

## **Excavation Depth Requirements**

DEPARTMENT OF

 All excavations or trenches that are 5 feet deep or greater must be properly benched, shored, or sloped to ensure safety. Trenches 4 feet or more in depth shall be provided with a fixed means of earess.

### Permits and Requests

 All excavations on OSU property require a valid Okie Locate Request in addition to an OSU Excavation Permit. Details regarding the OSU Excavation Permit Procedures can be found here.

### **Temporary Soil Placement**

 Temporary spoil must be placed no closer than 2 feet from the edge of the excavation, measured from the nearest point of the spoil pile to the excavated cut.

## Soil Classification:

- Type A (most stable) Includes clay, silty clay, and hardpan soils. No soil is classified as Type A if it is fissured, subject to any form of vibration, previously disturbed, or has water seeping through it.
- **Type B (medium stability)** Consists of silt, sandy loam, medium clay, and unstable dry rock; includes previously disturbed soils unless classified as Type C; and soils classified as Type A but are fissured or subject to vibration.
- Type C (least stable) Comprises gravel, loamy sand, soft clay, submerged soil, or dense, heavy unstable rock, and soil that has free water seeping through it.
- Layered Geological Strata Refers to soil arranged in layers, with classification based on the weakest layer. Each layer may be classified individually if there is a more stable layer beneath a less stable one (e.g., Type C soil on top of stable rock).

### **Protective Systems:**

- Benching A method to protect workers from cave-ins by excavating the sides of an excavation to create one or a series of horizontal levels or steps, typically with vertical or near-vertical surfaces between levels.
- Shielding A protective structure designed to withstand the forces of a cave-in, thereby safeguarding workers inside. Shields can be permanent or portable, often referred to as trench boxes or trench shields.
- Shoring A system of supports, which can be metal, hydraulic, mechanical, or timber, designed to prevent cave-ins by providing structural support to the sides of an excavation.
- Sloping A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.
- Shielding A protective method that involves excavating the sides of the trench at an incline away • from the excavation to minimize the risk of cave-ins. The angle of the slope varies based on factors like soil type, environmental conditions, and surcharge loads.

## For more information, please see the OSU EHS Trenching and Shoring Manual.

# SAFETY DOESN'T HAPPEN BY ACCIDENT