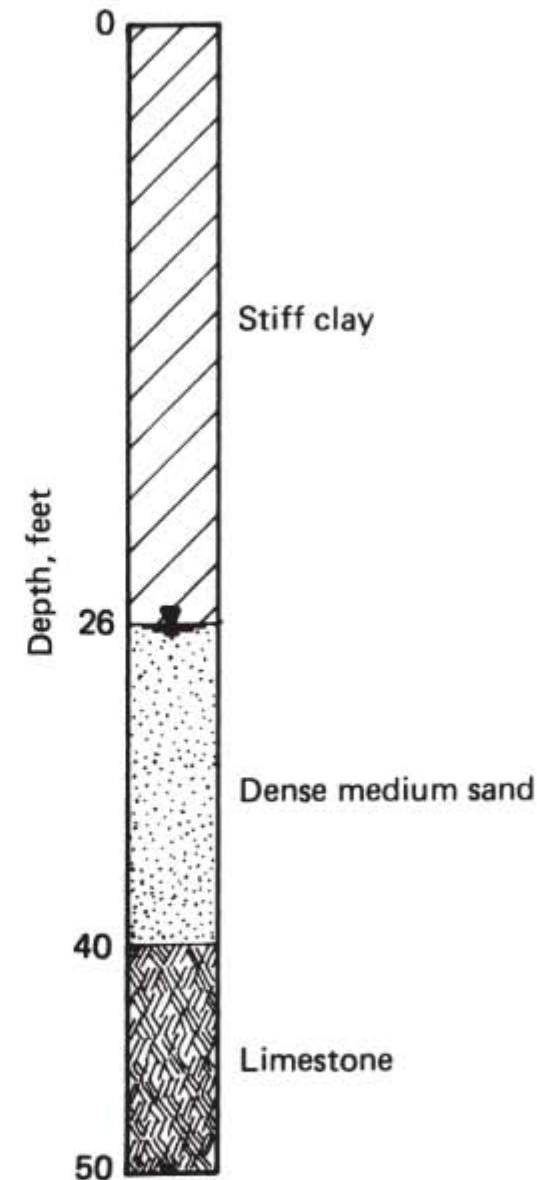


4. A 25-ft-diameter concrete caisson is to be sunk to the rock surface shown in Figure 5.17 at a depth of 50 ft. Describe, using sketches where appropriate, how you would do it, and what problems you might encounter.
5. A large (200-ft-square) structure is to be built on a downtown site where subsurface conditions are as shown in Figure 10.27. The structure foundations are to be placed on the surface of the dense sand. A 4-ft-deep gravel fill is then to be placed above the sand to support the basement floor. Streets and sidewalks surround the property. The structure walls proposed extend to within 5 ft of the sidewalk line. Propose a method for supporting the excavation walls. Use sketches and justify your assumptions.
6. Repeat Problem 5, assuming that the structure is to be founded on the rock.



**FIGURE 10.27** Soil profile for problem 5.