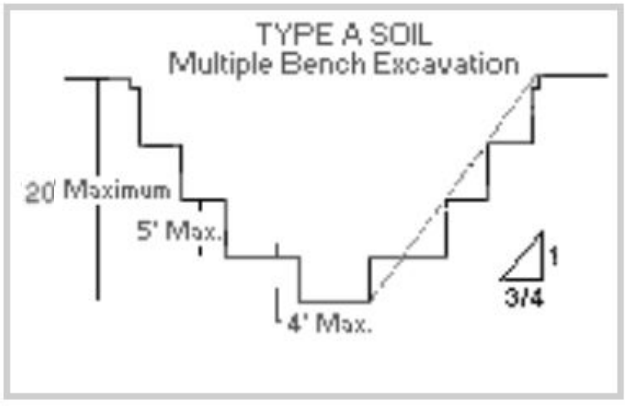
SAFETY BULLETIN #2

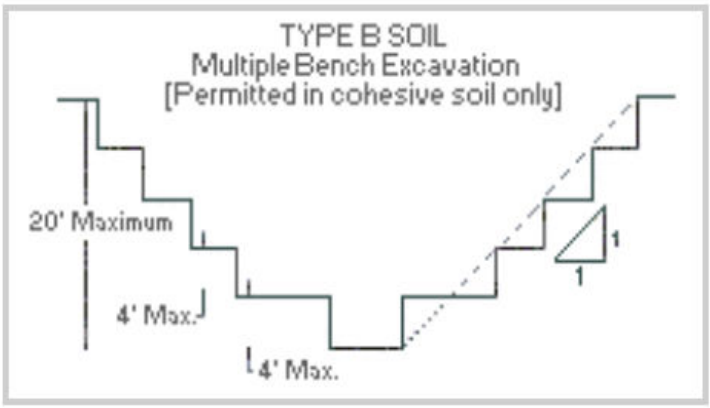
February 24, 2025

Excavation & Trench Safety - Part 2

Excavation and Trenching

- ★ The previous Excavation and Trench Safety Bulletin (Part 1) discussed trench collapses and cave-ins. Part 2 will explain proper sloping and benching methods (for excavations at depths of 5' or greater)
- ★ The method of sloping, benching, or shoring is determined by the soil classification. The four types are:
  1.) Solid Rock
  2.) Type A - clay, silty clay, sandy clay, clay loam (soil previously disturbed can't be Type A)
  3.) Type B - crushed rock, silt, silt or sandy loam
  4.) Type C - sand, gravel, soils or rock in water (least stable)
- ★ The allowable slopes are:
  - Stable Rock = Vertical
  - Type A = ¾:1
  - Type B = 1:1
  - Type C = 1½ :1
- ★ Only soil Types A & B can be benched. The permitted benchings for Type A & B soils are shown below:





Note:The dashed line represents permitted sloping.

Discussion Point:

- ★ What is <u>one</u> difference between Type A benching and Type B benching?
  - For both soil types, the first bench's vertical height must not exceed 4' vertically. For Type A, bench two and beyond can increase up to 5' vertically.
- ★ What is the maximum depth you can slope?
- ★ What is the maximum depth you can bench?

★ Answer Key: 20' for each