PROJECT DESCRIPTION

THIS PROJECT, DESIGNATED AS FUL-120-14.08, PID NO. 101140, INCLUDES REPLACEMENT OF THE SR 120 BRIDGE (SFN 2601745) OVER TENMILE CREEK IN METAMORA, FULTON COUNTY, OHIO.

HISTORIC RECORDS

REVIEW OF ODOT RECORDS FOR THE PROJECT AREA INDICATED NUMEROUS HISTORIC AUGER AND DRIVE ROD STRUCTURAL BORINGS HAD BEEN PERFORMED FOR THE SR 120 BRIDGE OVER TENMILE CREEK IN 1954 FOR FUL-120 (14.06-14.08). TEN BORINGS WERE PERFORMED NEAR THE INTERSECTIONS PERTINENT TO THIS PROJECT. SINCE THE HISTORIC BORINGS WERE AUGER BORINGS OR DRIVE ROD BORINGS THAT DID NOT INCLUDE STANDARD PENETRATION TESTS, THEY WERE NOT UTILIZED FOR EVALUATIONS FOR THIS PROJECT AND ARE NOT SHOWN ON THE PLAN AND PROFILE SHEETS. HOWEVER, THE COVER SHEET, AS WELL AS THE PERTINENT PLAN-AND-PROFILE DRAWINGS FROM THE HISTORIC SOIL PROFILE, ARE INCLUDED IN APPENDIX C OF THE ASSOCIATED GEOTECHNICAL REPORT.

GEOLOGY

PUBLISHED GEOLOGIC MAPS FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) INDICATE THAT THE PROJECT SITE IS LOCATED IN THE MAUMEE LAKE PLAINS PHYSIOGRAPHIC REGION OF THE HURON-ERIE LAKE PLAINS SECTION. WITHIN THIS REGION, THE GEOLOGIC DEPOSITS CONSIST OF PLEISTOCENE-AGE SILT, CLAY, AND WAVE-PLANED CLAYEY TILL OVERLYING SILURIAN-AGE CARBONATE AND SHALE BEDROCK.

THE USDA NATURAL RESOURCE CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY INDICATES THAT UPPER-PROFILE SOILS IN THE PROJECT AREA ARE PREDOMINANTLY MAPPED AS SLOAN SILTY CLAY LOAM (SO) AT THE BRIDGE, HASKINS LOAM (HKA) JUST PAST THE EXISTING AUTO BODY SHOP EAST OF THE BRIDGE, AND BIXLER LOAMY FINE SAND (BCA) WEST OF THE BRIDGE. THE SO SOILS CONSIST OF LOAMY ALLUVIUM FORMED ON DRAINAGEWAYS, BACKSWAMPS, AND FLATS ON FLOOD PLAINS. THE HKA SOILS CONSIST OF LACUSTRINE DEPOSITS FORMED ON LAKE AND TILL PLAINS. THE BCA SOILS CONSIST OF SANDY LACUSTRINE DEPOSITS FORMED ON RIDGES AND KNOLLS ON BEACH RIDGES, OUTWASH PLAINS, AND DELTAS. THE SO SOILS ARE CHARACTERIZED AS VERY POORLY DRAINED AND HAVE A MODERATELY HIGH TO HIGH PERMEABILITY. THE HKA SOILS ARE CHARACTERIZED AS SOMEWHAT POORLY DRAINED AND HAVE A LOW TO MODERATELY HIGH PERMEABILITY. THE BCA SOILS ARE CHARACTERIZED AS SOMEWHAT POORLY DRAINED AND HAVE A MODERATELY HIGH TO HIGH PERMEABILITY.

THE ALLUVIAL DEPOSITS NEAR TENMILE CREEK ARE ASSOCIATED WITH THE HISTORIC DEPOSITION ASSOCIATED WITH THIS CREEK. THE LACUSTRINE SOILS CONSIST OF HISTORIC LAKE-LAID DEPOSITS, CONSISTING OF PREDOMINANTLY SILTS AND CLAYS, AND OFTEN EXHIBIT ALTERNATING THIN LAYERS OF INTERBEDDED SILTS AND CLAYS KNOWN AS VARVES. VARVED SOILS ARE CHARACTERISTIC OF LACUSTRINE DEPOSITS, AND THE THIN LAYERING IS TYPICALLY ATTRIBUTED TO SEASONAL OR OTHER CYCLIC VARIATIONS OF SEDIMENTATION IN THE LAKE WATERS. IN ADDITION, THIN SAND SEAMS AND PARTINGS MAY BE ENCOUNTERED.

THE GLACIAL TILL, ALSO REFERRED TO AS MORAINE, WAS DEPOSITED BY THE ADVANCE AND RETREAT OF GLACIAL ICE. DUE TO THE WEIGHT OF THE ICE MASS, THE TILL DEPOSITS ARE MODERATELY TO HIGHLY OVER-CONSOLIDATED, THAT IS, THE EXISTING SOIL DEPOSITS HAVE EXPERIENCED A PREVIOUS VERTICAL STRESS SIGNIFICANTLY HIGHER THAN THE PRESENT EFFECTIVE VERTICAL STRESS DUE TO THE REMAINING OVERLYING SOIL STRATA IN THE PROFILE. THE TILL MAY CONTAIN COBBLES AND/OR BOULDERS LEFT IN THE TILL SOIL MATRIX. ADDITIONALLY, SEAMS OF GRANULAR SOILS MAY ALSO BE ENCOUNTERED WITHIN GLACIAL TILLS.

BEDROCK IN THE PROJECT AREA IS BROADLY MAPPED ON THE "GEOLOGIC MAP OF OHIO"AS DEVONIAN-AGE OLENTANGY AND OHIO SHALES. BEDROCK AT THE SITE IS MAPPED AT ELEV. 620±, CORRESPONDING TO DEPTHS ON THE ORDER OF APPROXIMATELY 100 FEET BELOW EXISTING GRADES. A LOG FOR A NEARBY WATER WELL INDICATED SHALE BEDROCK WAS ENCOUNTERED AT A DEPTH OF APPROXIMATELY 135 FEET BELOW GRADE.

RECONNAISSANCE

TTL PERFORMED A SITE RECONNAISSANCE ON OCTOBER 1, 2020. THE PROJECT AREA CONSISTED PREDOMINANTLY OF SMALL BUSINESSES WITH A CHURCH JUST WEST OF THE BRIDGE. THE PAVEMENTS WERE IN GENERALLY FAIR TO POOR CONDITION WITH FREQUENT LONGITUDINAL AND TRANSVERSE CRACKING. THE CRACKS WERE GENERALLY SEALED. THE CONCRETE SIDEWALKS ON EITHER SIDE OF THE BRIDGE WERE IN GENERALLY GOOD TO FAIR CONDITION WITH LITTLE TO NO DISTRESS.

SPALLING CONCRETE AND LARGE CRACKS WERE OBSERVED ALONG PORTIONS OF THE HEADWALLS, AND CONNECTED RETAINING WALL. THE BRIDGE GIRDERS GENERALLY HAD MINOR RUST. A PIPE EXTENDS THROUGH THE WESTERN HEADWALL, SOUTH OF THE BRIDGE. SEVERAL PIPES ARE PRESENT DISCHARGING INTO THE CREEK TROUGH THE HEADWALLS AND RETAINING WALL. A PVC PIPE AND A CONCRETE PIPE DISCHARGING TO THE CREEK WERE PRESENT AT THE GROUND SURFACE/TOP OF EAST HEADWALL, SOUTH OF THE BRIDGE. THIS WALL INCLUDED A TURNBACK BEYOND A STEEL I-BEAM THAT HAD BEEN INSTALLED POSSIBLY FOR REINFORCEMENT LATER IN THE LIFE OF THE WALL, IN ANY CASE, THE PORTION OF THE WALL BEYOND THE TURNBACK INCLUDED TILTING AND SPALLING.

THE RETAINING WALL APPEARED TO HAVE A SMALL WINDOW PLACED IN IT APPROXIMATELY 6 TO 12 INCHES BELOW THE TOP OF THE WALL UNDER THE BRICK PORTION OF THE EXISTING AUTO BODY SHOP. AT THE TIME OF OUR RECONNAISSANCE, WATER WAS FLOWING AT THE WALL/CREEK BANK INTERFACE OR BELOW. WEEP HOLES WERE OBSERVED IN THE HEADWALLS.

AT THE TIME OF OUR RECONNAISSANCE, THE TENMILE CREEK BOTTOM WAS APPROXIMATELY 13 FEET AND 14 FEET BELOW ROADWAY GRADES SOUTH AND NORTH OF THE BRIDGE, RESPECTIVELY (ELEVS. 706± AND 705±, RESPECTIVELY). THE WATER LEVEL IN THE CREEK WAS APPROXIMATELY 2 INCHES AND 12 INCHES ABOVE CREEK BOTTOM SOUTH AND NORTH OF THE BRIDGE, RESPECTIVELY (ELEV. 706±).

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
SANDY SILT	A-4A	2	4
SILT AND CLAY	A-6A	9	7
SILTY CLAY	A-6B	3	29
	TOTAL	14	40
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		

BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

WC INDICATES WATER CONTENT IN PERCENT.

W— INDICATES FREE WATER ELEVATION.

INDICATES STATIC WATER ELEVATION.

● INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

SS INDICATES A SPLIT SPOON SAMPLE.

NI INDICATES A NOT-INTACT SAMPLE.

✻ INDICATES UNCONFINED COMPRESSIVE STRENGTH TEST BY ASTM D 2166.

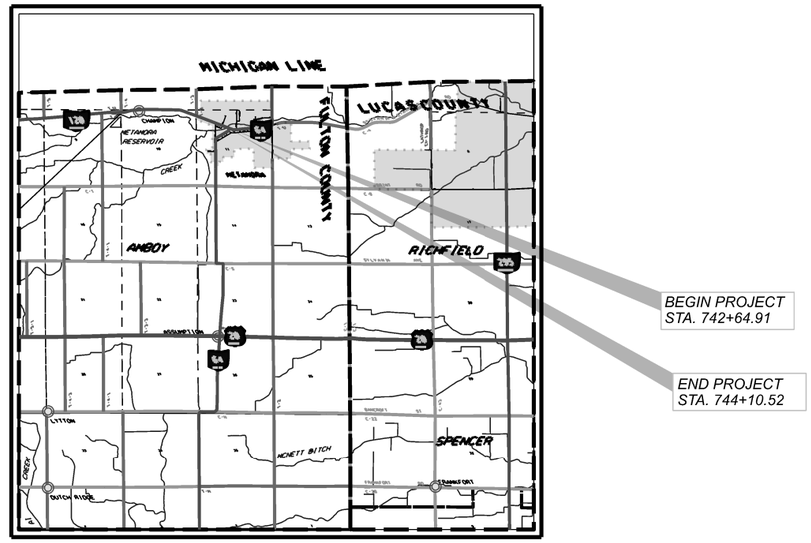
ORGANIC CONTENT = INDICATES ORGANIC CONTENT BY LOSS ON IGNITION.

SUBSURFACE EXPLORATION

THIS EXPLORATION INCLUDED THREE TEST BORINGS, DESIGNATED AS B-001-0-20, B-002-0-20 (AND OFFSET BORING B-002-1-20), AND B-004-0-20. ADDITIONALLY, AN AUGER PROBE BORING WAS PERFORMED, DESIGNATED AS X-003-0-20 (ALONG WITH OFFSET AUGER PROBE BORING X-003-1-20) THE BORINGS WERE PERFORMED BY TTL DURING OCTOBER 7 THROUGH 9, 2020. THE BORINGS HAVE BEEN IDENTIFIED IN ACCORDANCE WITH ODOT PROTOCOL, BUT THE "-0-20" OR "-20" PORTION OF THE NOMENCLATURE IS GENERALLY OMITTED FORM THE DISCUSSION HEREIN. BORING B-002-0 WAS TERMINATED DUE TO ENCOUNTERED REBAR IN CONCRETE UNDERLYING THE ASPHALT SURFACE COURSE. AN OFFSET BORING (B-002-1) WAS ADVANCED FURTHER FROM THE BRIDGE SO AS TO AVOID THE APPARENT APPROACH SLAB. AUGER BORING X-003-0 WAS INTENDED TO ENCOUNTER THE FOOTING OF AN EXISTING RETAINING WALL SO IT COULD BE CORED TO DETERMINE THE FOOTING THICKNESS. BORING X-003-0 WAS TERMINATED AFTER IT WAS EXTENDED DEEPER THAN THE INDICATED BEARING ELEVATION. AN OFFSET BORING (X-003-1) WAS MOVED CLOSER TO THE WALL BUT WAS ALSO TERMINATED AFTER BEING ADVANCED DEEPER THAN THE INDICATED BEARING ELEVATION WITHOUT ENCOUNTERING THE RETAINING WALL FOOTING. THE BORINGS WERE LOCATED IN THE FIELD BY TTL BASED ON A DIRECTION PROVIDED FROM BERGMANN.

IN ACCORDANCE WITH THE ODOT SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (SGE), BORINGS B-001 AND B-002-1 WERE PERFORMED AS ODOT TYPE E1 BRIDGE BORINGS, EXTENDED TO ENCOUNTER A MINIMUM OF 30 CONSECUTIVE FEET OF 30 BLOWS PER FOOT (BPF) MATERIAL. THE UPPER PORTION OF EACH OF THESE BORINGS WAS PERFORMED AS ODOT TYPE A ROADWAY BORINGS TO FACILITATE PAVEMENT SUBGRADE EVALUATIONS. ADDITIONALLY, BORING B-002-1 WAS PERFORMED TO MEET ODOT TYPE E3C RETAINING WALL AND TYPE E6 BUILDING CRITERIA. BORING B-004 WAS ALSO PERFORMED AS AN ODOT TYPE E6 BUILDING BORING.

THE TEST BORINGS PERFORMED DURING THIS EXPLORATION WERE DRILLED WITH AN ATV-MOUNTED DRILLING RIG FOR THE BRIDGE BORINGS AND WITH A TRUCK-MOUNTED DRILLING RIG FOR THE BUILDING AND EXISTING RETAINING WALL EXPLORATORY BORINGS. THE BORINGS WERE EXTENDED UTILIZING 3¼-INCH INSIDE DIAMETER HOLLOW-STEM AUGERS. IN BORINGS B-001 AND B-002-1, SAMPLES WERE OBTAINED CONTINUOUSLY OVER 18-INCH SPLIT-SPOON (SS) SAMPLE DRIVES TO A DEPTH OF 7 FEET, AT 2½-FOOT INTERVALS TO A DEPTH OF 30 FEET, AND AT 5-FOOT INTERVALS THEREAFTER. ADDITIONALLY, IN BORING B-001, SAMPLES WERE OBTAINED CONTINUOUSLY OVER 18-INCH SS SAMPLE DRIVES FROM 11 TO 20 FEET TO INCLUDE SAMPLING FOR EVALUATION OF POTENTIAL SCOUR. IN BORING B-004, SAMPLES WERE OBTAINED AT 2½-FOOT INTERVALS TO A DEPTH OF 10 FEET, AND AT 5-FOOT INTERVALS THEREAFTER. BORINGS X-003-0 AND X-003-1 DID NOT INCLUDE SAMPLING. SPLIT-SPOON SOIL SAMPLES WERE OBTAINED BY THE STANDARD PENETRATION TEST METHOD (ASTM D 1586). THESE SAMPLES WERE SEALED IN JARS AND TRANSPORTED TO OUR LABORATORY FOR FURTHER CLASSIFICATION AND TESTING. THE HAMMER/ROD ENERGY RATIO FOR THE ATV-MOUNTED DRILL RIG (CME 550X) WAS 77.3 PERCENT, AND WAS CALIBRATED ON FEBRUARY 20, 2019. THE HAMMER/ROD ENERGY RATIO FOR THE TRUCK-MOUNTED DRILL RIG (CME 75) WAS 70.8 PERCENT, AND WAS CALIBRATED ON THE SAME DATE.



LOCATION MAP

LATITUDE: 41°42'43" LONGITUDE: 83°54'39"

SCALE IN MILES
0 1 2 3 4

ALL SAMPLES WERE VISUALLY CLASSIFIED IN ACCORDANCE WITH THE ODOT SOIL CLASSIFICATION SYSTEM. ALL RECOVERED SAMPLES OF THE SUBSOILS WERE ALSO TESTED IN OUR LABORATORY FOR MOISTURE CONTENT (ASTM D 2216). ORGANIC CONTENT DETERMINATIONS BY THE LOSS-ON-IGNITION (LOI) METHOD (ASTM D 2974) WERE PERFORMED ON SELECTED SAMPLES. DRY DENSITY DETERMINATIONS AND UNCONFINED COMPRESSIVE STRENGTH TESTS BY THE CONSTANT RATE OF STRAIN METHOD (ASTM D 2166) WERE PERFORMED ON SELECTED SPLIT-SPOON SAMPLES. UNCONFINED COMPRESSIVE STRENGTH ESTIMATES WERE OBTAINED FOR THE REMAINING INTACT COHESIVE SPLIT-SPOON SAMPLES USING A CALIBRATED HAND PENETROMETER.

LABORATORY TESTING WAS PERFORMED IN ACCORDANCE WITH GB-1 "PLAN SUBGRADES" CRITERIA, INCLUDING MECHANICAL SOIL CLASSIFICATION CONSISTING OF AN ATTERBERG LIMITS TEST (ASTM D 4318) AND A PARTICLE SIZE ANALYSIS (ASTM D 422) [FOR COHESIVE SOIL SAMPLES] FOR AT LEAST TWO SAMPLES FROM BORINGS B-001 AND B-002-1 WITHIN 6 FEET OF THE PROPOSED SUBGRADE. COMPLETE CLASSIFICATION TESTING WAS ALSO PERFORMED FOR SELECTED SAMPLES DEEPER IN THE SUBSOIL PROFILE.

SULFATE CONTENT DETERMINATIONS (ODOT SUPPLEMENT 1122) WERE PERFORMED ON A SUBGRADE SAMPLE FROM BORINGS B-001 AND B-002-1.

EXPLORATION FINDINGS

THE BORINGS ENCOUNTERED SURFACE MATERIALS CONSISTING OF ASPHALT RANGING IN THICKNESS FROM 1 TO 7 INCHES. CONCRETE AND AGGREGATE BASE WERE ENCOUNTERED UNDERLYING THE ASPHALT IN SOME OF THE BORINGS WITH VARYING THICKNESSES. A DESCRIPTION OF THE SURFACE MATERIALS AND THEIR THICKNESSES ARE SUMMARIZED IN THE FOLLOWING TABLE.

DESCRIPTION OF SURFACE MATERIALS

BORING NUMBER	APPROXIMATE ASPHALT THICKNESS (INCHES)	APPROXIMATE CONCRETE THICKNESS (INCHES)	APPROXIMATE AGGREGATE THICKNESS (INCHES)
B-001-0-20	7	8	3
B-002-0-20	2	> 10 (NOTE 1)	-
B-002-1-20	6	3	N.E.
X-003-0-20	1 (NOTE 2)	N.E.	35
X-003-1-20	1 (NOTE 2)	N.E.	35
B-004-0-20	4	8	N.E.

N.E. = NOT ENCOUNTERED
NOTES:
1) BORING B-002-0 WAS TERMINATED AT A DEPTH OF APPROXIMATELY 12 INCHES FROM THE TOP OF PAVEMENT IN THE REINFORCED CONCRETE LAYER DUE TO ENCOUNTERED REBAR.
2) BORINGS X-003-0 AND X-003-1 WERE PERFORMED IN AN AREA OF DELIPIDATED ASPHALT BETWEEN THE PARKING AREA AND A GUARDRAIL AT THE TOP OF THE RETAINING WALL.

RECON CPI 10/01/20
DRILLING TB 10/07/20 THROUGH 10/09/20
DRAWN TRR 01/22
REVIEWED CPI 01/22

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK

DESIGN AGENCY
TTL associates inc
Environmental, Geotechnical Engineering & Testing

DESIGNER
TRR

REVIEWER
CPI 01/22

PROJECT ID
101140

SHEET 4 of 55

FUL-120-14.08

UNDERLYING THE SURFACE MATERIALS, MEDIUM STIFF TO STIFF COHESIVE EXISTING FILL MATERIALS WERE ENCOUNTERED TO DEPTHS RANGING FROM 3.8 TO 8.8 FEET BELOW TOP OF PAVEMENT. THE FILL CONSISTED OF SANDY SILT, SILT AND CLAY, AS WELL AS SILTY CLAY. NON-SOIL MATERIALS OBSERVED IN THE FILL CONSISTED OF CRUSHED STONE, WOOD, AS WELL AS ASPHALT AND BRICK FRAGMENTS. ORGANIC CONTENTS OF APPROXIMATELY 10 TO 11 PERCENT WERE DETERMINED FOR TWO FILL SAMPLES CONTAINING WOOD [BORINGS B-001 (SS-4) AND B-004 (SS-1)].

BASED ON THE BORINGS COMPLETED FOR THIS EXPLORATION, THE SUBSURFACE PROFILE ENCOUNTERED UNDERLYING THE SURFACE AND FILL MATERIALS CAN BE GENERALLY CHARACTERIZED BY FIVE STRATA OF COHESIVE SOILS WITH VARYING STRENGTH AND MOISTURE CHARACTERISTICS.

STRATUM I CONSISTED OF PREDOMINANTLY SOFT TO MEDIUM STIFF COHESIVE SOILS ENCOUNTERED UNDERLYING THE FILL IN BORINGS B-001 AND B-002-1 TO DEPTHS OF 11 FEET AND 8½ FEET, RESPECTIVELY (ELEVS. 708± AND 710±, RESPECTIVELY). THE STRATUM I SOILS CONSISTED OF SILTY CLAY (ODOT A-6B) WITH LITTLE SAND AND TRACE GRAVEL.

STRATUM II CONSISTED OF PREDOMINANTLY STIFF TO VERY STIFF COHESIVE SOILS ENCOUNTERED UNDERLYING THE FILL IN BORING B-004 AND STRATUM I IN BORING B-002-1. STRATUM II EXTENDED TO DEPTHS OF 11 FEET (ELEV. 708±) IN BORING B-002-1 AND 6 FEET (ELEV. 713±) IN BORING B-004. THESE COHESIVE SOILS CONSISTED OF SILT AND CLAY (A-6A) AS WELL AS SILTY CLAY (A-6B) WITH VARYING AMOUNTS OF SAND AND GRAVEL.

STRATUM III CONSISTED OF PREDOMINANTLY VERY STIFF TO HARD COHESIVE SOILS ENCOUNTERED UNDERLYING STRATUM I IN BORING B-001, AS WELL AS STRATUM II IN BORINGS B-002-1 AND B-004. STRATUM III EXTENDED TO BORING TERMINATION AT A DEPTH OF 20 FEET IN BORING B-004, AS WELL AS TO DEPTHS OF 49½ FEET (ELEV. 669±) IN BORING B-001 AND 38½ FEET (ELEV. 680±) IN BORING B-002-1. THESE COHESIVE SOILS CONSISTED OF SANDY SILT (A-4A), SILT AND CLAY (A-6A), AS WELL AS SILTY CLAY (A-6B).

STRATUM IV CONSISTED OF PREDOMINANTLY HARD COHESIVE SOILS ENCOUNTERED UNDERLYING STRATUM II IN BORINGS B-001 AND B-002-1 TO DEPTHS OF 73 FEET AND 73½ FEET, RESPECTIVELY (ELEVS. 646± AND 645±, RESPECTIVELY). THESE COHESIVE SOILS CONSISTED OF SILT AND CLAY (A-6A) AS WELL AS SILTY CLAY (A-6B).

STRATUM V CONSISTED OF PREDOMINANTLY "VERY HARD" COHESIVE SOILS ENCOUNTERED UNDERLYING STRATUM IV IN BORINGS B-001 AND B-002-1 TO TERMINATION AT A DEPTH OF 80 FEET (ELEV. 639±). THESE COHESIVE SOILS CONSISTED OF SANDY SILT (A-4A).

GROUNDWATER WAS INITIALLY ENCOUNTERED DURING DRILLING AND OBSERVED UPON COMPLETION OF DRILLING OPERATIONS IN ONLY BORING B-001 AT A DEPTH OF 79.5 FEET (ELEV. 639.5). IT SHOULD BE NOTED THAT EACH BORING WAS GENERALLY DRILLED AND BACKFILLED OR SEALED WITHIN THE SAME DAY. THEREFORE, STABILIZED AMBIENT WATER LEVELS WERE NOT OBSERVED OVER THIS LIMITED TIME PERIOD. INSTRUMENTATION WAS NOT INSTALLED FOR LONG-TERM GROUNDWATER READINGS.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (SGE), DATED JULY 2020.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
EXPLORATION NOTES - (CONT.)

DESIGN AGENCY
TTL associates, inc.
Environmental, Geotechnical Engineering & Testing

DESIGNER
TRR

REVIEWER
CPI 01/22

PROJECT ID
101140

SHEET 45 TOTAL 55

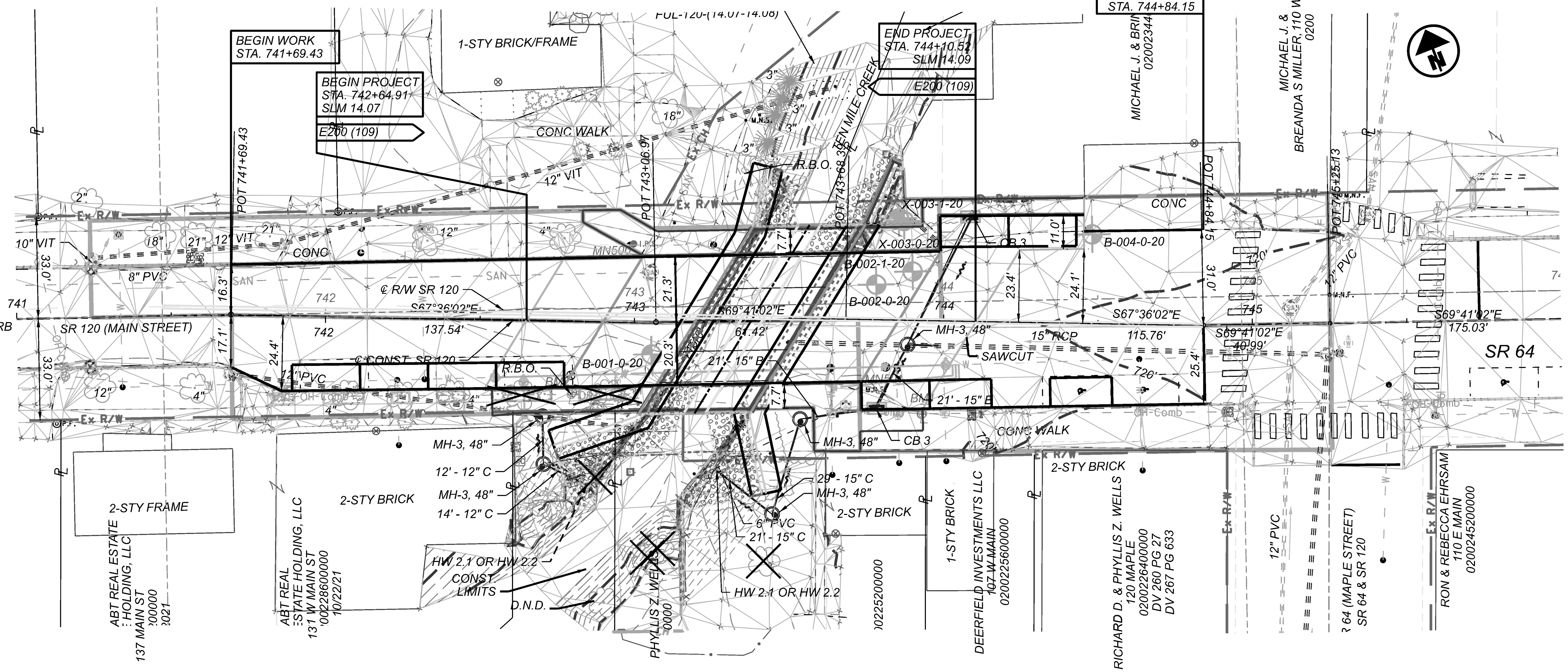
FUL-120-14.08

FUL-120-14.08

LEGEND

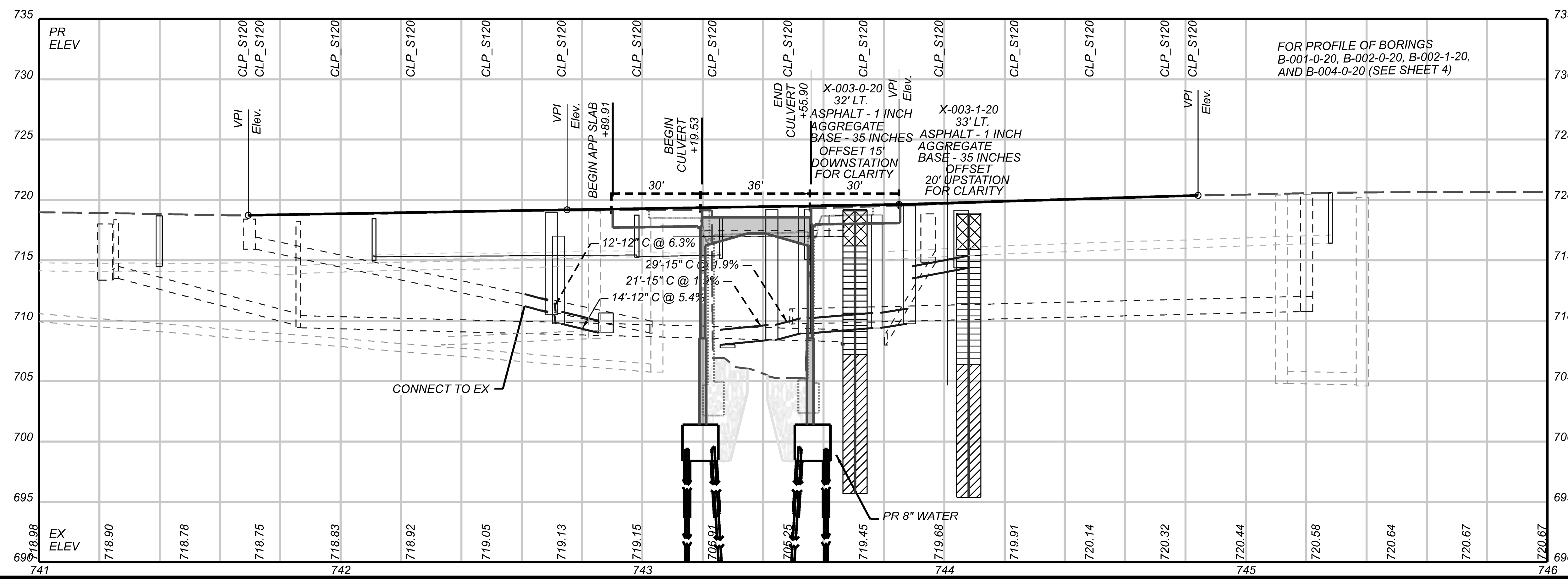
D.N.D. = DO NOT DISTURB

R.B.O. = RELOCATED BY OTHERS



HORIZONTAL SCALE IN FEET

0 10 20 40



SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
PLAN AND PROFILE - AUGER BORINGS

DESIGN AGENCY

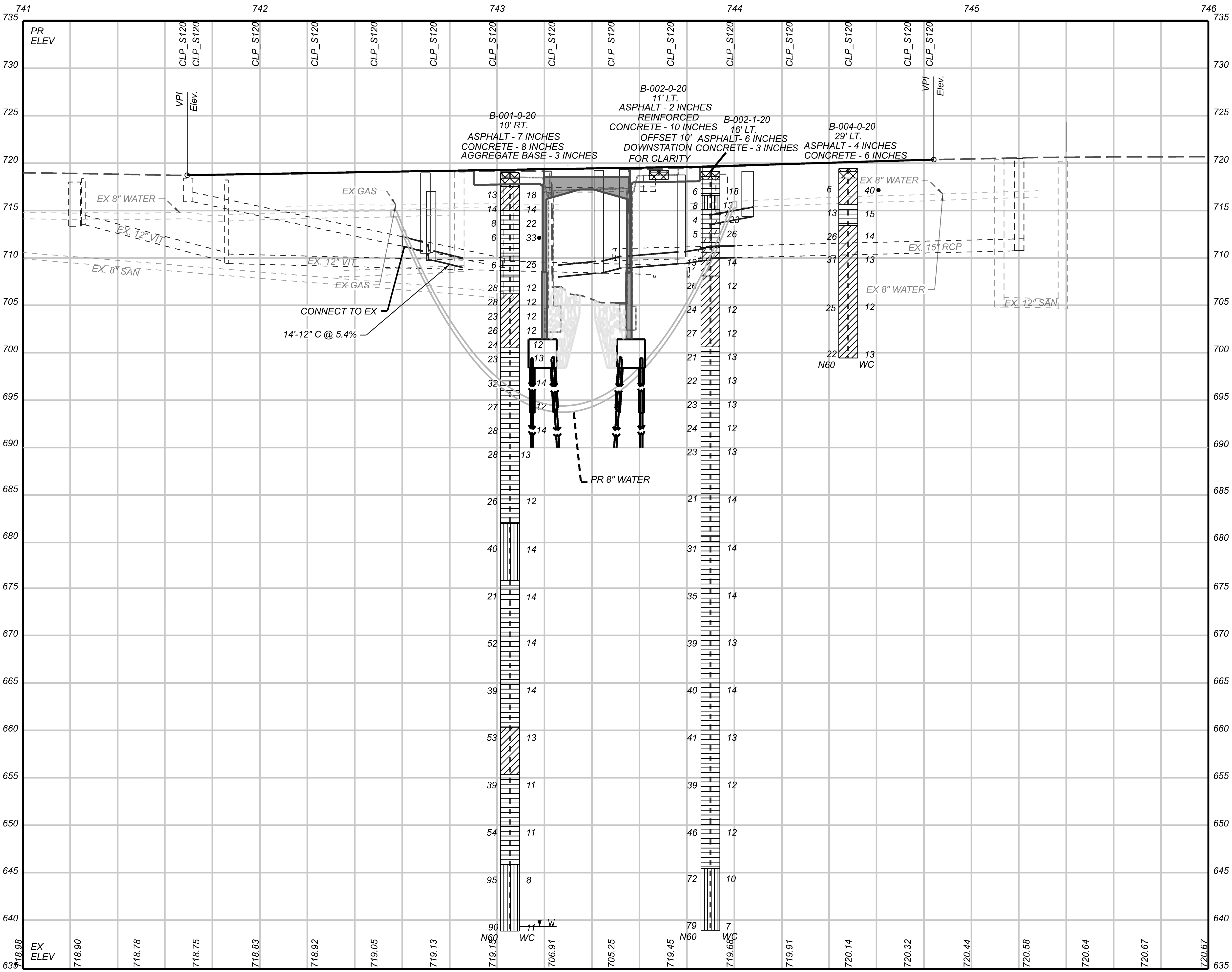
TTL associates inc
Environmental, Geotechnical Engineering & Testing

DESIGNER
TRR

REVIEWER
CPI 01/22

PROJECT ID
101140

SHEET 46 TOTAL 55



HORIZONTAL SCALE IN FEET

0 10 20 40

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
PROFILE - TEST BORINGS

DESIGN AGENCY

TTL associates inc
Environmental, Geotechnical Engineering & Testing

DESIGNER TRR

REVIEWER CPI 01/22

PROJECT ID 101140

SHEET 47 TOTAL 55

FUL-120-14.08

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / JW	DRILL RIG: CME 550X ATV	STATION / OFFSET: 743+06, 10' RT.	EXPLORATION ID B-001-0-20
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120	
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 719.0 (NAVD88) EOB: 80.0 ft.	PAGE 1 OF 3
START: 10/7/20 END: 10/7/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.3	COORD: 748267.0200 N, 1583250.6700 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
ASPHALT - 7 INCHES	719.0																		
CONCRETE - 8 INCHES	718.4																		
CRUSHED STONE - 3 INCHES	717.7																		
STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND AND TRACE CRUSHED STONE, MOIST **FILL**	717.5		2 4 6	13	78	SS-1	3.50	1	7	11	23	58	29	15	14	18	A-6a (10)	2400	
@2.5': "AND" SAND, DAMP	715.0		2 6 5	14	78	SS-2	NI	8	16	20	22	34	26	14	12	14	A-6a (5)	580	
MEDIUM STIFF, BROWN, **SILTY CLAY**, LITTLE SAND AND TRACE CRUSHED STONE, MOIST **FILL**			2 2 4	8	100	SS-3	1.25	-	-	-	-	-	-	-	-	22	A-6b (V)	-	
@5.5': SOME SAND, WITH WOOD, WET			2 2 3	6	83	SS-4	0.75	-	-	-	-	-	-	-	-	33	A-6b (V)	-	
(MODERATELY ORGANIC, ORGANIC CONTENT = 10.3%)	710.2																		
MEDIUM STIFF, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, MOIST	708.0		2 2 3	6	100	SS-5	0.50	-	-	-	-	-	-	-	-	25	A-6b (V)	-	
VERY STIFF, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP	706.2		6 10 12	28	100	SS-6	4.90*	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
VERY STIFF TO HARD, GRAY, **SILT AND CLAY**, SOME SAND AND TRACE GRAVEL, DAMP			4 10 12	28	100	SS-7	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	-	
			3 8 10	23	100	SS-8	4.50	2	10	24	25	39	26	11	15	12	A-6a (8)	-	
			5 8 12	26	100	SS-9	4.50	5	8	19	27	41	26	12	14	12	A-6a (8)	-	
@17': LITTLE GRAVEL	700.5		7 8 11	24	100	SS-10	4.50	10	7	18	24	41	26	14	12	12	A-6a (7)	-	
VERY STIFF TO HARD, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP			4 8 10	23	100	SS-11	4.50	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
			12 13 12	32	100	SS-12	4.50	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
			6 8 13	27	100	SS-13	4.67*	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
			7 10 12	28	100	SS-14	3.75	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
			7 10 12	28	100	SS-15	4.50	-	-	-	-	-	-	-	-	13	A-6b (V)	-	

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 14:47 - S:\PROJECTS\1987301.GPJ

PID: 101140	SFN: 2601745	PROJECT: FUL-120-14.08	STATION / OFFSET: 743+06, 10' RT.	START: 10/7/20	END: 10/7/20	PG 2 OF 3	B-001-0-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
VERY STIFF TO HARD, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP *(continued)*	688.0																		
@33.5': SOME SAND	682.0		5 9 11	26	100	SS-16	4.50	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
HARD, GRAY, **SANDY SILT**, "AND" CLAY, DAMP	676.0		17 17 14	40	100	SS-17	4.00	0	0	4	46	50	21	14	7	14	A-4a (8)	-	
VERY STIFF TO HARD, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP			4 7 9	21	100	SS-18	4.50	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
	669.5		9 23 17	52	100	SS-19	4.25	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, SOME SAND AND TRACE GRAVEL, DAMP																			
@53.5': LITTLE SAND	660.5		9 13 17	39	100	SS-20	4.50	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, GRAY, **SILT AND CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP	655.5		11 17 24	53	17	SS-21	5.44*	2	3	7	22	66	28	13	15	13	A-6a (10)	-	
			9																

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 14:47 - S:\PROJECTS\1987301.GPJ

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-001-0-20

PID: 101140 | SFN: 2601745 | PROJECT: FUL-120-14.08 | STATION / OFFSET: 743+06, 10' RT. | START: 10/7/20 | END: 10/7/20 | PG 3 OF 3 | B-001-0-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
HARD, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP *(continued)*	654.8	65	12 18	39	100	SS-22	4.50	-	-	-	-	-	-	-	-	11	A-6b (V)	-	
		66																	
		67																	
		68																	
		69	15 20 22	54	100	SS-23	4.50	-	-	-	-	-	-	-	-	11	A-6b (V)	-	
		70																	
		71																	
		72																	
		73																	
HARD, GRAY, **SANDY SILT**, LITTLE CLAY AND TRACE GRAVEL, DAMP	646.0	74	20 29 45	95	89	SS-24	4.50	-	-	-	-	-	-	-	-	8	A-4a (V)	-	
		75																	
		76																	
		77																	
		78																	
		79	30 32 38	90	100	SS-25	4.50	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	639.0	80																	

639.5

EOB

NOTES: "*" - UNCONFINED STRENGTH DETERMINED BY ASTM D 2166. "NI" - NOT INTACT

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.25 BAG ASPHALT PATCH; PUMPED 23 CF BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 14:47 - S:\PROJECTS\1987301.GPJ

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-001-0-20 (CONT.)

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / JW	DRILL RIG: CME 550X ATV	STATION / OFFSET: 743+78, 11' LT.
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 719.3 (NAVD88) EOB: 1.0 ft.
START: 10/7/20 END: 10/7/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.3	COORD: 748261.5900 N, 1583326.6100 E

EXPLORATION ID: B-002-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 719.3	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	ABAN-DONED
ASPHALT - 2 INCHES	719.1																		
REINFORCED CONCRETE - 10 INCHES	718.3	EOB 1																	

NOTES: BORING TERMINATED AT 1.0' DUE TO REBAR.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: 0.5 BAG ASPHALT PATCH

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 14:53 - S:\PROJECTS\1987301.GPJ

SHEET 50 | TOTAL 55

PROJECT ID 101140

REVIEWER CPI 01/22

DESIGNER TRR

DESIGN AGENCY TTL associates, inc. Environmental, Geotechnical Engineering & Testing

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-002-0-20

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / JW	DRILL RIG: CME 550X ATV	STATION / OFFSET: 743+90, 16' LT.	EXPLORATION ID B-002-1-20
TYPE: BRIDGE	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120	
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 719.1 (NAVD88) EOB: 80.0 ft.	PAGE 1 OF 3
START: 10/7/20 END: 10/8/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.3	COORD: 748261.2500 N, 1583339.1000 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
ASPHALT - 6 INCHES	719.1																		
CONCRETE - 3 INCHES	718.6																		
MEDIUM STIFF, GRAY, **SILTY CLAY**, SOME SAND AND TRACE CRUSHED STONE, MOIST **FILL**	718.3		2 3 2	6	100	SS-1	3.00	-	-	-	-	-	-	-	-	18	A-6b (V)	1300	
MEDIUM STIFF, GRAY, **SANDY SILT**, SOME CRUSHED STONE, LITTLE CLAY, TRACE ASPHALT AND BRICK FRAGMENTS, MOIST **FILL**	716.6		4 3 3	8	100	SS-2	0.50	22	20	10	36	12	21	13	8	13	A-4a (3)	-	
SOFT TO MEDIUM STIFF, GRAY, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, MOIST	715.1		0 1 2	4	100	SS-3	1.00	2	6	11	21	60	33	17	16	23	A-6b (10)	-	
@6.5': MEDIUM STIFF			0 0 4	5	100	SS-4	1.00	-	-	-	-	-	-	-	-	26	A-6b (V)	-	
STIFF TO VERY STIFF, BROWN, **SILT AND CLAY**, SOME SAND AND LITTLE GRAVEL, MOIST	710.6		4 5 5	13	100	SS-5	4.50	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
VERY STIFF TO HARD, GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, IRON OXIDE STAIN STEAM, DAMP	708.1		5 8 12	26	100	SS-6	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	-	
			5 8 11	24	100	SS-7	4.50	3	9	19	25	44	27	13	14	12	A-6a (8)	-	
			10 8 13	27	100	SS-8	4.50	8	6	14	26	46	26	11	15	12	A-6a (9)	-	
VERY STIFF TO HARD, GRAY, **SILTY CLAY**, SOME SAND, DAMP	700.6		3 6 10	21	100	SS-9	4.50	0	9	20	27	44	26	8	18	13	A-6b (10)	-	
@21': LITTLE SAND, TRACE GRAVEL			5 7 10	22	100	SS-10	4.50	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
			5 6 12	23	100	SS-11	4.50	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
@26.0': VERY STIFF			7 8 11	24	100	SS-12	2.43*	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
@28.5': LITTLE GRAVEL			7 7 11	23	100	SS-13	3.00	-	-	-	-	-	-	-	-	13	A-6b (V)	-	

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT GDT - 1/14/22 15:01 - S:\PROJECTS\1987301.GPJ

PID: 101140	SFN: 2601745	PROJECT: FUL-120-14.08	STATION / OFFSET: 743+90, 16' LT.	START: 10/7/20	END: 10/8/20	PG 2 OF 3	B-002-1-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
VERY STIFF TO HARD, GRAY, **SILTY CLAY**, SOME SAND, DAMP *(continued)*	688.1																		
@33.5': VERY STIFF TO HARD			7 7 9	21	100	SS-14	4.25	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, SOME SAND, TRACE GRAVEL, DAMP	680.6		7 12 12	31	94	SS-15	5.04*	5	8	16	26	45	30	14	16	14	A-6b (10)	-	
			8 11 16	35	89	SS-16	4.25	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
			7 15 15	39	83	SS-17	4.08*	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
@53.5': LITTLE SAND AND GRAVEL			8 13 18	40	100	SS-18	4.50	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
			7 12 20	41	100	SS-19	4.50	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
			10																

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT GDT - 1/14/22 15:01 - S:\PROJECTS\1987301.GPJ

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-002-1-20

PID: 101140	SFN: 2601745	PROJECT: FUL-120-14.08	STATION / OFFSET: 743+90, 16' LT.	START: 10/7/20	END: 10/8/20	PG 3 OF 3	B-002-1-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
HARD, GRAY, **SILTY CLAY**, SOME SAND, TRACE GRAVEL, DAMP *(continued)*	654.9	65	14 16	39	89	SS-20	4.50	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
		66																	
		67																	
		68																	
@68.5': SOME SAND		69	11 15 21	46	94	SS-21	4.50	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
		70																	
		71																	
		72																	
		73																	
HARD, GRAY, **SANDY SILT**, LITTLE CLAY AND TRACE GRAVEL, MOIST	645.6	74	22 26 30	72	83	SS-22	4.50	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
		75																	
		76																	
		77																	
		78																	
@78.5': LITTLE GRAVEL		79	24 29 32	79	78	SS-23	4.50	-	-	-	-	-	-	-	-	7	A-4a (V)	-	
	639.1 EOB	80																	

NOTES: "*" - UNCONFINED STRENGTH DETERMINED BY ASTM D 2166.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 23 CF BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 15:01 - S:\PROJECTS\1987301.GPJ

SHEET 52 | TOTAL 55

PROJECT ID 101140

REVIEWER CPI 01/22

DESIGNER TRR

DESIGN AGENCY TTL associates inc Environmental, Geotechnical Engineering & Testing

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-002-1-20 (CONT.)

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / TB	DRILL RIG: CME 75 TRUCK 111	STATION / OFFSET: 743+87, 32' LT.
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 719.2 (NAVD88) EOB: 23.5 ft.
START: 10/9/20 END: 10/9/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.8	COORD: 748277.4800 N, 1583342.4600 E

EXPLORATION ID: X-003-0-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
ASPHALT - 1 INCH	719.2																		
CRUSHED STONE - 35 INCHES	719.1																		
	716.2																		
BROWN, **SILTY CLAY**, SOME SAND, LITTLE CRUSHED STONE, AND TRACE BRICK FRAGMENTS **FILL**																			
	712.7																		
GRAY, **SILTY CLAY**, SOME SAND																			
	707.2																		
BROWN, **SILT AND CLAY**, LITTLE SAND																			
@14': GRAY																			
	695.7	EOB																	

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.25 BAG ASPHALT PATCH; PUMPED 7 CF BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT GDT - 1/14/22 15:02 - S:\PROJECTS\1987301.GPJ

SHEET 53 TOTAL 55 | PROJECT ID 101140 | REVIEWER CPI 01/22 | DESIGNER TRR | DESIGN AGENCY TTL associates, inc. Environmental, Geotechnical Engineering & Testing

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG X-003-0-20

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / TB	DRILL RIG: CME 75 TRUCK 111	STATION / OFFSET: 743+85, 33' LT.
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 718.9 (NAVD88) EOB: 23.5 ft.
START: 10/9/20 END: 10/9/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.8	COORD: 748278.8900 N, 1583341.2000 E

EXPLORATION ID X-003-1-20

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
ASPHALT - 1 INCH	718.9																		
CRUSHED STONE - 35 INCHES (WITH CONCRETE FRAGMENTS)	718.8																		
	715.9																		
BROWN, **SILTY CLAY**, SOME SAND, LITTLE CRUSHED STONE **FILL**																			
	712.4																		
GRAY, **SILTY CLAY**, SOME SAND AND LITTLE GRAVEL																			
	706.4																		
GRAY, **SILT AND CLAY**, LITTLE SAND																			
@16': TRACE GRAVEL																			
	695.4	EOB																	

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.25 BAG ASPHALT PATCH; PUMPED 7 CF BENTONITE GROUT

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT.GDT - 1/14/22 15:03 - S:\PROJECTS\101987301.GPJ

SHEET 54 TOTAL 55

PROJECT ID 101140

REVIEWER CPI 01/22

DESIGNER TRR

DESIGN AGENCY TTL associates, inc. Environmental, Geotechnical Engineering & Testing

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG X-003-1-20

PROJECT: FUL-120-14.08	DRILLING FIRM / OPERATOR: TTL / TB	DRILL RIG: CME 75 TRUCK 111	STATION / OFFSET: 744+48, 29' LT.
TYPE: BUILDING	SAMPLING FIRM / LOGGER: TTL / KKC	HAMMER: CME AUTOMATIC	ALIGNMENT: SR 120
PID: 101140 SFN: 2601745	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 2/20/19	ELEVATION: 719.4 (NAVD88) EOB: 20.0 ft.
START: 10/9/20 END: 10/9/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.8	COORD: 748251.2300 N, 1583397.6600 E

EXPLORATION ID: B-004-0-20

PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 719.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	ABAN-DONED
ASPHALT - 4 INCHES	719.1																		
CONCRETE - 8 INCHES	718.4																		
MEDIUM STIFF, DARK BROWN, **SILT AND CLAY**, WITH WOOD, LITTLE SAND, AND TRACE CRUSHED STONE, WET **FILL** (HIGHLY ORGANIC, ORGANIC CONTENT = 11.7%)	715.6	1	1 2 3	6	100	SS-1	1.25	-	-	-	-	-	-	-	-	40	A-6a (V)	-	
STIFF TO VERY STIFF, BROWN, **SILTY CLAY**, LITTLE SAND AND TRACE GRAVEL, DAMP	713.4	3	3 4 7	13	100	SS-2	3.47*	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
VERY STIFF TO HARD, BROWN, **SILT AND CLAY**, SOME SAND AND TRACE GRAVEL, DAMP		6	6 8 14	26	100	SS-3	4.50	6	9	19	24	42	28	17	11	14	A-6a (7)	-	
@8.5': HARD		9	5 12 14	31	100	SS-4	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	-	
@13.7': VERY STIFF TO HARD GRAY		14	5 10 11	25	100	SS-5	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	-	
	699.4	EOB 20	3 8 11	22	100	SS-6	4.50	-	-	-	-	-	-	-	-	13	A-6a (V)	-	

NOTES: "*" - UNCONFINED STRENGTH DETERMINED BY ASTM D 2166.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.25 BAG ASPHALT PATCH; PLACED 1 BAG BENTONITE CHIPS

STANDARD ODOT LOG W/ SULFATES (8.5 X 11) - OH DOT GDT - 1/14/22 15:04 - S:\PROJECTS\1987301.GPJ

SHEET 56 | TOTAL 55

PROJECT ID 101140

REVIEWER CPI 01/22

DESIGNER TRR

DESIGN AGENCY: TTL associates, inc. Environmental, Geotechnical Engineering & Testing

SOIL PROFILE - ROADWAY
FUL-120-1408 OVER TENMILE CREEK
BORING LOG B-004-0-20