Homework Assignment

Due Wednesday February 21, 2007

1) You have identified a saprolyte (weathered granite) along a rock cut. Explain how it was formed. What geologic hazards can be related to that kind of geologic environment ?

2) An elevator shaft is to be excavated through weathered granite into rock at a final depth of about 20 m (60 ft). What construction difficulties might be anticipated and how could they be remedied ?

3) A rock-fill dam is to be constructed on a site underlain by decomposed granite weathered variably down to about 35 m depth. How serious is the problem of foundation seepage likely to be, and what measures could be taken to control leakage and foundation pore pressures ?

4) A public parking lot is to be constructed within a city over the site of a former sinkhole. What different schemes could be used to deal with the potential foundation hazard?

5) Prepare a two page summary of the various techniques that can be used to minimize (or even eliminate) the effect of swelling rocks (or soils) on a residential home in the Boulder/Denver area.