25

Richard Land NO 12112

TE.- 118 600 - 4 - 66

SECURITY OF THE STATE AND A PORTION OF THE GLACIATED LAW PLAIN, IN AN AREA Auger Boring Location - Plan View. WHERE SHALLOW GLACIAL TILL OVERLIES SHALE RESPONDED OF DEVOKIAN ACE. Press and / or Drive Sample and / or THE EXPLORATION CONSISTED OF TWO DRIVE SAFELE-CORE NOTIONS, MADE SERVENI COTOMIN 9 Core Boring Location - Plan View. AND 14, 1968, AND EIGHT DRIVE NOD PROMERATION TRATS, MADE OF SEPTEMBER 9 AND 10,1968. **Drive Rod Penetration Resistance** DELYE AND LE-COME NORTHERN DISCLOSED VINT DENGE SANDE STATE AND STLIT SANDS TO RESECUT.
SUBPACE, ENCOUNTERED AT 25 AND 32-FOOT DEPTES, ELEVATIONS 752 AND 717 FIRST. THE BOSTHOS WERE TERMINATED AT 35 AND 45-FOOT DEPTES, ELEVATIONS 742 AND 794 FERT, ATTER
PERSONATION 10 AND 13 FIRST OF BRUNCOSE. Sounding Location - Plan View. THE MOD SOURCE WAS ENCOUNTERED BAFFO INCREMENT IN PROPERTY OF RESISTANCE WITH INCREME.

INC. DEPTH, AND WERE TENDERATED DIES TO BATHER ARREST BEFORAL TO THE BEATTER AT 14 TO 16-POOT DEPTES, ELEVATIONS 764 TO 761 PERT, CONSTRUEND TO BE IN DESIR MATRICAL ABOVE SECROOK SURPLUE, AS REVEALED BY THE MORIEMS. NO PRES VATUR WAS CHARRYED IN ANY OF THE ROD SOURIED HOLES. Top of Rock Weathered Indurated Clay Indurated Clay Weathered Shale Casing: Length 30! Dia. 3 1/2" Date Completed 10-10-68 Station & Offset 207+01, 61' Rt. (Rear Abutment) Surface Elev. 779-11 Elev. Depth Std. Pen. Rec. Loss ft. Physical Characteristics Description 0 Brown Sandy Gravelly Clay 1 18 6 10 22 44 32 13 15 4-62 Gray Sandy Clay 2 12 7 12 24 45 29 11 15 A-6a Gray Sandy Silt 3 12 10 11 32 35 23 7 11 A-4a Gray Sandy Gravelly Silt 4 25 7 9 23 36 25 8 9 4-44 Gray Sandy Clay 5 12 5 10 29 64 29 11 12 A-6a Gray Sandy Silt 6 12 15 20 23 30 22 9 10 A-La Gray Silty Sand 7 8 7 48 21 16 MP NP 12 4-42 30 2.9 1.8 Sendstone, gray, medium-and-fine-grained, with alay seems. Core Loss 581.

Siltatone, gray, generally noft and erombly with firm intervals with thick clay

"Lafteral.

LEGEND

Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken. Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.

Drive Rod Penetration Resistance Sounding Log - Profile

Casing Resistance "R" < 10,000 lbs. Resistance "R" > 10.000 lbs.

Indicates Final Measurement of Penetration, in Inches.

Indicates Static Water Elevation.

Indicates Free Water Elevation.

SYMBOLS OF ROCK TYPES

Weathered Sandstone

Sandstone

Leached Dolomite Ξ Dolomite

Leached Limestone

Boulders

Drive Rod Penetration Sounding Tests Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the

GENERAL INFORMATION

Drive Sample Borings - Drive-Press Sample Borings

overall uniformity of subsurface condition may be evaluated.

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system-and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

No. 40 sieve

	Date Started 10-10-68 Date Completed 10-14-68 Boring No. B-9 Depth Std. Pen. Rec. Loss ft. ft.				Sampler Type SS Dia 1 3/8" Casing: Length 26' Dia 3 1/2" Station & Offset 208+27, 56' Lt. (Forward)	Pier) Surface Elev. 777.21									
· .							Physical Characteristics								
Elev.		(N)	fi	11.	Description	Sample No.	% Agg.							W.C.	SHTL Class.
(17.2	-			 			AGG.	0.3.	F.3.	3111	Cicy				
•	2														
	4							•							,
772.2	6-	7/9			Brownish-Gray Sandy Clay	1	8	9	13	25	45	10	12	17	A-6a
		,				_								- 7	
67.2	10	9/15			Gray Sandy Clay	2	10	7	12	30	41	28	11	74	A-6e
	12							,							
762.2	14				•										
	16	50°			Gray Sandy Silt	3	12	8	11	33	36	25	8	13	A-6a
		(0.81)						_							
	<u> </u>														
757.2	20	50/*		Gray Silty Sandy Gravel	4	42	8	26	12	12	WP	MP	12	1-1-b	
	22									,	ĺ				
753:f	24							_		-					
752-1	26	(0.17)			Gray Silty Gravelly Sand (Wash Sample)	5	33	28	27	4	8	XP	MP	14	A-1-b
	28				TOP OF BOCK			ř							
	30		4.0	0.7	Sandstone, gray and brownish-gray, firm, fine		-	Leann			,				
		1		†	Core Loss 9%.	Pr manual 1			•						
	32		5.0	0.0											
742.2	34	٠			BOTTON OF BORTING								٠,	•	

the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. CUY-80-0203 OVER MACKENZIE ROAD

CUY-80-1.90

CHECKED BY REVIEWED BY 11/1/68 R.D.R. L.N.L