PROJECT DESCRIPTION

THE MOE-TR2001-0.13 PROJECT CONSISTS OF THE REPLACEMENT OF AN EXISTING SINGLE SPAN BRIDGE STRUCTURE CARRYING WEHR ROAD (TR 2001) OVER SENECA FORK WILLS CREEK AT MILE MARKER 0.13 IN MONROE COUNTY, OHIO.

HISTORIC RECORDS

HDR IS UNAWARE OF ANY PRIOR GEOTECHNICAL EXPLORATIONS WITHIN THE PROJECT LIMITS.

GEOLOGY

THE PROJECT SITE IS LOCATED WITHIN THE MARIETTA PLATEAU REGION OF THE ALLEGHENY PLATEAUS SECTION OF THE APPALACHIAN PLATEAUS PROVINCE. THE MARIETTA PLATEAU REGION IS CHARACTERIZED BY HIGHLY DISSECTED, HIGH RELIEF VALLEYS OF GENERALLY 350 TO 600 FEET NEAR THE OHIO RIVER. ELEVATIONS IN THIS REGION GENERALLY RANGE FROM 515 TO 1,400 FEET ABOVE SEA LEVEL. SOILS IN THE MARIETTA PLATEAU TYPICALLY CONSIST OF RED AND BROWN SILTY-CLAY LOAM COLLUVIUM, AS WELL AS PLEISTOCENE (TEAYS)-AGE MINFORD CLAY OVER PENNSYLVANIAN-AGE UPPER CONEMAUGH GROUP THROUGH PERMIAN-AGE DUNKARD GROUP CYCLIC SEQUENCES OF RED AND GRAY SHALES, AND SILTSTONES, SANDSTONES, LIMESTONES, AND COALS.

DRAINAGE IN THE PROJECT AREA IS ACCOMMODATED BY THE SENECA FORK WILLS CREEK, WHICH IN TURN DRAINS INTO SENECAVILLE LAKE APPROXIMATELY 3½ MILES DOWNSTREAM OF THE PROJECT SITE.

ACCORDING TO THE SURFICIAL GEOLOGY DATA FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) DIVISION OF GEOLOGICAL SURVEY, SURFICIAL SOILS AT THE SITE CONSIST OF PRIMARILY HOLOCENE-AGED ALLUVIAL DEPOSITS OVERLYING SILT AND CLAY WITH OCCASIONAL SAND AND GRAVEL INTERBEDS OF UNSPECIFIED AGE. THESE SURFICIAL DEPOSITS ARE UNDERLAIN BY PENNSYLVANIAN BEDROCK INCLUDING SANDSTONE, SHALE, SILTSTONE, CLAY, LIMESTONE, AND COAL. THE ALLUVIUM DEVELOPS IN FLOODPLAINS OF MODERN STREAMS WITH SOILS RANGING FROM SILT TO CLAY TO BOULDERS, COMMONLY INCLUDING ORGANIC MATERIALS. THE SILT AND CLAY WITH OCCASIONAL SAND AND GRAVEL INTERBED DEPOSITS ARE LIKELY THE RESULT OF BACKWATER LAKE DEPOSITS, BUT MAY ALSO BE DELTAIC DEPOSITS, OUTWASH, AND DEPOSITS IN UPLAND DEPRESSIONS.

THE UNDERLYING BEDROCK MAPPED WITHIN THE PROJECT AREA IS THE UPPER PENNSYLVANIAN AGE CONEMAUGH GROUP. THE UPPER PENNSYLVANIAN AGE MONONGAHELA GROUP IS LOCATED AT HIGHER ELEVATIONS ON THE VALLEY WALLS AND RIDGES OUTSIDE THE PROJECT AREA. THE UPPER PENNSYLVANIAN AGE CONEMAUGH GROUP GENERALLY CONSISTS OF SHALE, SILTSTONE, MUDSTONE, SANDSTONE, LIMESTONE, AND COAL. GENERAL FEATURES INCLUDE LENTICULAR, PLANAR, NODULAR, IRREGULAR, AND CROSS BEDDING. THE MUDSTONE, SHALE, AND SILTSTONE ARE DESCRIBED AS ARGILLACEOUS TO SANDY, NON-BEDDED TO THINLY BEDDED, LOCALLY CALCAREOUS AND MAY CONTAIN MARINE FOSSILS IN LOWER HALF OF THE UNIT. THE SANDSTONES ARE DESCRIBED AS FINE TO MEDIUM GRAINED, LOCALLY CONGLOMERATIC, THIN TO MASSIVE TO CROSS BEDDED, AND MICACEOUS. LIMESTONE IS DESCRIBED AS MICRITIC TO COARSE GRAINED, THIN TO MEDIUM BEDDED WITH MARINE FOSSILS COMMON IN THE LOWER PART OF THE UNIT. COALS ARE IMPURE, BITUMINOUS, THIN TO BEDDED, AND DISCONTINUOUS. COAL BED OF NOTE WITHIN THE CONEMAUGH GROUP IS THE MAHONING NO. 7A COAL SEAM. SEVERAL ABANDONED MINE ENTRANCES ARE LOCATED APPROXIMATELY 2.5 MILES EAST OF THE PROJECT SITE. THESE MINE OPENINGS ARE ASSOCIATED WITH THE MEIGS CREEK NO. 9 COAL SEAM OF THE OVERLYING MONONGAHELA GROUP. ADDITIONAL SURFACE MINES WERE ALSO MAPPED APPROXIMATELY 3 MILES NORTHWEST OF THE PROJECT SITE IN NEIGHBORING NOBLE COUNTY. NO PREVIOUS SURFACE OR DEEP MINING WAS MAPPED AT THE PROJECT SITE ITSELF.

RECONNAISSANCE

A VISUAL RECONNAISSANCE OF THE PROJECT SITE AND SURROUNDING AREA WAS PERFORMED BY AN HDR GEOTECHNICAL ENGINEER DURING THE DRILLING ACTIVITIES ON OCTOBER 20, 2022. THE PROJECT SITE IS LOCATED WITHIN A RELATIVELY WIDE VALLEY CONTAINING THE SENECA FORK WILLS CREEK. THE EXISTING BRIDGE IS A ONE LANE STRUCTURE CARRYING TR 2001 OVER THE CREEK, WITH THE ROADWAY ENDING SOON AFTER THE STREAM CROSSING AT A HOMESTEAD. THIS SINGLE SPAN STRUCTURE IS SUPPORTED BY TWO APPROXIMATELY 24-INCH DEEP BY 9-INCH WIDE, STEEL SECTIONS SPANNING BETWEEN THE TWO BRIDGE ABUTMENTS. THE BRIDGE STRUCTURE APPEARS TO HAVE BEEN PREVIOUSLY SUPPORTED ON STACKED STONES. THESE STONE ABUTMENTS ARE STILL IN PLACE BUT, APPEAR TO NO LONGER BE THE PRIMARY SUPPORT FOR THE STRUCTURE. THE EAST ABUTMENT HAS BEEN REINFORCED WITH A 12-INCH DEEP BY 12-INCH WIDE STEEL BEAM SPANNING THE WIDTH OF THE BRIDGE AND SUPPORTED BY THREE 12-INCH DEEP BY 12-INCH WIDE PILES DRIVEN IN FRONT OF THE STACKED STONE. GUARDRAIL LAGGING HAS BEEN PLACED BEHIND THE LOWER HALF OF THE PILES. AT THE WEST ABUTMENT, THE BRIDGE STRUCTURE EXTENDS BEYOND THE STACKED STONE ABUTMENT AND IS SUPPORTED ON A 12-INCH DEEP BY 12-INCH WIDE STEEL GRADE BEAM PLACED UPON THE GROUND IMMEDIATELY BEHIND THE ABUTMENT.

THE EXISTING BRIDGE DECK CONSISTS OF WOOD PLANKS, PLACED PERPENDICULAR TO THE ALIGNMENT, SUPPORTED ON FIVE EVENLY SPACED 3.5-INCH WIDE BY 7-INCH DEEP STEEL SECTIONS POSITIONED PARALLEL TO THE ALIGNMENT. SEVERAL STEEL PLATES HAVE ALSO BEEN PLACED OVER WOOD PLANKS NEAR THE CENTER OF THE STRUCTURE. THE BRIDGE DECK IS SUPPORTED BY 7 APPROXIMATELY 8-INCH WIDE AND 8-INCH DEEP STEEL SECTIONS SPANNING PERPENDICULAR TO THE ALIGNMENT AND CONNECTED TO THE TWO 24-INCH DEEP BY 9-INCH WIDE STEEL SECTIONS ON EITHER SIDE OF THE BRIDGE.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH.	CLASSIFIED VISUAL
GRAVEL/STONE FRAGMENTS W/ SAND, SILT & CLAY	A-2-6	1	1
FINE SAND	A-3	0	1
COARSE & FINE SAND	A-3a	3	0
SANDY SILT	A-4a	5	0
SILT	A-4b	2	0
SILT & CLAY	A-6a	4	6
CLAY	A-7-6	3	6
	TOTAL	18	14

SANDSTONE

SHALE

CLAYSTONE

BORING LOCATION - PLAN VIEW.

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

WC INDICATES WATER CONTENT IN PERCENT.

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

X/Y/Z 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.

X/Y/D" NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT):
X= NUMBER OF BLOWS 6 INCHES (UNCORRECTED).
Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D"OF PENETRATION AT REFUSAL.

W— INDICATES FREE 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.

ST INDICATES A SHELBY TUBE SAMPLE.

NP INDICATES A NON-PLASTIC SAMPLE.

TR INDICATES TOP OF ROCK.

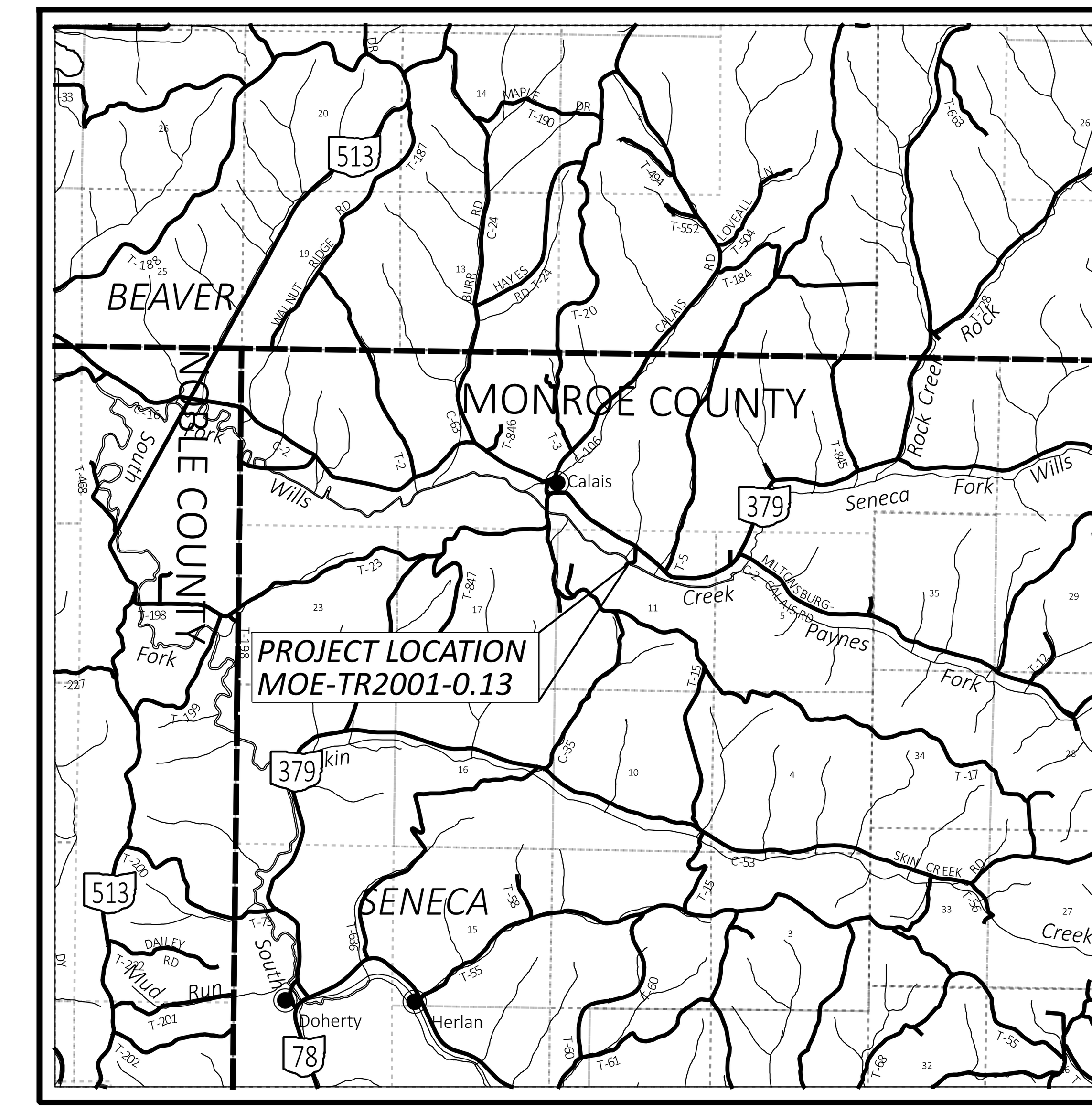
NQ2 INDICATES A ROCK CORE SAMPLE.

Qu INDICATES POINT LOAD STRENGTH INDEX OF ROCK TEST, ASTM D5731.
INDICATES SOIL UNCONFINED COMPRESSION TEST, ASTM D2166, RESULTS.

SUBSURFACE EXPLORATION

THE GEOTECHNICAL EXPLORATION PROGRAM CONSISTED OF TWO TEST BORINGS LOCATED ALONG THE GRASSY SHOULDER TO THE NORTH OF TR 2001 TO NOT BLOCK TRAFFIC ALONG THE SINGLE LANE ROAD AND BRIDGE DURING THE DRILLING ACTIVITIES. THE TEST BORINGS (DESIGNATED AS BORINGS B-001-0-22 THROUGH B-002-0-22) WERE DRILLED ON OCTOBER 20, 2022 NEAR THE EAST AND WEST ABUTMENTS, RESPECTIVELY, TO CHARACTERIZE THE SUBSURFACE PROFILE ALONG THE PROJECT ALIGNMENT. THE BORINGS WERE DRILLED BY CENTRAL STAR DRILLING UNDER THE GENERAL SUPERVISION OF AN HDR GEOTECHNICAL ENGINEER WITH A DIEDRICH D-50 TRACK-MOUNTED DRILL RIG. THIS RIG WAS CALIBRATED ON MARCH 7, 2022 WITH A HAMMER ENERGY RATIO OF 86.8%. THE BORINGS WERE DRILLED IN GENERAL ACCORDANCE WITH THE SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (ODOT REVISED JULY 2022) UTILIZING 2.25-INCH HOLLOW STEM AUGERS TO ADVANCE THE BORINGS. SAMPLING OF THE SOILS WAS PERFORMED AT 2.5-FOOT INTERVALS TO THE DEPTHS EXPLORED, EXCEPT FOR 6 FEET OF CONTINUOUS SAMPLING PERFORMED AT THE APPROXIMATE STREAM BED ELEVATION. SAMPLING WAS ACCOMPLISHED IN ACCORDANCE WITH THE “STANDARD TEST METHOD FOR PENETRATION TEST AND SPLIT-BARREL SAMPLING OF SOILS”, ASTM D 1586. TWO UNDISTURBED SOIL SAMPLES WERE COLLECTED IN BORING B-001-0-22 AND ONE WAS COLLECTED IN BORING B-001-0-22 IN ACCORDANCE WITH THE STANDARD PRACTICE FOR THIN-WALLED TUBE SAMPLING OF SOILS FOR GEOTECHNICAL PURPOSES, ASTM D 1587.

SAMPLING OF THE UNDERLYING BEDROCK WAS PERFORMED AT EACH BORING IN ACCORDANCE WITH THE “STANDARD PRACTICE FOR ROCK CORE DRILLING AND SAMPLING OF ROCK FOR SITE INVESTIGATION” (ASTM D 2113) USING AN NQ2-SIZE DOUBLE-TUBE SWIVEL BARREL WITH A DIAMOND BIT.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

PARTICLE SIZE DEFINITIONS

BOULDERS	12"	COBBLES	3"	GRAVEL	2.0 mm (No. 10 SIEVE)	COARSE SAND	0.42 mm (No. 40 SIEVE)	FINE SAND	0.074 mm (No. 200 SIEVE)	SILT	0.005 mm	CLAY

SCOUR ANALYSIS PARAMETERS					
BORING NO.	SAMPLE NO.	ELEVATION (ft)	D50 VALUES (mm)	τc (psf)	EROSION CATEGORY (EC)
B-001-0-22	SS-5	854.8 - 853.3	0.0304	0.001	0.379
	SS-6	853.3 -850.8	0.0808	0.002	0.889
	SS-7	851.8 - 850.3	0.2168	0.003	2.211
	SS-8	850.3 - 848.8	0.2442	0.001	2.211
B-002-0-22	SS-5	855.2 - 853.7	0.2416	0.000	2.361
	SS-6	853.7 - 852.2	0.0849	0.006	2.211
	SS-7	852.2 - 850.7	0.0895	0.002	0.942
	SS-8	850.7 - 849.2	2.1089	0.044	2.589

BEDROCK TEST SUMMARY				
BORING NO.	SAMPLE	SAMPLE ELEVATION	DEPTH	Qu (PSI)
B-001-0-22	NQ2-1	805.1 - 804.4	56.2' - 56.9'	220
B-002-0-22	NQ2-2	810.5 - 809.8	51.1' - 51.8'	469

RECON. - DCM 10/20/2022 - 10/21/2022
DRILLING - CENTRAL STAR 10/20/2022
DRAWN - CLW 11/16/2022 - 12/02/2022
REVIEWED - DMV 12/02/2022

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK

DESIGN AGENCY
HDR

DESIGNER
DCM

REVIEWER
DMV 12/02/22

PROJECT ID
117522

SHEET 1 TOTAL 11

MOE-TR2001-0.13

MODEL: Untitled Sheet PAPERSIZE: 34x22 (in.) DATE: 12/4/2022 TIME: 8:30:45 PM USER: CWAHLBRI

EXPLORATION FINDINGS

THE GENERALIZED SOIL PROFILE AS ENCOUNTERED IN THE BORINGS CONSISTS OF SILT AND CLAY DEPOSITS WITH INTERBEDDED GRANULAR LAYERS OVERLYING COHESIVE RESIDUAL SOILS. THE UNDERLYING BEDROCK CONSISTS OF INTERBEDDED SHALE, SANDSTONE, AND CLAYSTONE.

THE SILT AND CLAY DEPOSITS GENERALLY CONSIST OF AN OVERLYING ROUGHLY 6-FOOT THICK LAYER OF MEDIUM STIFF TO STIFF SILT AND CLAY (A-6A) UNDERLAIN BY INTERBEDDED VERY SOFT CLAY (A-7-6), VERY SOFT SILT (A-4B), VERY SOFT TO SOFT SANDY SILT (A-4A), LOOSE FINE SAND (A-3), LOOSE COARSE AND FINE SAND (A-3A), AND LOOSE TO MEDIUM DENSE GRAVEL AND STONE FRAGMENTS WITH SAND, SILT, AND CLAY (A-2-6) TO ABOUT 21.5 FEET BELOW THE EXISTING GROUND SURFACE (BGS) (EL 839.8) IN BORING B-001-0-22 AND 16.5 FEET BGS (EL 845.1) IN BORING B-002-0-22. THE SILT AND CLAY DEPOSITS BECOME MORE COMPETENT BELOW THESE DEPTHS, WITH THE RESPECTIVE BORINGS ENCOUNTERING MEDIUM STIFF TO STIFF CLAY (A-7-6), STIFF TO VERY STIFF SILT AND CLAY (A-6A), AND STIFF SILT (A-4B) TO A DEPTH OF 36.5 FEET BGS (EL 824.8) AND 38.5 FEET BGS (EL 823.1).

RESIDUAL SOILS WERE ENCOUNTERED IN EACH OF THE BORINGS BELOW THESE DEPTHS. BORING B-001-0-22 ENCOUNTERED A 12-FOOT LAYER OF VERY STIFF CLAY (A-7-6) WITH NOTED STONE FRAGMENTS FROM A DEPTH OF 36.5 FEET BGS (EL 824.8) TO THE TOP OF ROCK AT 48.5 BGS (EL 812.8). AT BORING B-002-0-22, HARD SANDY SILT (A-4A) EXHIBITING RELIC ROCK STRUCTURE WAS ENCOUNTERED AT A DEPTH OF 38.5 FEET BGS (EL 823.1) TO THE TOP OF ROCK AT 43 FEET BGS (EL 818.6).

THE UNDERLYING BEDROCK AS ENCOUNTERED IN BORINGS B-001-0-22 AND B-002-0-22 CONSISTED OF INTERBEDDED SHALE, SANDSTONE, AND CLAYSTONE. SHALE WAS ENCOUNTERED FROM A DEPTH OF 48.5 TO 49.0 FEET (EL. 812.8 TO EL. 812.3) AND 53.0 TO 55.5 FEET (EL. 808.3 TO EL. 805.8) IN BORING B-001-0-22 AND FROM 43 TO 46.5 FEET (EL. 818.6 TO EL. 815.1) IN BORING B-002-0-22. THE SHALE WAS CHARACTERIZED AS SLIGHTLY TO MODERATELY WEATHERED AND WEAK TO VERY WEAK IN STRENGTH. THE SHALE WHICH WAS CORED HAD A STRATUM ROCK QUALITY (SRQD) OF 60%. CLAYSTONE WAS ENCOUNTERED UNDERLYING THE SHALE IN BORING B-001-0-22 AT A DEPTH OF 55.5 FEET TO TERMINATION AT 59.0 FEET BGS (EL. 805.8 TO EL. 802.3). THE CLAYSTONE WAS CHARACTERIZED AS SLIGHTLY TO MODERATELY WEATHERED AND VERY WEAK WITH A SRQD OF 77%. SANDSTONE WAS ENCOUNTERED FROM 49 FEET (EL 812.3) TO 53 FEET (EL 808.3) IN BORING B-001-0-22, AND FROM A DEPTH OF 46.5 FEET (EL 815.1) TO BORING TERMINATION AT 54 FEET (EL. 807.6) IN BORING B-002-0-22. THE SANDSTONE WAS CHARACTERIZED AS SLIGHTLY TO MODERATELY WEATHERED AND WEAK TO SLIGHTLY STRONG. THE SANDSTONE AS ENCOUNTERED IN BORING B-001-0-22 HAD A SRQD OF 0%, AND A B-002-0-22, THE SRQD WAS 56%.

GROUNDWATER WAS ENCOUNTERED IN BOTH BORINGS DURING DRILLING. AS WATER WAS INTRODUCED DURING DRILLING ACTIVITIES TO PERFORM ROCK CORING, WATER LEVELS UPON COMPLETION WERE NOT OBTAINED. FURTHERMORE, THE BORINGS WERE SEALED IMMEDIATELY UPON COMPLETION AS THE BORINGS WERE PERFORMED IN CLOSE PROXIMITY TO THE TRAVELED LANE, AND DELAYED WATER READINGS WERE NOT OBTAINED.

SPECIFICATIONS

THE GEOTECHNICAL EXPLORATION WAS PERFORMED IN GENERAL ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING "SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS", DATED JULY 2022.

AVAILABLE INFORMATION

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

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK

DESIGN AGENCY

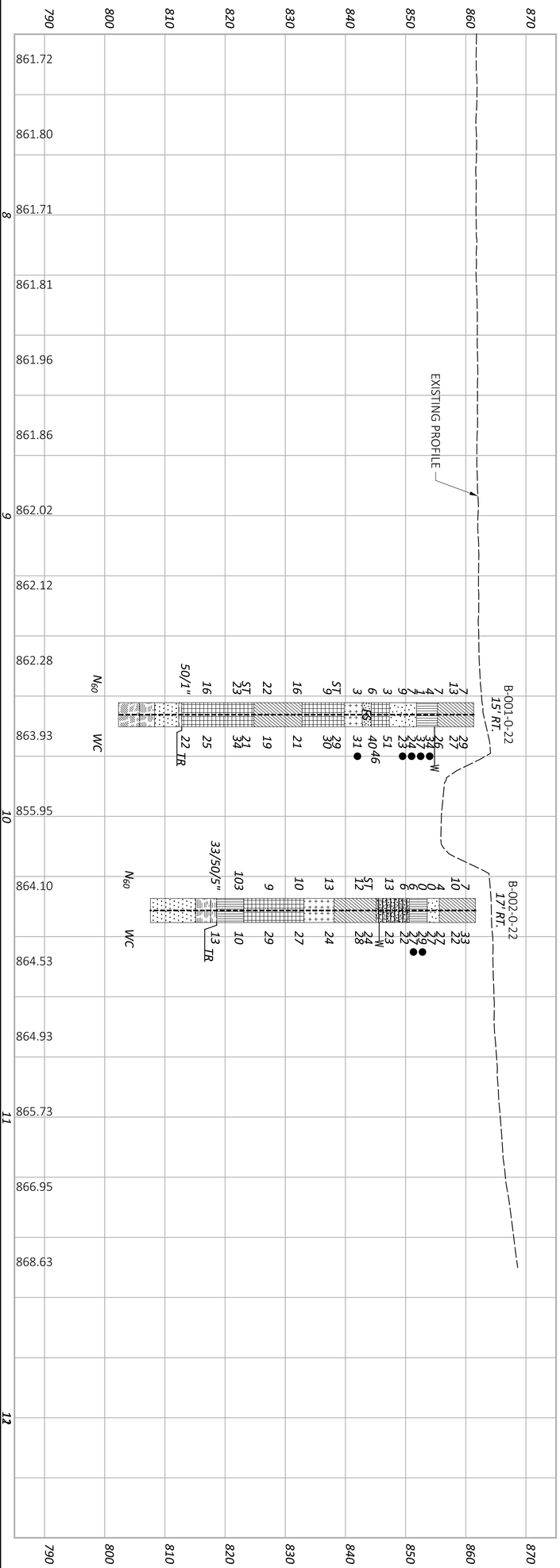
DESIGNER
DCM

REVIEWER
DMV 12/02/22

PROJECT ID
117522

SHEET 2 | TOTAL 11

MODEL: CLX_RW_2001 - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 12/4/2022 TIME: 8:31:13 PM USER: CWAHLBRI



GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
STA. 7+50.00 TO STA. 11+50.00

DESIGNER DCM
REVIEWER DMV 12/02/22
PROJECT ID 117522
SHEET 3 TOTAL 11
DESIGN AGENCY HDR

HORIZONTAL SCALE IN FEET
0 20
10 40

PROJECT: MOE-TR2001-00.13 | DRILLING FIRM / OPERATOR: CENTRAL STAR / TS | DRILL RIG: DIEDRICH D-50 TRACK | STATION / OFFSET: 9+66, 15' RT. | EXPLORATION ID B-001-0-22

TYPE: BRIDGE | SAMPLING FIRM / LOGGER: HDR / DCM | HAMMER: AUTOMATIC HAMMER | ALIGNMENT: TR 2001

PID: 117522 SFN: 5630290 | DRILLING METHOD: 3.25" HSA / NQ2 | CALIBRATION DATE: 3/7/22 | ELEVATION: 861.3 (MSL) EOB: 59.0 ft. | PAGE 1 OF 2

START: 10/20/22 END: 10/20/22 | SAMPLING METHOD: SPT / ST / NQ2 | ENERGY RATIO (%): 86.8 | LAT / LONG: 39.849175, -81.267229

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)	HOLE SEALED
MEDIUM STIFF TO STIFF, BROWN, **SILT AND CLAY**, TRACE SAND, TRACE GRAVEL, MOIST	861.3		2 2 3	7	44	SS-1	1.00	-	-	-	-	-	-	-	-	29	A-6a (V)	
			3 4 5	13	100	SS-2	2.00	1	1	4	62	32	36	25	11	27	A-6a (8)	
	855.3		2 2 3	7	78	SS-3	1.00	-	-	-	-	-	-	-	-	26	A-6a (V)	
VERY SOFT TO SOFT, GRAY, **SANDY SILT**, LITTLE TO SOME CLAY, TRACE GRAVEL, WET		W 854.8	1 2 1	4	100	SS-4	-	0	1	43	35	21	21	15	6	34	A-4a (4)	
	851.8		WOH WOH 1	1	33	SS-5	-	4	13	35	31	17	24	19	5	37	A-4a (3)	
LOOSE, GRAY, **COARSE AND FINE SAND**, LITTLE SILT, LITTLE TO TRACE CLAY, LITTLE GRAVEL, WET			2 3 2	7	78	SS-6	-	16	19	39	15	11	22	18	4	24	A-3a (0)	
			2 3 3	9	89	SS-7	-	20	16	45	11	8	16	16	NP	23	A-3a (0)	
	847.3																	
VERY SOFT, GRAY, **CLAY**, SOME SAND, WET			1 1 1	3	78	SS-8	0.25	-	-	-	-	-	-	-	-	51	A-7-6 (V)	
	844.3		2 3 1	6	78	SS-9A	0.25	-	-	-	-	-	-	-	-	46	A-7-6 (V)	
LOOSE, GRAY, **FINE SAND**, WET						SS-9B	-	-	-	-	-	-	-	-	-	40	A-3 (V)	
	842.8																	
VERY SOFT, GRAY, **SILT**, "AND" CLAY, TRACE SAND, WET			1 1 1	3	100	SS-10	-	0	0	4	57	39	29	20	9	31	A-4b (8)	
	839.8																	
MEDIUM STIFF TO STIFF, BROWN, **CLAY**, "AND" SILT, TRACE SAND, TRACE GRAVEL, MOIST @ 22.5' - 23.0' : qu = 2,130 psf					75	ST-11	1.00	5	3	7	49	36	41	20	21	29	A-7-6 (13)	
			2 2 4	9	67	SS-12	0.50	-	-	-	-	-	-	-	-	30	A-7-6 (V)	
	832.8																	
VERY STIFF, GRAY, **SILT AND CLAY**, SOME GRAVEL, LITTLE SAND, DAMP @ 28.5' - 30.0' : Drove 3-inch SPT Sampler to recover addtional sample for SS-13			5 4 7	16	22	SS-13	1.00	-	-	-	-	-	-	-	-	21	A-6a (V)	
@ 33.5' - 35.0 : Trace Brown and Red-Brown			4 6 9	22	78	SS-14	2.50	34	8	6	23	29	37	22	15	19	A-6a (5)	
	824.8																	
VERY STIFF, RED-BROWN AND GRAY, **CLAY**, "AND" SILT, TRACE SAND, TRACE STONE FRAGMENTS, DAMP @ 38.0' - 38.5' : qu = 2,320 psf					58	ST-15	1.50	3	1	3	59	34	41	26	15	21	A-7-6 (10)	
			5 7 9	23	100	SS-16	2.00	-	-	-	-	-	-	-	-	34	A-7-6 (V)	
@ 44.5' - 45.0' : Red-brown, fine sand, some clay			3 5 6	16	100	SS-17	-	-	-	-	-	-	-	-	-	25	A-7-6 (V)	
	812.8																	
SHALE, GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK.	812.3	TR	50/1"	-	100	SS-18	-	-	-	-	-	-	-	-	-	22	Rock (V)	
SANDSTONE, GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FINE TO MEDIUM GRAINED, VERY THIN BEDDED, PYRITIC, BEDDING DISCONTINUITIES, FRACTURE TO MODERATELY FRACTURED, NARROW TO OPEN APERTURE, SLICKENSIDED TO SLIGHTLY ROUGH, LAMINATED, POOR TO FAIR SURFACE CONDITION; RQD 0%, REC 100%. @ 49.0' - 53.0' : Interbedded shale partings 1/4 inch to 1 inch in thickness	808.3		38		100	NQ2-1											CORE	
SHALE, GRAY, SLIGHTLY TO MODERATELY WEATHERED, VERY WEAK, THIN TO MEDIUM BEDDED, BEDDING AND JOINT DISCONTINUITIES, FRACTURE TO MODERATELY FRACTURED, SLICKENSIDED, LAMINATED, FAIR TO POOR SURFACE CONDITIONS; RQD 60%, REC 100%. @ 53.7' - 53.9' : Interbedded Sandstone @ 54.6' - 54.8' : Interbedded Sandstone	805.8		58		100	NQ2-2											CORE	
CLAYSTONE, GRAY, SLIGHTLY TO MODERATELY WEATHERED, VERY WEAK, MEDIUM BEDDED, JOINT	802.3	EOB																

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/30/22 17:09 - C:\PWWORKING\EAST01\D2962291\202221020_MOE-TR2001_BORINGLOGS.GPJ

SHEET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
4	11	117522	DMV 12/02/22	DCM	HDR

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
BORING LOG B-001-0-22

PID: 117522	SFN:	PROJECT: MOE-TR2001-00.13	STATION / OFFSET: 9+66, 15' RT.	START: 10/20/22	END: 10/20/22	PG 2 OF 2	B-001-0-22

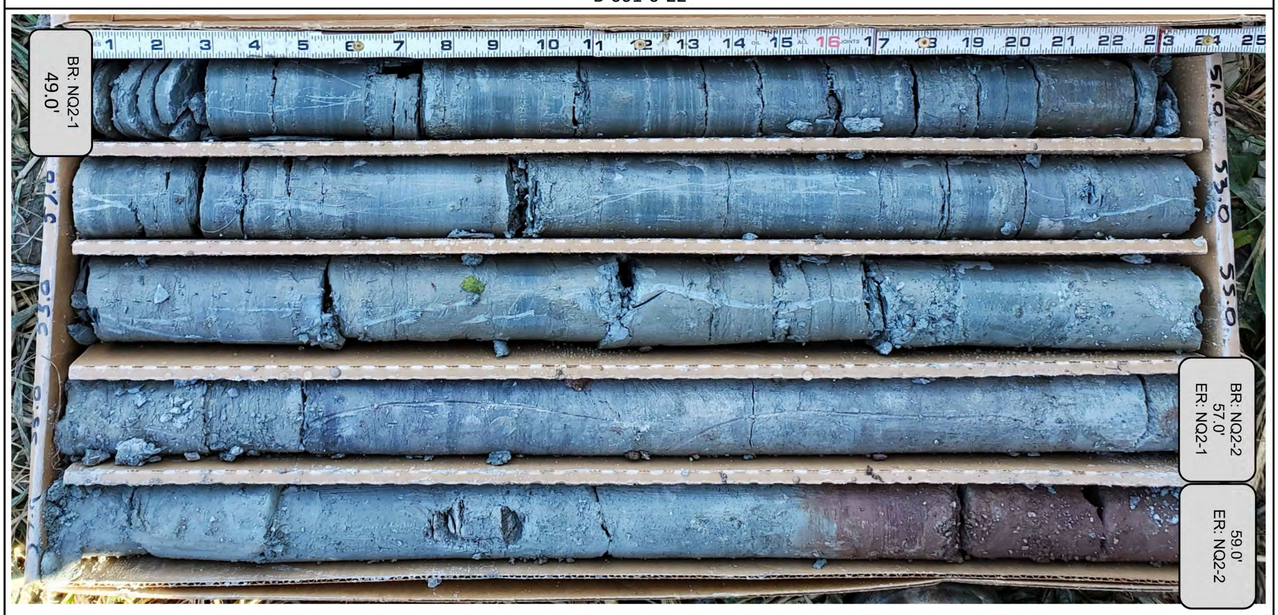
MATERIAL DESCRIPTION AND NOTES	ELEV. 801.3	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
DISCONTINUITIES, SLIGHTLY FRACTURED, TIGHT APERTURE, SLICKENSIDED, LAMINATED, FAIR TO POOR SURFACE CONDITION; RQD 77%, REC 100%. @ 56.2' - 56.9' : Qu = 220 psi (Point Load Test)																		

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 25 LB. BENTONITE POWDER; 94 LB. CEMENT; 50 GAL. WATER

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/30/22 17:09 - C:\PWWORKING\EAST01\D2962291\202221020_MOE-TR2001_BORINGLOGS.GPJ

B-001-0-22



Run #	Depth (ft)		Recovery		RQD	
NQ2-1	49	57	96 in. / 96 in.	100%	36 in. / 96 in.	38%
NQ2-2	57	59	24 in. / 24 in.	100%	14 in. / 24 in.	58%

MOE-TR2001-0.13, PID 117522

SHEET 6 | TOTAL 11
PROJECT ID 117522
REVIEWER DMV 12/02/22
DESIGNER DCM
DESIGN AGENCY

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
ROCK CORE PHOTO

MODEL: Untitled Sheet PAPERSIZE: 34x22 (in.) DATE: 12/4/2022 TIME: 8:33:11 PM USER: CWAHLBRI

PROJECT: MOE-TR2001-00.13
TYPE: BRIDGE
PID: 117522 SFN: 5630290
START: 10/20/22 END: 10/20/22

DRILLING FIRM / OPERATOR: CENTRAL STAR / TS
SAMPLING FIRM / LOGGER: HDR / DCM
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / ST / NQ2

DRILL RIG: DIEDRICH D-50 TRACK
HAMMER: AUTOMATIC HAMMER
CALIBRATION DATE: 3/7/22
ENERGY RATIO (%): 86.8

STATION / OFFSET: 10+31, 17' RT.
ALIGNMENT: TR 2001
ELEVATION: 861.6 (MSL) EOB: 54.0 ft.
LAT / LONG: 39.849173, -81.267472

EXPLORATION ID: B-002-0-22
PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 861.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
MEDIUM STIFF TO STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL, DAMP		1	2 2 3	7	67	SS-1	1.50	-	-	-	-	-	-	-	-	33	A-6a (V)	
		2																
		3	3 3 4	10	67	SS-2	2.00	15	10	7	45	23	37	26	11	22	A-6a (7)	
		4																
	855.6	5	2 2 1	4	67	SS-3	0.25	-	-	-	-	-	-	-	-	27	A-6a (V)	
VERY LOOSE, BROWN, **COARSE AND FINE SAND**, TRACE SILT AND CLAY, WET		6																
	853.6	7	WOH WOH WOH	0	33	SS-4	-	0	29	65	-	6 -	20	15	5	27	A-3a (0)	
VERY SOFT TO SOFT, BROWN, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL, WET		8																
@ 9.0' - 9.2' : Gray		9	WOH WOH WOH	0	78	SS-5	-	1	4	48	27	20	21	17	4	29	A-4a (2)	
	850.6	10	2 1 3	6	89	SS-6	-	1	4	50	25	20	22	14	8	27	A-4a (2)	
LOOSE TO MEDIUM DENSE, BROWN TRACE GRAY AND RED-BROWN, **GRAVEL AND STONE FRAGMENTS WITH SAND, SILT, AND CLAY**, WET		11																
		12	2 2 2	6	67	SS-7	-	50	13	6	13	18	38	25	13	22	A-2-6 (0)	
		13																
		14	4 4 5	13	50	SS-8	-	-	-	-	-	-	-	-	-	23	A-2-6 (V)	
	845.1	15																
		16	W 845.6															
STIFF, GRAY TO BLUE-GRAY, **SILT AND CLAY**, SOME SAND, LITTLE STONE FRAGMENTS, DAMP		17			100	ST-9	1.00	20	10	12	29	29	40	25	15	24	A-6a (7)	
@ 17.0' - 17.5' : qu = 2,080 psf		18																
		19	3 4 4	12	100	SS-10	1.50	-	-	-	-	-	-	-	-	28	A-6a (V)	
		20																
		21																
		22																
	838.1	23																
STIFF, GRAY TO BLUE-GRAY, **SILT**, SOME CLAY, LITTLE SAND, DAMP		24	2 4 5	13	100	SS-11	1.00	0	4	9	55	32	31	24	7	24	A-4b (8)	
		25																
		26																
		27																
	833.1	28																
STIFF, GRAY TO BLUE-GRAY, **CLAY**, SOME SILT, LITTLE SAND, LITTLE GRAVEL, DAMP		29	2 3 4	10	100	SS-12	1.00	12	5	4	25	54	49	28	21	27	A-7-6 (14)	
		30																
		31																
		32																
		33																
		34	2 3 3	9	100	SS-13	1.00	-	-	-	-	-	-	-	-	29	A-7-6 (V)	
		35																
		36																
		37																
	823.1	38																
HARD, GRAY, **SANDY SILT**, SOME STONE FRAGMENTS, LITTLE CLAY, DAMP (Relic Rock Structure)		39	4 24 47	103	89	SS-14	1.00	30	15	8	34	13	27	18	9	10	A-4a (2)	
		40																
		41																
		42																
	818.6	43	TR															
SHALE, GRAY, MODERATELY WEATHERED, VERY WEAK.	817.6	44	33 50/5"	-	100	SS-15	-	-	-	-	-	-	-	-	-	13	Rock (V)	
SHALE, GRAY, MODERATELY WEATHERED, VERY WEAK, THIN BEDDED, FRIABLE, BEDDING DISCONTINUITIES, FRACTURED, NARROW TO TIGHT APERTURE, SLICKENSIDED, LAMINATED, POOR TO FAIR SURFACE CONDITION; RQD 60%, REC 100%.		45																
@ 45.5' - 46.6' : Highly Fractured		46	38		100	NQ2-1											CORE	
@ 46.0' - 47.5' : Vertically split approximately 50% shale, 50% sandstone	815.1	47																
SANDSTONE, GRAY, SLIGHTLY WEATHERED, WEAK TO SLIGHTLY STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, JOINT AND BEDDING DISCONTINUITIES, MODERATELY FRACTURED, TIGHT TO NARROW APERTURE, SLIGHTLY ROUGH, VERY BLOCKY, FAIR TO GOOD SURFACE CONDITION; RQD 56%, REC 100%.		48																
@ 47.5' - 48.8' : Highly Fractured		49																
@ 51.1' - 51.8' : Qu = 469 psi (Point Load Test)		50																
		51	69		100	NQ2-2											CORE	
		52																
		53																
	807.6	54	EOB															

NOTES: SAMPLE SS-4 (6.5' - 8.0') : INSUFFICIENT AMOUNT OF FINES FOR HYDROMETER TEST

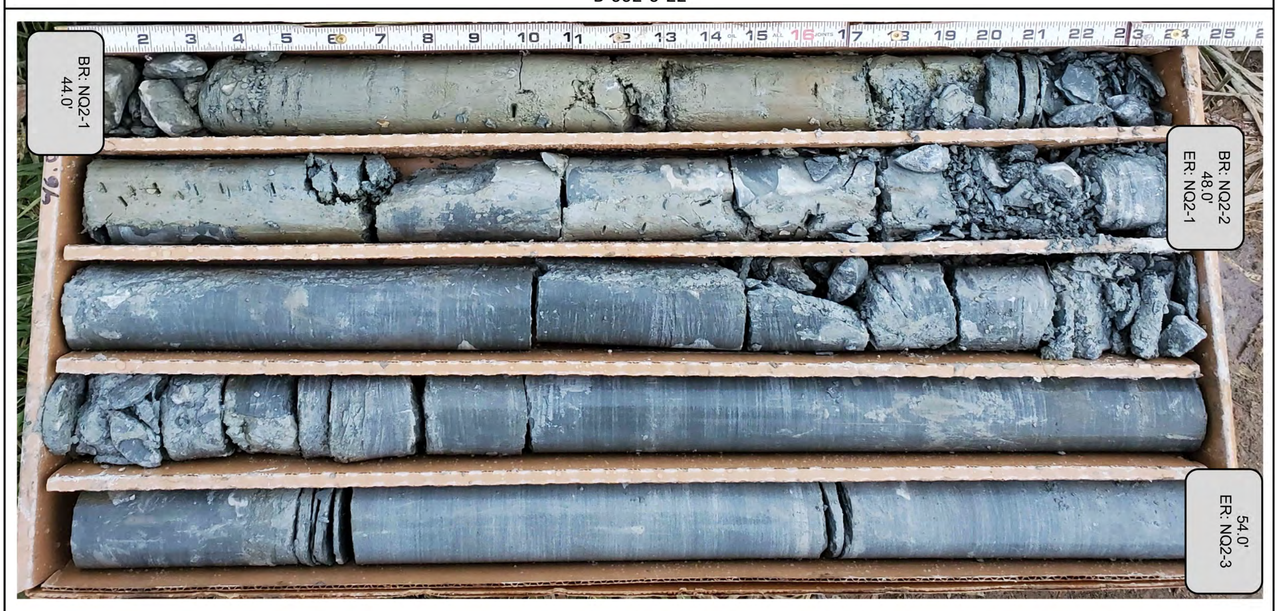
ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 25 LB. BENTONITE POWDER; 94 LB. CEMENT; 50 GAL. WATER

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 11/30/22 17:09 - C:\PWWORKING\EAST01\D296229\i202221020_MOE-TR2001_BORINGLOGS.GPJ

SHEET 7 TOTAL 11 | PROJECT ID 117522 | REVIEWER DMV 12/02/22 | DESIGNER DCM | DESIGN AGENCY HDR

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
BORING LOG B-002-0-22

B-002-0-22



Run #	Depth (ft)		Recovery		RQD	
NQ2-1	44	48	48 in. / 48 in.	100%	18 in. / 48 in.	38%
NQ2-2	48	54	72 in. / 72 in.	100%	50 in. / 72 in.	69%

MOE-TR2001-0.13, PID 117522

UNCONFINED COMPRESSION TEST

AASHTO: T-208

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-11
Project County	: Monroe	Sample Loc.	: Boring No. B-001-0-22
Project State	: Ohio	Sample Depth	: 22.5' to 23.0'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-7-6(13)		
Wet Density	: 129.7 pcf	Initial Height	: 5.77 in
Dry Density	: 104.4 pcf	Initial Diameter	: 2.85 in
Moisture	: 24.2 %	Proving Ring	: #22734

RESULTS:

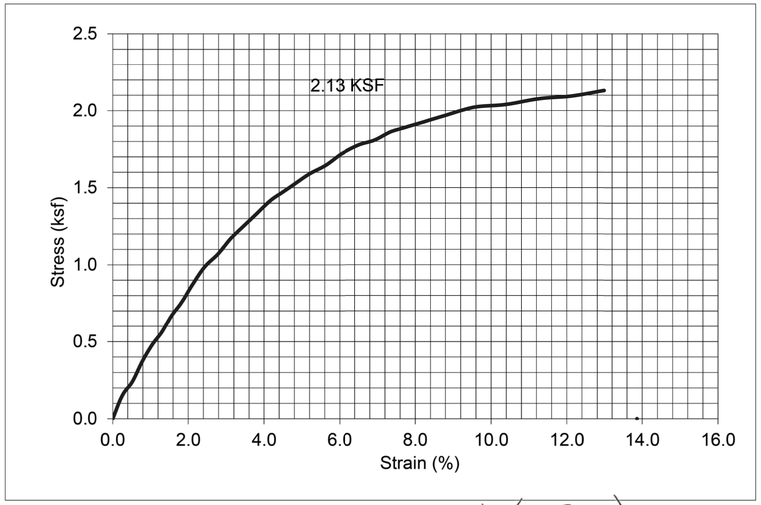
#	Axial Load lbs	Corrected Area sf	Unit Strain %	Stress Ksf
1	0.0	0.04	0.0	0.00
2	6.8	0.04	0.3	0.15
3	10.7	0.04	0.5	0.24
4	16.5	0.04	0.8	0.37
5	21.3	0.04	1.0	0.48
6	25.2	0.04	1.3	0.56
7	30.1	0.04	1.6	0.67
8	34.0	0.05	1.8	0.75
9	38.8	0.05	2.1	0.86
10	44.6	0.05	2.4	0.99
11	48.5	0.05	2.8	1.07
12	53.4	0.05	3.1	1.17
13	57.4	0.05	3.5	1.25
14	61.3	0.05	3.8	1.33
15	65.2	0.05	4.2	1.41
16	68.2	0.05	4.5	1.47
17	71.1	0.05	4.9	1.53
18	74.1	0.05	5.2	1.59
19	77.0	0.05	5.6	1.65
20	81.0	0.05	6.1	1.72
21	83.9	0.05	6.5	1.78
22	85.9	0.05	6.9	1.81
23	88.8	0.05	7.4	1.86
24	90.8	0.05	7.8	1.89
25	92.8	0.05	8.2	1.93
26	94.7	0.05	8.7	1.96
27	98.7	0.05	9.5	2.02
28	100.6	0.05	10.4	2.04
29	103.4	0.05	11.3	2.08
30	105.3	0.05	12.1	2.09
31	108.2	0.05	13.0	2.13
32	109.1	0.05	13.9	0.00

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

UNCONFINED COMPRESSION TEST

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-11
Project County	: Monroe	Sample Loc.	: Boring No. B-001-0-22
Project State	: Ohio	Sample Depth	: 22.5' to 23.0'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-7-6(13)		
Wet Density	: 129.7 pcf	Initial Height	: 5.77 in
Dry Density	: 104.4 pcf	Initial Diameter	: 2.85 in
Moisture	: 24.2 %	Proving Ring	: #22734
Deg. of Sat.	: 100.0 %	SPECIFIC GRAVITY	: 2.660
Comments	: AASHTO: T-208		



APPROVED BY: Kevin E. Walker

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
LABORATORY TEST DATA

DESIGN AGENCY

DESIGNER DCM
REVIEWER DMV 12/02/22
PROJECT ID 117522
SHEET 9 TOTAL 11

CTY-RTE-SECTION

UNCONFINED COMPRESSION TEST

AASHTO: T-208

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-15
Project County	: Monroe	Sample Loc.	: Boring No. B-001-0-22
Project State	: Ohio	Sample Depth	: 38.0' to 38.5'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-7-6(13)		
Wet Density	: 127.7 pcf	Initial Height	: 5.81 in
Dry Density	: 101.5 pcf	Initial Diameter	: 2.84 in
Moisture	: 25.8 %	Proving Ring	: #22734

RESULTS:

#	Axial Load lbs	Corrected Area sf	Unit Strain %	Stress Ksf
1	0.0	0.04	0.0	0.00
2	8.7	0.04	0.3	0.20
3	16.5	0.04	0.5	0.37
4	23.3	0.04	0.8	0.52
5	30.1	0.04	1.0	0.67
6	36.9	0.04	1.3	0.82
7	43.7	0.04	1.5	0.97
8	49.5	0.04	1.8	1.10
9	54.4	0.05	2.1	1.21
10	62.3	0.05	2.4	1.38
11	67.2	0.05	2.8	1.48
12	72.1	0.05	3.1	1.58
13	78.0	0.05	3.4	1.71
14	82.0	0.05	3.8	1.79
15	85.9	0.05	4.1	1.87
16	88.8	0.05	4.5	1.92
17	91.8	0.05	4.8	1.98
18	94.7	0.05	5.2	2.04
19	98.7	0.05	5.6	2.11
20	101.5	0.05	6.0	2.16
21	103.4	0.05	6.5	2.19
22	105.3	0.05	6.9	2.22
23	107.2	0.05	7.3	2.25
24	109.1	0.05	7.7	2.28
25	110.1	0.05	8.2	2.29
26	111.1	0.05	8.6	2.30
27	113.0	0.05	9.5	2.32
28	113.9	0.05	10.3	2.32
29	114.9	0.05	11.2	2.31
30	114.9	0.05	12.1	2.29
31	114.9	0.05	12.9	2.27
32	113.9	0.05	13.8	0.00

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-15
Project County	: Monroe	Sample Loc.	: Boring No. B-001-0-22
Project State	: Ohio	Sample Depth	: 38.0' to 38.5'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-7-6(13)		
Wet Density	: 127.7 pcf	Initial Height	: 5.81 in
Dry Density	: 101.5 pcf	Initial Diameter	: 2.84 in
Moisture	: 25.8 %	Proving Ring	: #22734
Deg. of Sat.	: 100.0 %	SPECIFIC GRAVITY	: 2.750
Comments	: AASHTO: T-208		

APPROVED BY: Kevin E. Walker

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
LABORATORY TEST DATA

DESIGN AGENCY

DESIGNER DCM

REVIEWER DMV 12/02/22

PROJECT ID 117522

SHEET 10 TOTAL 11

MOE-TR2001-0.13

MODEL: Untitled Sheet PAPERSIZE: 34x22 (in.) DATE: 12/4/2022 TIME: 8:35:09 PM USER: CWAHLBRI

UNCONFINED COMPRESSION TEST

AASHTO: T-208

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-9
Project County	: Monroe	Sample Loc.	: Boring No. B-002-0-22
Project State	: Ohio	Sample Depth	: 17.0' to 17.5'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-6(7)		
Wet Density	: 132.6 pcf	Initial Height	: 5.92 in
Dry Density	: 105.8 pcf	Initial Diameter	: 2.83 in
Moisture	: 25.2 %	Proving Ring	: #22734

RESULTS:

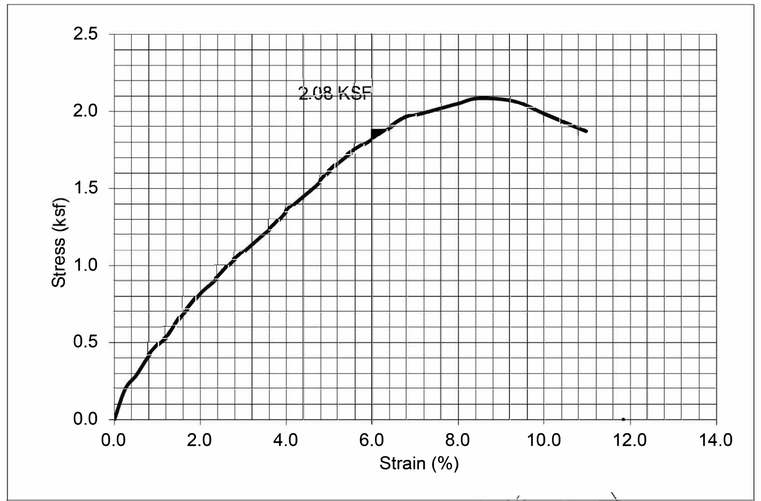
#	Axial Load lbs	Corrected Area sf	Unit Strain %	Stress Ksf
1	0.0	0.04	0.0	0.00
2	8.7	0.04	0.3	0.20
3	12.6	0.04	0.5	0.29
4	17.5	0.04	0.8	0.40
5	21.3	0.04	1.0	0.48
6	24.3	0.04	1.3	0.55
7	29.1	0.04	1.5	0.66
8	33.0	0.04	1.8	0.74
9	36.9	0.04	2.0	0.83
10	40.7	0.04	2.4	0.91
11	45.6	0.04	2.7	1.01
12	49.5	0.05	3.0	1.10
13	53.4	0.05	3.4	1.18
14	57.4	0.05	3.7	1.26
15	62.3	0.05	4.1	1.37
16	66.2	0.05	4.4	1.45
17	70.1	0.05	4.7	1.53
18	75.1	0.05	5.1	1.63
19	80.0	0.05	5.5	1.73
20	83.9	0.05	5.9	1.81
21	87.9	0.05	6.3	1.88
22	91.8	0.05	6.8	1.96
23	93.8	0.05	7.2	1.99
24	95.7	0.05	7.6	2.02
25	97.7	0.05	8.0	2.05
26	99.6	0.05	8.5	2.08
27	99.6	0.05	9.3	2.07
28	95.7	0.05	10.1	1.97
29	91.8	0.05	11.0	1.87
30	83.9	0.05	11.8	0.00

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

UNCONFINED COMPRESSION TEST

Project Name	: MOE-TR2001-0.13		
Project #	: 10356694	Sample #	: ST-9
Project County	: Monroe	Sample Loc.	: Boring No. B-002-0-22
Project State	: Ohio	Sample Depth	: 17.0' to 17.5'
Laboratory #	: 10356694	Date Tested	: 10/31/2022
Submitted By	: HDR	Date Reported	: 11/2/2022
Soil Type	: A-6(7)		
Wet Density	: 132.6 pcf	Initial Height	: 5.92 in
Dry Density	: 105.8 pcf	Initial Diameter	: 2.83 in
Moisture	: 25.2 %	Proving Ring	: #22734
Deg. of Sat.	: 100.0 %	SPECIFIC GRAVITY	: 2.740
Comments	: AASHTO: T-208		



APPROVED BY: Kevin E. Walker

hdrinc.com

4645 Village Square Drive, Suite F, Paducah, KY 42001
T 270.444.9691 F 270.538.1599

GEOTECHNICAL PROFILE - BRIDGE
SFN:5630290 OVER SENECA FORK WILLS CREEK
LABORATORY TEST DATA

DESIGN AGENCY

DESIGNER DCM
REVIEWER DMV 12/02/22
PROJECT ID 117522
SHEET 11 TOTAL 11

MOE-TR2001-0.13
MODEL: Untitled Sheet PAPERSIZE: 34x22 (in.) DATE: 12/4/2022 TIME: 8:35:47 PM USER: CWAHLBRI