CE 441
DESIGN OF PAVEMENT

Fall 2002-2003

HOMEWORK # 5b.

MATERIAL CHARACTERIZATION

1. Plot the density-moisture-CBR data given below on graph paper. Show graphically the relationship between density and CBR for constant moisture content and the relationship between moisture content and CBR for constant density.

	Dry Density (pci)	Moisture Content (%)	CBR (%)
10 blows	99.0	9.0	. 1.0
	105.0	13.0	1.5
	105.0	16.0	2.0
	105.0	18.0	3.0
	99.0	22.0	1.0
20 blows	105.0	9.0	6.0
	111.0	12.0	7.0
	114.0	14.0	9.0
	109.0	17.0	4.0
	100.0	21.0	1.0
55 blows	117.0	8.0	14.0
	119.0	11.0	16.0
	117.0	15.0	10.0
	112.0	16.0	. 2.0

2. For data in problem (1) plot dry density versus moisture content for 25 blows, on the same plot, plot the saturation line (0% air voids) assuming specific gravity of the soil is 2.65.