

GEOLOGY FOR GEOTECHS — QUARTERLY SERIES

SESSION 1: WHY GEOLOGY MATTERS TO GEOTECHS

FRIDAY, DECEMBER 5 | NOON - 2 PM | ZOOM

**REGISTER
NOW**

MEMBERS: \$75
NONMEMBERS: \$150
EARLY REG NOVEMBER 28

Attend This Short Course to Learn

Basic Geologic Terms (Principles, Processes, Provenance)

- Importance of geology in understanding engineering properties of soil and rock

Characteristics of Soil

- Sources and origins of soil
- Soil and parent (provenance)
- Use geology to help extrapolate limited data (boring/CPT/test pit)
- Soil prone to settlement, poor drainage, low-friction, expansion, liquefaction

Characteristics of Rock

- Rock types and their origins in processes and tectonics
- What is important? Rock strength of discontinuity orientation
- Methods of investigation (rock strength, slaking, joint/discontinuity orientation and friction)

Top 5 Places Geotechs Create Risk Through Lack of Geological Knowledge of Rock

- Rock mass instability, dissolution of chemical rocks, planar/wedge/topple slide behavior, unexpected site conditions from block-in-matrix

Rock Definitions

- Geologist, GE, contractor definitions
- Classification and description of rock (Caltrans logging manual, USACE, FHWA, Navfac/UFC, USBR Engineering Geology Field Manual)
- Rock Quality Designation (RQD)
- Lab testing for rock
- Geological Strength Index (GSI)



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