DLZ Ohio, Inc. * 6121 Huntley Road, Columbus, Ohio 43229 * (614) 888-0040

Client: ms consultants | *Project:* FRA-70-8.93 | *Job No.* 0221-1004.01

LOG OF: Boring B-043-0-08 | *Location:* Sta. 215+73.16, 1.06' LT., BL I-70 WB | *Date Drilled:* 7/16/2008 to 7/20/2008

WATER OBSERVATIONS:
Water seepage at: 37.0', 77.0'
Water level at completion: 14.4' (includes drilling water)

FIELD NOTES:
Advanced boring using 3.25" diameter hollowstem augers.

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	DESCRIPTION	Graphic Log	GRADATION % Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N60) Natural Moisture Content, % - ● PL — LL Blows per foot - ○ / Non-Plastic - NP (10 20 30 40)
	668.1						Very dense gray FINE SAND (A-3), trace gravel; wet.								
		13 28 50/5	17	24			@ 78.5', 2.0 feet sand heave.								50+
80															
82.0	661.1														
							Very dense gray GRAVEL WITH SAND (A-1-b), some fine to coarse sand, little silt; wet.								
		40 42 42	18	25											88
85															
		34 42 48	10	26											95
90															
93.5	649.6														
		50/5	3	27			Severely weathered gray SHALE.								50+
95.0	648.1														
95							Shale, blue-gray, weak, highly weathered, thinly laminated, slightly calcareous, pyritic, jointed, moderately to fractured, tight, slightly rough; RQD 88%, Loss 0%. Contains dark gray, well cemented shale zones [thin, dark bands]. Dark shale zones are typically 1-2 inches thick, spaced at intervals of 12 to 18 inches.								
100	643.1														