Homework Assignment
Due Wednesday February 21, 2007

1) You have identified a saprolute (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.