

GENERAL INFORMATION

INTRODUCTION

THIS REPORT CONSISTS OF THE SOILS INVESTIGATION OF 0.52 MILE OF PROPOSED USR 20, BEGINNING ON VINE STREET, IMMEDIATELY WEST OF THE ERIE STREET-MENTOR AVENUE INTERSECTION, EXTENDING EASTWARD AND TERMINATING 0.2 MILE EAST OF THE CHAGRIN RIVER. PROPOSED GRADE INDICATES MAXIMUM 7-FOOT CUTS AND 32-FOOT FILL EMBANKMENTS.

GEOLOGY OF THE PROJECT

THE PROJECT IS LOCATED ON A DISSECTED PORTION OF THE GLACIATED LAKE PLAIN, IN AN AREA WHERE THIN GLACIAL DRIFT OVERLIES SHALE BEDROCK, OF DEVONIAN AGE. A DUMP AREA IS LOCATED BETWEEN STATIONS 13+00 AND 19+00.

EXPLORATION

EXPLORATORY BORINGS WERE MADE BY MEANS OF TRUCK-MOUNTED MECHANICAL SOIL AUGER AND ROTARY TYPE DRILL RIG ON JANUARY 4 AND 5, MARCH 8 AND 9, AND APRIL 13 AND 14, 1977. INCLUDED IN THIS REPORT ARE LOGS OF BORINGS MADE FOR THE STRUCTURE FOUNDATION INVESTIGATION ON THE PROJECT.

INVESTIGATIONAL FINDINGS

MATERIALS ENCOUNTERED ON THE PROJECT WERE PREDOMINANTLY COMPRISED OF SANDY SILTS (A-4A AND A-4B), WITH SILT CLAYS (A-6A), GENERALLY HAVING LOW MOISTURE CONTENTS AND MOISTURE CONTENTS IN THE LOWER PORTIONS OF THE PLASTIC RANGE.

RANDOM FILL MATERIALS ENCOUNTERED IN THE LAND FILL DUMP AREA (BETWEEN STATIONS 13+00 AND 19+00) AVERAGED OVER 20 FEET IN DEPTH.

WET AND/OR ORGANIC MATERIALS WERE ENCOUNTERED AT STATIONS 14+90, 16+00, 17+00, 18+00, 18+42, 18+90, 19+00, 21+50, 21+60, 21+77, 25+50, 28+00 AND 32+00.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS— 87 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	52	24	10	10	4	NP	NP	16	1
GRAVEL OR STONE FRAGMENTS WITH SAND	A-1-B(0)	A-1-B	36	28	18	10	8	NP	NP	13	4
COARSE AND FINE SAND	--	A-3A	27	9	49	3	12	NP	NP	12	1
GRAVEL OR STONE FRAGMENTS WITH SAND AND SILT	A-2-4(0)	A-2-4	42	13	16	19	10	21	3	17	2
SANDY SILT	A-4(5)	A-4A	13	7	18	35	27	25	5	16	34
SILT	A-4(8)	A-4B	1	0	11	64	24	26	4	22	23
SILT AND CLAY	A-6(9)	A-6A	8	4	6	38	44	34	13	20	11
SILTY CLAY	A-6(10)	A-6B	10	1	7	21	61	38	16	23	2
ELASTIC CLAY	A-7-5(12)	A-7-5	3	2	6	51	38	50	15	41	4
CLAY	A-7-6(12)	A-7-6	6	1	3	37	53	41	20	23	2
RANDOM FILL											
WEATHERED SHALE											
SHALE											3
VARIOUS OTHER MATERIALS											

VISUAL CLASSIFICATION
 VISUAL CLASSIFICATION
 VISUAL CLASSIFICATION
 VISUAL CLASSIFICATION

SOD =X= APPROXIMATE DEPTH
 BERM MATERIAL
 AUGER BORING-PLAN VIEW
 DRIVE SAMPLE AND/OR CORE BORING-PLAN VIEW
 AUGER BORING PLOTTED TO VERTICAL SCALE ONLY
 DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY
 WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT
 INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT
 FREE WATER
 NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST
 X=NUMBER OF BLOWS FOR FIRST 6 INCHES
 Y=NUMBER OF BLOWS FOR SECOND 6 INCHES
 Z=NUMBER OF BLOWS FOR THIRD 6 INCHES

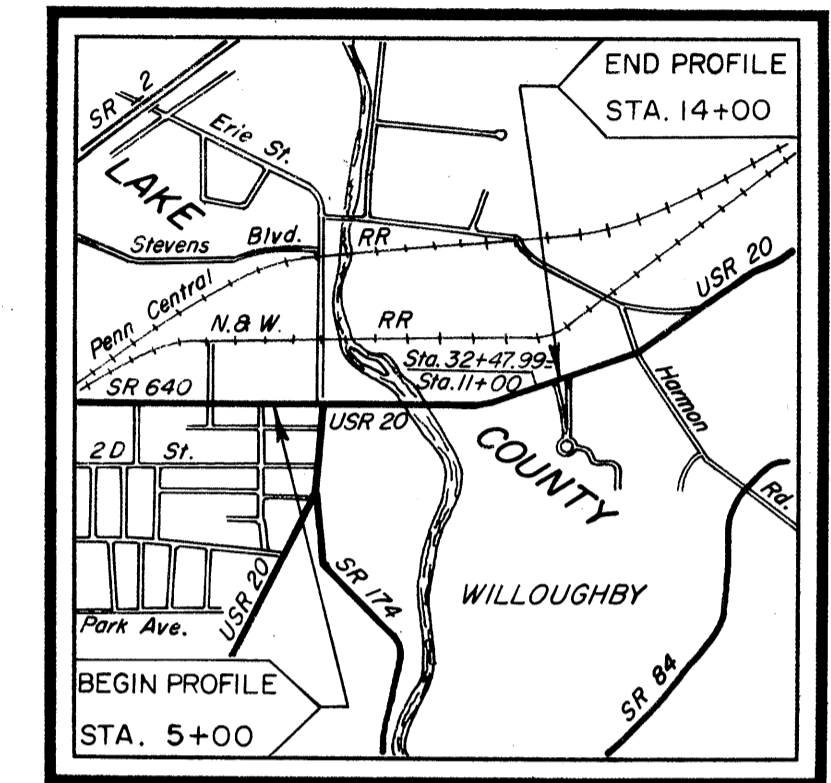
NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT e.g. 15

ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATION, SOIL TESTS, AND BEDROCK BORINGS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF ROADWAY DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.

SOIL PROFILE
LAKE COUNTY
LAK - 20 - 5.60
 OHIO DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS-TESTING LABORATORY
 1600 WEST BROAD STREET COLUMBUS, OHIO 43223

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR 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.

FED. NO. F-BRF - 69(9)



LOCATION MAP

Drilling - J.A.G. - 1/4/85/77, 3/8/89/77, 4/13/84/77

Drafting - R.A.W. - 5/9/77