LAK I-90

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS - 121 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel	A-1-a (0)	A-1-a	53	27	13	5	2	NP	NP	12	3
Gravel with sand	A-1-b (0)	A-1-b	40	25	18	12	5	NP	NP	13	13
F.S. Fine sand	A-3 (0)	A-3	3	17	73	5	2	NP	NP	21	2
Coarse and fine sand	——	A-3a	9	10	59	14	8	NP	NP	18	20
Gravel and/or stone fragments with sand and silt	A-2-4 (0)	A-2-4	37	18	22	13	10	21	6	16	9
Sandy silt	A-4 (4)	A-4a	10	6	30	34	20	15	4	16	35
Silt	A-4 (8)	A-4b	1	2	12	59	26	22	7	20	22
Silt and clay	A-6 (9)	A-6a	5	4	9	40	42	31	12	19	16
Silty clay	A-6 (7)	A-6b	11	14	15	34	26	36	16	26	1
Shale	(Visual classification)										

Sod & Topsoil = X'= Approx. depth.

W— Free water

Auger boring - Plan view

Core boring - Plan view

● This A-4a soil will be rubbery and unstable at water contents which exceed the optimum.

● Water content nearly equal to or greater than liquid limit.

| Auger boring plotted to vertical scale only.

Samples Taken
Lab Nos. Sa. 68375-68385 incl.
68713
70298-70330 incl.
70409-70420 incl.
70834-70850 incl.
70854-70894 incl.
71736-71739 incl.

Note: Figures in parentheses ( ) indicate number of blows for "Standard Penetration" Test.

Note: Figures beside borings indicate water content in per cent.

SOIL PROFILE
LAKE COUNTY
LAK-1-4.02
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

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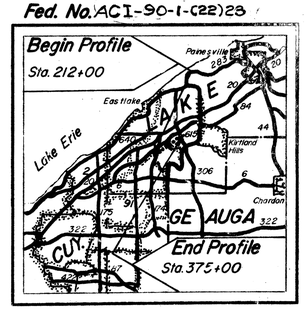
NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

Fed. No. ACI-90-1-(22)28



LOCATION MAP

Recon - L.M.T.- 8/2/57
Auger - C.A.S., D.M. - 8/14/57
Core - D.W.B., R.L.S. - 8/22/57
Drafting - M.J.H., J.H.W., G.W.M. - 9/12/57

Summary of Soil Test Data

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.
223+50 CL	0.3-2.0'	1	6	18	44	31	26	6	17	A-4a
	2.0-5.0'	33	13	30	14	10	20	2	16	A-2-4
	5.0-6.0'	49	20	14	9	8	27	9	18	A-2-4
229+50 CL	0.3-3.0'	8	6	59	16	11	NP	NP	15	A-3a
	3.0-4.0'	77	23	26	13	11	NP	NP	14	A-1-b
233+75 CL	1.0-3.0'	0	2	60	20	18	19	3	21	A-4a
	3.0-6.0'	39	16	15	8	12	28	9	23	A-2-4
	6.0-8.5'	26	5	6	42	21	26	11	12	A-6a
235+50 CL	0.3-3.0'	19	8	17	30	26	23	6	8	A-4a
	3.0-5.0'	9	9	18	35	29	26	8	16	A-4a
	5.0-7.0'	46	6	6	24	18	28	8	23	A-4a
	7.0-10.5'	8	5	5	45	37	28	11	19	A-6a
241+00 CL	0.3-4.0'	6	4	20	69	21	28	8	18	A-4b
	4.0-6.0'	1	2	22	58	17	21	4	30	A-4b
	6.0-7.0'	41	13	14	18	14	23	5	14	A-2-4
	7.0-8.5'	10	9	13	42	26	25	8	10	A-4a
[illegible] CL	0.3-3.0'	81	7	4	2	6	25	8	10	A-2-4
249+00 CL	0.3-3.5'	3	6	37	37	17	21	4	13	A-4a
	3.5-6.0'	31	36	9	1	3	NP	NP	5	A-1-a
	6.0-9.0'	16	44	21	9	10	21	7	21	A-2-4
256+50 CL	0.3-6.0'	0	2	9	57	32	28	8	20	A-4b
	6.0-9.0'	0	2	22	55	21	22	4	21	A-4b
	9.0-12.5'	9	14	54	16	8	NP	NP	18	A-3a
	12.5-17.0'	32	12	17	14	6	17	4	19	A-1-b
	17.0-19.5'	21	11	10	32	26	24	7	15	A-4a
262+00 CL	0.3-2.0'	0	1	21	51	27	23	5	12	A-4b
	2.0-5.0'	2	2	67	16	13	NP	NP	21	A-3a
	5.0-8.5'	44	12	19	16	9	NP	NP	21	A-1-b
269+00 CL	0.3-3.0'	0	1	17	50	32	25	7	17	A-4b
	3.0-9.5'	3	8	53	22	14	NP	NP	22	A-4a
	9.5-10.5'	0	3	11	39	47	33	14	16	A-6a
274+00 CL	0.3-3.0'	0	1	37	44	18	NP	NP	20	A-4a
	3.0-6.0'	0	1	42	43	14	NP	NP	29	A-4a
	6.0-10.5'	0	1	30	50	19	20	4	21	A-4b
281+00 CL	0.3-3.0'	0	2	4	60	34	30	5	17	A-4b
	3.0-9.0'	0	0	6	63	31	29	9	26	A-4b
	9.0-16.0'	0	0	8	65	27	23	5	27	A-4b

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.
288+00 CL	0.0-2.0'	0	2	11	51	36	28	7	18	A-4b
	2.0-4.0'	0	2	5	56	37	28	3	21	A-4b
	4.0-5.0'	0	1	77	14	8	NP	NP	12	A-2a
	5.0-7.0'	0	0	50	34	16	NP	NP	25	A-4a
	7.0-8.5'	6	20	55	15	4	NP	NP	23	A-3a
294+25 CL	0.0-3.0'	0	1	46	42	11	NP	NP	13	A-4a
	3.0-5.0'	0	7	58	27	8	NP	NP	9	A-3a
	5.0-6.0'	12	39	35	13	1	NP	NP	4	A-1-b
	6.0-7.0'	46	26	20	6	2	NP	NP	5	A-1-b
296+00 CL	0.6-3.0'	0	0	14	73	13	25	1	24	A-4b
	3.0-5.0'	27	17	37	16	3	NP	NP	11	A-3a
	5.0-7.5'	52	18	22	7	1	NP	NP	10	A-1-a
305+00 CL	0.6-4.0'	17	5	39	24	15	31	8	8	A-4a
	4.0-6.0'	11	13	34	26	16	30	6	16	A-6b
	6.0-9.0'	47	29	13	8	3	NP	NP	15	A-1-b
	9.0-13.0'	9	4	7	50	30	22	6	16	A-4b
	13.0-15.0'	4	4	12	51	29	20	3	13	A-4b
306+00 CL	0.6-4.0'	0	4	18	33	45	35	10	19	A-6a
	4.0-6.0'	14	9	47	26	8	NP	NP	22	A-3a
	6.0-9.0'	45	22	17	12	4	NP	NP	16	A-1-b
	9.0-12.0'	6	7	55	26	11	22	3	18	A-4b
	12.0-15.0'	28	3	20	32	17	20	6	13	A-4a
313+50 CL	0.6-4.0'	0	7	53	27	11	NP	NP	14	A-4a
	4.0-6.0'	0	4	68	14	14	NP	NP	19	A-3a
	6.0-16.0'	41	23	19	12	5	NP	NP	10	A-1-b
314+00 CL	0.6-4.0'	6	7	37	28	22	19	3	16	A-4a
	4.0-6.0'	2	2	42	37	17	NP	NP	25	A-4a
	6.0-16.0'	47	26	10	13	4	NP	NP	10	A-1-b
321+00 CL	0.6-4.0'	6	12	23	38	21	23	4	9	A-4a
	4.0-6.0'	0	4	10	41	45	32	13	19	A-6a
	6.0-9.0'	6	20	47	16	11	22	8	16	A-2-4
	9.0-13.0'	4	18	60	10	8	NP	NP	22	A-3a
	13.0-15.0'	0	7	32	32	29	18	4	13	A-4a
	15.0-21.0'	4	14	72	7	3	NP	NP	20	A-3
328+45 CL	0.8-5.5'	44	21	14	13	8	23	7	6	A-2-4
329+25 CL	0.8-6.0'	54	16	14	11	5	NP	NP	7	A-1-b
	6.0-9.0'	6	7	26	45	16	20	6	17	A-4b
	9.0-14.0'	0	1	2	51	46	27	7	15	A-4b
	14.0-16.0'	6	5	8	45	36	27	10	14	A-4a
	16.0-22.0'	56	28	9	6	1	NP	NP	12	A-1-a
	22.0-26.0'	9	6	9	49	27	21	7	15	A-4a

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	% W.C.	SHTL Class.
334+00 20' Lt.	0.5-2.0'	13	7	24	29	27	30	9	11	A-4a
	2.0-6.0'	17	2	7	36	38	33	14	24	A-6a
	6.0-7.0'	4	3	10	45	38	28	11	15	A-6a
	7.0-9.0'	0	1	4	60	35	24	6	15	A-4b
	9.0-14.0'	38	27	10	16	9	17	4	10	A-1-b
	14.0-16.0'		Gravel Visual						16	A-1-b
341+15 CL	0.5-3.0'	4	3	6	40	41	29	11	16	A-6a
	3.0-6.0'	26	8	16	26	24	28	9	12	A-4a
	6.0-8.0'	33	10	29	16	12	19	4	14	A-2-4
	8.0-9.0'	2	2	72	8	16	NP	NP	20	A-3a
	9.0-10.0'	13	6	14	46	21	23	4	31	A-4a
	10.0-12.0'	25	22	25	18	10	24	7	22	A-2-4
	12.0-19.0'	22	18	44	11	5	NP	NP	16	A-3a
	19.0-20.0'	5	2	18	59	16	NP	NP	20	A-4b
342+40 CL	0.5-4.0'	35	8	32	16	9	NP	NP	17	A-2-4
	4.0-7.0'	20	9	54	8	9	NP	NP	26	A-3a
	7.0-8.0'	0	1	4	84	11	NP	NP	22	A-4b
	8.0-9.0'	22	15	43	12	8	NP	NP	22	A-3a
	9.0-16.0'	0	3	86	8	3	NP	NP	21	A-3a
346+00 CL	0.5-4.0'	6	3	61	18	13	NP	NP	13	A-3a
	4.0-6.0'	0	0	8	87	5	25	6	21	A-4b
	6.0-8.0'	16	10	27	41	6	NP	NP	17	A-4a
	8.0-16.0'	45	0	3	41	11	NP	NP	11	A-4a
354+70 CL	0.5-3.0'	17	10	23	30	20	28	5	12	A-4a
	3.0-6.0'	5	6	24	28	37	29	19	22	A-4a
	6.0-8.0'	6	11	61	12	10	NP	NP	23	A-3a
	8.0-12.0'	29	15	37	11	8	NP	NP	21	A-3a
	12.0-16.0'	36	44	11	6	3	NP	NP	15	A-1-b
358+75 CL	0.5-3.0'	0	4	16	36	44	34	11	20	A-6a
	3.0-8.0'	0	1	3	51	45	33	12	24	A-6a
	8.0-10.0'	7	21	56	12	4	NP	NP	18	A-3a
	10.0-12.0'	4	5	45	38	8	NP	NP	17	A-4a
	12.0-16.0'	4	11	70	10	5	NP	NP	17	A-3a
360+50 CL	0.8-3.0'	0	6	48	23	23	19	4	15	A-4a
	3.0-8.0'	0	1	8	54	37	25	9	23	A-4b
	8.0-12.0'	30	35	23	8	4	NP	NP	16	A-1-b
	12.0-13.0'	2	19	75	3	1	NP	NP	21	A-3
366+00 CL	0.6-3.0'	0	10	53	22	15	NP	NP	14	A-4a
	3.0-7.0'	2	9	21	30	38	26	8	18	A-4a
	7.0-8.0'	4	4	6	38	48	32	11	19	A-6a
369+50 CL	0.8-2.0'	6	14	42	21	17	16	2	14	A-4a
	2.0-4.0'	4	5	12	37	42	30	11	21	A-6a
	4.0-7.0'	3	4	8	36	49	31	12	18	A-6a
	7.0-11.0'	3	9	13	36	39	29	11	17	A-6a
369+50 90' Lt.	0.8-5.0'	1	8	31	37	23	19	[illegible]	17	A-4a

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.