starting work and as work is performed if conditions change.

Conclusion

OSHA's excavation and trenching standards can be found on its website, as can a number of memorandums and notices regarding excavation and trenching safety. For assistance with reviewing and creating OSHA compliant excavation and trenching programs, please contact a Fisher Phillips Workplace Safety Attorney.

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