

PROJECT DESCRIPTION

WIDENING OF S.R. 310 TO SIX LANES, WIDENING OF STRUCTURE LIC-310-0096 OVER I.R. 70 TO SIX LANES AND WIDENING OF THE RAMPS AT THE INTERCHANGE OF S.R. 310 & I.R. 70.

HISTORIC RECORDS

A HISTORIC CONSTRUCTION PLAN SET AND SOIL PROFILE, LIC-310-0.47, DATED 1963, WERE REVIEWED FOR THIS PROJECT. THE RECORDS DID NOT PROVIDE ADEQUATE INFORMATION FOR USE ON THE DESIGN OF THIS PROJECT THEREFORE NO HISTORIC DATA FROM THAT PROJECT HAS BEEN PRESENTED ON THIS SOIL PROFILE.

IN 2000, FIVE EXPLORATION BORINGS, B-001-0-00 THROUGH B-005-0-00 WERE DRILLED FOR THE POSSIBLE REPLACEMENT OF THE STRUCTURE LIC-310-0096 AT THAT TIME. BORINGS B-002-0-00, B-003-0-00, AND B-004-0-00 HAVE BEEN USED FOR DESIGN OF THE CURRENT PROJECT AND ARE PRESENTED HERE. THOSE BORINGS HAVE BEEN RENUMBERED TO B-005-0-00, B-006-0-00 AND B-007-0-00, RESPECTIVELY, TO COINCIDE WITH THE BORING NUMBERING FROM THE CURRENT PROJECT.

GEOLOGY

THE PROJECT IS LOCATED IN THE GALION GLACIATED LOW PLATEAU OF THE CENTRAL LOWLAND TILL PLAINS. THE AREA IS CHARACTERIZED BY ROLLING TERRAIN WITH MODERATE RELIEF ASSOCIATED WITH THE TRANSITION FROM THE TILL PLAINS TO THE WEST TO THE HILLY GLACIATED ALLEGHENY PLATEAU TO THE EAST. THICK DEPOSITS OF WISCONSIAN AGED COHESIVE TILLS COVER MISSISSIPPIAN AGED SHALE AND SANDSTONE BEDROCK.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED ON JULY 08, 2014 BY OGE STAFF. DURING THE FIELD RECONNAISSANCE THE PAVEMENT WAS NOTED AS BEING IN GOOD CONDITION WITH CRACKING DUE TO AGE. THE APPROACH EMBANKMENTS TO THE BRIDGE APPEAR TO BE IN GOOD CONDITION WITH NO SIGNS OF INSTABILITY AND MINOR SURFACE EROSION AROUND THE GUARD RAIL POSTS. THE STRUCTURE OVER I.R. 70 (LIC-310-0096) WAS NOTED AS BEING IN FAIR CONDITION.

THE SURROUNDING LAND USAGE WAS NOTED AS BEING A MIX OF COMMERCIAL PROPERTIES AND AGRICULTURAL LAND.

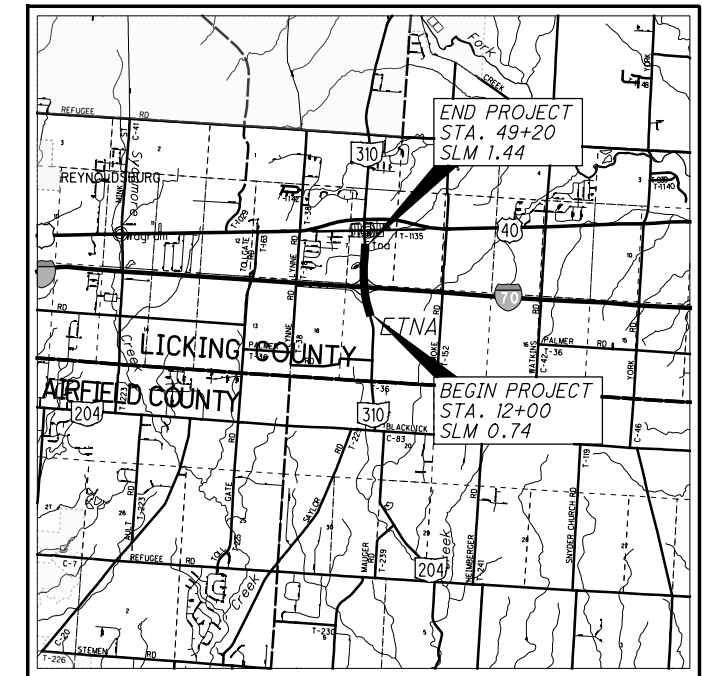
SUBSURFACE EXPLORATION

SEVENTEEN (17) BORINGS, B-001-0-14 THROUGH B-003-0-14 AND B-009-0-14 THROUGH B-022-0-14, WERE COMPLETED ON S.R. 310 AND THE RAMPS FOR THE ROADWAY EXPLORATION. THESE BORINGS WERE COMPLETED BETWEEN AUGUST 12 AND 14, 2014, WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3/4-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS AND 2.5 FOOT INTERVALS FOR THE FULL DEPTH OF THE BORINGS. THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON AUGUST 6, 2014, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) WAS 85%.

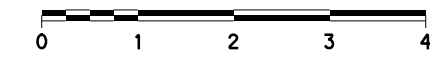
TO SUPPLEMENT THE HISTORIC BORINGS, TWO (2) BORINGS, B-004-0-14 AND B-008-0-14 WERE DRILLED FOR THE STRUCTURE FOUNDATION EXPLORATION BETWEEN AUGUST 12 AND 14, 2014, WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3/4-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS, 2.5 AND 5.0 FOOT INTERVALS FOR THE FULL DEPTH OF THE BORINGS. THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON MAY 07, 2013, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) WAS 91%.

LEGEND

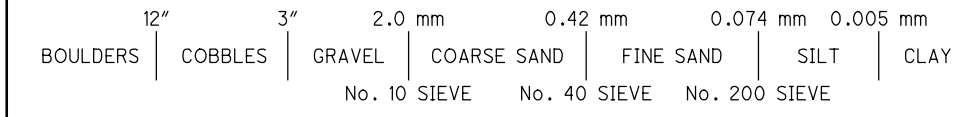
DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	1	1
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	3	4
GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	5	6
GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY	A-2-6	1	1
SANDY SILT	A-4a	14	10
SILT	A-4b	5	7
SILT AND CLAY	A-6a	22	23
SILTY CLAY	A-6b	14	11
CLAY	A-7-6	2	3
TOTAL		67	66
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	TOTAL		
TOPSOIL = X = APPROXIMATE THICKNESS	TOTAL		
BORING LOCATION - PLAN VIEW.			
HISTORIC BORING LOCATION - PLAN VIEW - LIC-310-00.96, 2000.			
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
<i>WC</i> INDICATES WATER CONTENT IN PERCENT.			
<i>N₆₀</i> INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
<i>X/Y/Z</i> NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.			
<i>X/Y/D"</i> NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED). Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.			
<i>LOI</i> INDICATES ORGANIC CONTENT BY LOSS ON IGNITION (AASHTO T267).			
INDICATES STATIC WATER ELEVATION.			
INDICATES FREE WATER ELEVATION.			
INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.			
INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.			
<i>SS</i> INDICATES A SPLIT SPOON SAMPLE.			
<i>NP</i> INDICATES A NON-PLASTIC SAMPLE.			



LOCATION MAP
SCALE IN MILES



PARTICLE SIZE DEFINITIONS



LEGEND

HISTORIC BORING DESCRIPTIONS	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	10	-
COARSE AND FINE SAND	A-3a	1	1
GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	2	-
SANDY SILT	A-4a	32	1
SILT	A-4b	9	-
SILT AND CLAY	A-6a	2	-
TOTAL		56	2

INDEX OF SHEETS

SUMMARY OF SOIL TEST DATA, SHEETS 3 & 4.

LOCATION FROM STA. TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.	STRUCTURES INCLUDED	
					BRIDGE NO.	SFN
S.R. 310						
12+00 22+40	5	5	<1 FT	<1 FT	LIC-310-0096	4505646 (E)
22+40 28+00	6	7	-	1		
28+00 39+20	8	8	<1 FT	<1 FT		
39+20 50+00	9	9	1.5 FT	<1 FT		
RAMP A						
0+00 10+90	10	10	2 FT	<1 FT		
RAMP B						
4+53.12 14+77.40	11	11	<1 FT	2 FT		
RAMP C						
0+00 7+46	12	12	1 FT	2 FT		
RAMP D						
4+53.04 14+63.65	13	13	2 FT	<1 FT		

BORING LOGS, SHEETS 14 - 20.

RECON. - DAN 07/08/14
 DRILLING - DML 08/12/14 - 08/14/14
 DRILLING - KAM 08/12/14 - 08/14/14
 DRAWN - BKL 08/15
 REVIEWED - ST 09/15



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