

LOG OF BORING
Date Started 9/28/83 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 9/28/83 Casing Length _____ Dia. _____
Boring No. B-1 Station & Offset 13+00 20' RT. Surface Elev. 642.3'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
642.3	0																	
637.3	5	1/4/11		BROWN WITH GRAY SANDY SILT	44	7	9	13	37	34	31	10	17	A-4a				
632.3	10	3/6/7		GRAY SANDY GRAVELLY SILT	45	24	8	10	30	28	24	7	12	A-4a				
627.3	14	7/11/18		GRAY SANDY SILT	46	12	7	12	31	38	24	7	11	A-4a				
622.3	20	13/20/26		GRAY SANDY SILT	47	7	7	11	34	41	23	7	10	A-4a				
617.3	26	18/22/32		GRAY SANDY SILT	48	10	9	13	34	34	23	6	10	A-4a				
612.3	30	26/41		GRAY WEATHERED CLAY SHALE	49	14	8	12	33	33	23	6	8	VISUAL				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/28/83 Sampler Type SS Dia. 1 3/8" Water Elev. 610.4'
Date Completed 9/28/83 Casing Length _____ Dia. _____
Boring No. B-2 Station & Offset 14+00 20' RT. Surface Elev. 635.4'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
635.4	0																	
630.4	5	1/1/1		BROWN SAND AND CINDERS	37	35	24	29	7	5	NP	NP	11	VISUAL				
625.4	10	2/3/4		BROWN WITH GRAY SILTY GRAVELLY SAND	38	15	16	44	16	9	NP	NP	10	A-3a				
620.4	16	3/5/6		BROWN SILTY SANDY GRAVEL	39	40	14	18	17	11	NP	NP	10	A-2-4				
615.4	20	3/6/9		BROWN SILTY SAND	40	6	20	59	7	8	NP	NP	8	A-3a				
612.9	22	3/5/6		BROWN SILTY SAND	41	8	9	49	17	17	NP	NP	12	A-3a				
610.4	26	1/2/4		BROWN SILTY SAND	42	14	12	46	15	13	NP	NP	12	A3a				
606.4	30	50(0.2')		NO SAMPLE RECOVERED - BOULDERS										VISUAL				
605.4	30	50(0.2')		GRAY WEATHERED CLAY SHALE	43	63	6	7	16	8			4	VISUAL				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/21/83 Sampler Type SS Dia. 1 3/8" Water Elev. 608.3'
Date Completed 9/22/83 Casing Length _____ Dia. _____
Boring No. B-3 Station & Offset 15+00 20' RT. Surface Elev. 629.3'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
629.3	0																	
626.8	2			AUGERED BROWN SILT	33	0	2	3	79	16	NP	NP	12	A-4b				
624.3	6	9/12/20		BROWN SILTY GRAVELLY SAND WITH CINDERS AND SLAG	34	32	19	25	16	8	NP	NP	15	VISUAL				
621.8	8	12/32/18		BROWN SILTY GRAVELLY SAND	35	16	18	52	9	5	NP	NP	7	A-3a				
619.3	10	4/18/7		BROWN SILTY SANDY GRAVEL	36	41	15	24	14	6	NP	NP	12	A-1-b				
616.8	12	2/6/4		BROWN SILTY SANDY GRAVEL	37	41	10	11	28	10	NP	NP	23	A-4a				
614.3	16	2/3/4		BROWN SILTY GRAVELLY SAND	38	33	20	25	12	10	NP	NP	15	A-1-b				
611.8	18	6/8/10		BROWN SILTY SANDY GRAVEL	39	36	17	8	25	14	25	10	11	A-4a				
609.3	20	7/10/10		BROWN SILTY SANDY GRAVEL	40	42	16	8	19	15	25	9	13	A-2-4				
606.8	22	8/6/0		GRAY STONE FRAGMENTS	41	62	2	4	22	10	26	9	17	VISUAL				

TOP OF ROCK
BOTTOM OF BORING
* CLAY SHALE

LOG OF BORING
Date Started 9/28/83 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 9/28/83 Casing Length _____ Dia. _____
Boring No. B-4 Station & Offset 16+00 15' RT. Surface Elev. 623.6'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
623.6	0																	
618.6	5	1/1/1		BLACK CINDERS AND STONE FRAGMENTS	33	32	23	30	10	5	NP	NP	19	VISUAL				
613.6	10	2/3/9		BROWN CINDERS AND SAND	34	20	21	41	11	7	NP	NP	8	VISUAL				
608.6	14	14/11/11		BROWN WITH GRAY SILTY SANDY GRAVEL	35	42	11	8	19	20	30	11	16	A-6a				
606.1	18	16/50(0.2')		BROWN SILTY SANDY GRAVEL	36	31	6	10	34	19	NP	NP	12	A-4a				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/28/83 Sampler Type SS Dia. 1 3/8" Water Elev. 605.5'
Date Completed 9/28/83 Casing Length _____ Dia. _____
Boring No. B-5 Station & Offset 16+25 20' RT. Surface Elev. 623.0'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
623.0	0																	
618.0	5			NO SAMPLE RECOVERED - BOULDERS														VISUAL
613.0	10	5/3/5		BLACK CINDERS AND WOOD	30	42	28	16	9	6	NP	NP	6	VISUAL				
608.0	14	13/17/39		GRAY SANDY CLAY	31	10	14	10	29	37	33	14	12	A-6a				
604.0	18																	
603.0	20	60(0.5')		GRAY WEATHERED CLAY SHALE	32	67	3	5	19	6	30	10	6	VISUAL				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/27/83 Sampler Type SS Dia. 1 3/8" Water Elev. 592.2'
Date Completed 9/27/83 Casing Length _____ Dia. _____
Boring No. B-6 Station & Offset 16+75 20' RT. Surface Elev. 617.2'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
617.2	0																	
612.2	5	3/3/3		BROWN SILT	22	11	4	6	67	12	NP	NP	15	A-4b				
607.2	10	2/2/2		BROWN AND GRAY SILT AND CINDERS	23	34	14	13	19	20	NP	NP	22	VISUAL				
602.2	14	13/11/8		BROWN SILTY SANDY GRAVEL	24	39	20	9	23	9	NP	NP	8	A-2-4				
597.2	20	1/1/3		GRAY CLAYEY SILT, TRACE OF ORGANIC	25	10	2	6	54	28	32	10	25	A-4b				
594.7	22	4/5/8		BROWN AND GRAY SILT AND CLAY	26	9	2	3	43	43	34	15	21	A-6a				
592.2	26	6/7/10		BROWN WITH GRAY SILT AND CLAY	27	8	2	7	47	36	29	11	16	A-6a				
589.7	28	4/4/7		BROWN AND GRAY SANDY SILT	28	16	3	11	40	30	27	10	18	A-4a				
587.2	30	50(0.5')		GRAY WEATHERED CLAY SHALE	29	48	3	2	26	21	33	14	6	VISUAL				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/15/83 Sampler Type SS Dia. 1 3/8" Water Elev. 589.7'
Date Completed 9/20/83 Casing Length _____ Dia. _____
Boring No. B-7 Station & Offset 16+75 55' RT. Surface Elev. 614.7'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
614.7	0																	
609.7	5	11/11/11		BRICK BATS, CONCRETE AND SLAG														VISUAL
607.2	7	3/48/10		BROWN SILTY SANDY GRAVEL	61	53	17	11	12	7	NP	NP	11	A-1-b				
604.7	10	2/3/2		BROWN SILTY SANDY GRAVEL AND CINDERS	62	53	23	12	9	3	NP	NP	13	VISUAL				
602.2	12	1/0/1		BROWN SILTY GRAVELLY SAND AND CINDERS	63	35	23	14	20	3	NP	NP	15	VISUAL				
599.7	14	19/25/50(0.3')		BROWN STONE FRAGMENTS WITH SAND AND SILT	64	48	8	10	19	15			15	VISUAL				
597.2	18			NO SAMPLE RECOVERED - BOULDERS														VISUAL
594.7	20	5/10/6		BROWN SILTY GRAVELLY SAND	65	15	14	36	28	7	0	0	31	A-3a				
592.2	22	2/3/5		GRAY CLAYEY SILT	66	0	1	6	62	31	25	7	22	A-4b				
589.7	24	2/8/8		GRAY SANDY GRAVELLY SILT	67	22	9	6	38	25	26	8	22	A-4a				
587.2	28	9/12/12		BROWN SANDY GRAVELLY SILT	68	24	15	9	31	21	23	7	15	A-4a				
584.7	30	23/50		GRAY WEATHERED CLAY SHALE	69	51	3	4	28	14	30	10	16	A-4a				

TOP OF ROCK
BOTTOM OF BORING

LOG OF BORING
Date Started 9/20/83 Sampler Type SS Dia. 1 3/8" Water Elev. 590.6'
Date Completed 9/20/83 Casing Length _____ Dia. _____
Boring No. B-8 Station & Offset 17+33 8' LT. Surface Elev. 616.6'

Elev.	Depth	Std. Pen. (N)	Rec. Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.				
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
616.6	0																	
614.1	2	AUGERED		BROWN SAND GRAVEL AND CINDERS	1	60	14	16	6	4	NP	NP	9	VISUAL				
611.6	4	2/5/9		BROWN SILTY GRAVELLY SAND	2	22	14	37	21	6	NP	NP	9	A-3a				
609.1	8	4/4/4		BROWN SILTY GRAVELLY SAND	3	19	16	32	27	6	NP	NP	13	A-2-4				
606.6	10	2/3/3		GRAY SILTY SANDY GRAVEL	4	37	14	11	25	13	32	9	19	A-4a				
604.1	12	PRESS (RECT. 0.1')		GRAY AND BLACK CINDERS, BRICK BATS, SLAG, STONE FRAGMENTS AND SAND	5P													
601.6	16	3/3/3		GRAY SILTY GRAVELLY SAND	6	19	15	30	27	9	NP	NP	12	A-4a				
599.1	18	2/2/4		BROWN SILTY SANDY GRAVEL AND CINDERS	7	43	10	16	18	13	NP	NP	18	VISUAL				
596.6	20	15/25/17		BROWN SILTY SANDY GRAVEL AND CINDERS	8	36	15	22	19	8	NP	NP	23	VISUAL				
594.1	22	3/4/6		GRAY GRAVELLY SANDY SILT, ORGANIC	9	17	8	17	38	20	32	7	24	A-4a				
591.6	24	PRESS (RECT. 3.1')		GRAY AND BLACK CINDERS, BRICK BATS, SLAG, ST. FRAGS. & SAND	10													
589.1	28	5/8/2		GRAY CLAYEY SILT, TRACE OF ORGANIC	10A	8	9	20	36	27	26	9	24	A-4a				
586.6	30			DECAYED WOOD	11													VISUAL
584.1	32	1/1/1		GRAY SILTY SAND, ORGANIC	12	5	10	46	26	13	NP	NP	48	A-4a				
581.6	34	12/14/7		GRAY SILTY SANDY GRAVEL	13	41	13	12	21	13	20	4	14	A-2-4				
579.1	36	6/12/10		GRAY SILTY SANDY GRAVEL	14	44	13	12	21	10	NP	NP	11	A-2-4				
577.6	38	7/10/15		GRAY SILT AND STONE FRAGMENTS	15	47	8	6	26	13	NP	NP	14	VISUAL				
576.6	40	50(0.2')		GRAY WEATHERED CLAY SHALE	16													VISUAL

TOP OF ROCK
BOTTOM OF BORING

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1600 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LAK-20-1714
OVER GRAND RIVER
SEC. LAK-20-17.04

BORING DATA

TYPED BY S. M. G.	CHECKED BY L. N. L.	REVIEWED BY R. D. R.	DATE 1/13/84
----------------------	------------------------	-------------------------	-----------------