

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF REPLACING EXISTING 48-INCH X 72-INCH CONDUITS AND CONCRETE STRUCTURE. THE PROJECT LENGTH IS 40 FEET AND THE TOTAL WORK LENGTH IS 480 FEET.

HISTORIC RECORDS

NO HISTORICAL GEOTECHNICAL RECORDS WERE FOUND WITHIN THE PROJECT LIMITS.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE NON-GLACIATED IRONTON PLATEAU PHYSIOGRAPHIC REGION OF THE LARGER ALLEGHENY PLATEAUS SECTION. THIS AREA IS CHARACTERIZED BY MODERATELY HIGH RELIEF WITH THIN RESIDUAL SOILS ALONG THE RIDGE TOPS AND HILLSIDES WITH THICKER COLLUVIAL SOILS LOCATED AT THE BASE OF THE HILLS. LACUSTRINE DEPOSITS WITH OUTWASH SOILS ARE PRESENT ALONG MAJOR STREAM VALLEYS. BASED ON THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) OHIO GEOLOGY INTERACTIVE MAP, THE PROJECT IS LOCATED WITHIN A LARGE COLLUVIUM DEPOSIT. THE OVERBURDEN SOILS ARE UNDERLAIN BY PENNSYLVANIAN-AGED SHALE, SILTSTONE, SANDSTONE, CONGLOMERATE, AND SUBORDINATE AMOUNTS OF LIMESTONE, CLAY, FLINT, AND COAL OF ALLEGHENY AND POTTSVILLE GROUPS, UNDIVIDED. THIS AREA IS KNOWN FOR HAVING RAPID HORIZONTAL AND VERTICAL CHANGES OF ROCK TYPES.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNEL FROM THE OFFICE OF GEOTECHNICAL ENGINEERING ON APRIL 15, 2025. THE ROADWAY WAS NOTED AS SLOPING TO THE WEST WITH THE EXISTING PAVEMENT NOTED AS BEING IN VERY GOOD CONDITION. THE EXISTING CORRUGATED METAL PIPE ARCH IS IN POOR CONDITION DUE TO AGE. RUSTING WAS NOTED THROUGHOUT THE STRUCTURE WITH BLOCKAGE AT THE INLET AND SEPARATION OF JOINTS AT THE OUTLET ALLOWING WATER TO ERODE THE EMBANKMENT. THE STREAM CHANNEL WAS WELL VEGETATED. THE ADJACENT LAND USAGE WAS NOTED AS BEING PRIMARILY WOODED TO THE SOUTH ALONG THE STREAM, RURAL RESIDENTIAL LOTS TO THE NORTHEAST AND OPEN PASTURE TO THE NORTHWEST.

SUBSURFACE EXPLORATION

TWO (2) BORINGS, B-002-0-25 AND B-003-0-25, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION ON APRIL 28 AND 29, 2025. THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED CME 75 ROTARY DRILL RIG, UTILIZING 3.25-INCH I.D. HOLLOW STEM AUGERS (HSA) TO ADVANCE THE BORINGS THROUGH THE OVERBURDEN SOILS. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 2.5-FOOT INTERVALS. UNDISTURBED SOIL SAMPLES WERE COLLECTED IN EACH BORING IN ACCORDANCE WITH AASHTO T207. THE HAMMER SYSTEM UTILIZED WAS CALIBRATED ON MAY 23, 2024, WITH AN AVERAGE DRILL ROD ENERGY RATIO (ER) OF 89%. BOTH BORINGS WERE ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

ADDITIONALLY, ONE (1) MANUAL WILDCAT DYNAMIC CONE PENETRATION (WDCP) SOUNDING, D-001-0-25, WAS COMPLETED ON APRIL 28, 2025, UTILIZING A TRIGGS TECHNOLOGIES WILDCAT DCP UNIT.

EXPLORATION FINDINGS

BOTH BORINGS WERE COMPLETED WITHIN THE PAVED ROADWAY ENCOUNTERING BETWEEN 13 AND 15-INCHES OF PAVEMENT UNDERLAIN BY 3 TO 5-INCHES OF AGGREGATE BASE. BENEATH THE SURFACE MATERIALS, B-002-0-25 ENCOUNTERED SILT AND CLAY (A-6a) TO ELEVATION (EL.) 709.6 FEET (FT) UNDERLAIN BY PREDOMINATELY SANDY SILT (A-4a) EXTENDING TO TOP OF ROCK. SILTY CLAY (A-6b) WAS ENCOUNTERED BETWEEN THIS LAYER (FROM EL. 707.1 FT TO EL. 705.1 FT). THE COHESIVE SOILS IN B-002-0-25 RANGED FROM STIFF TO VERY STIFF IN CONSISTENCY AND DAMP TO WET IN CONDITION. B-003-0-25 ENCOUNTERED SILT AND CLAY (A-6a) TO EL. 698.6 FT IN MEDIUM STIFF TO STIFF CONSISTENCY AND WET IN CONDITION UNDERLAIN BY STONE FRAGMENTS WITH SAND AND SILT (A-2-4) IN MEDIUM DENSE COMPACTNESS AND WET IN CONDITION EXTENDING TO TOP OF ROCK.

UNDISTURBED SOIL SAMPLES WERE TAKEN IN B-002-0-25 AND B-003-0-25 AS SHOWN ON THE BORING LOGS. UNCONFINED COMPRESSIVE STRENGTH TESTS WERE COMPLETED FROM BOTH SAMPLES WITH RESULTS OF 715 PSF AT 7.4% STRAIN WITHIN B-002-0-25 AND 2,210 PSF AT 8.9% STRAIN WITHIN B-003-0-25.

SLIGHTLY TO MODERATELY ORGANIC SOILS WERE ENCOUNTERED WITHIN BOTH BORINGS WITH LOSS ON IGNITION (LOI) RESULTS RANGING FROM 3.2 TO 5.7% ORGANIC CONTENT. THESE RESULTS ARE PRESENTED IN TABULAR FORMAT, SEE ORGANIC CONTENT BY LOSS ON IGNITION TEST TABLE.

SANDSTONE BEDROCK WAS ENCOUNTERED IN B-002-0-25 AND B-003-0-25 AT EL. 702.1 AND 693.6 FT, RESPECTIVELY, UNDERLAIN BY CLAYSTONE BEDROCK INTO WHICH B-003-0-25 WAS TERMINATED. A SECOND LAYER OF SANDSTONE WAS ENCOUNTERED IN B-002-0-25 AT EL. 696.6 FT INTO WHICH THE BORING WAS TERMINATED. THE SANDSTONE UNIT WAS DESCRIBED AS HIGHLY WEATHERED TO MODERATELY WEATHERED AND WEAK TO SLIGHTLY STRONG. THE CLAYSTONE UNIT WAS DESCRIBED AS HIGHLY WEATHERED TO MODERATELY WEATHERED AND VERY WEAK TO WEAK.

STRENGTH TESTING WAS COMPLETED ON SELECT ROCK CORE SAMPLES. WITHIN B-002-0-25, THE UPPER SANDSTONE HAD AN UNCONFINED COMPRESSIVE STRENGTH TEST RESULT OF 3,022 PSI AND THE LOWER SANDSTONE HAD A POINT LOAD STRENGTH INDEX RESULT OF 910 PSI. WITHIN B-003-0-25, THE CLAYSTONE HAD AN UNCONFINED COMPRESSIVE STRENGTH RESULT OF 73 PSI. THESE RESULTS ARE PRESENTED IN TABULAR FORMAT, SEE BEDROCK TEST SUMMARY TABLE.

THE WDCP SOUNDING WAS ADVANCED WITHIN THE STREAM CHANNEL AT THE PROPOSED INLET LOCATION. THE SOUNDING REVEALED VERY SOFT MATERIAL AT THE CHANNEL EXISTING GROUND EL. EXTENDING TO APPROXIMATELY 4.5 FEET IN DEPTH WHERE THE STRENGTH INCREASED BUT WAS HIGHLY VARIABLE.

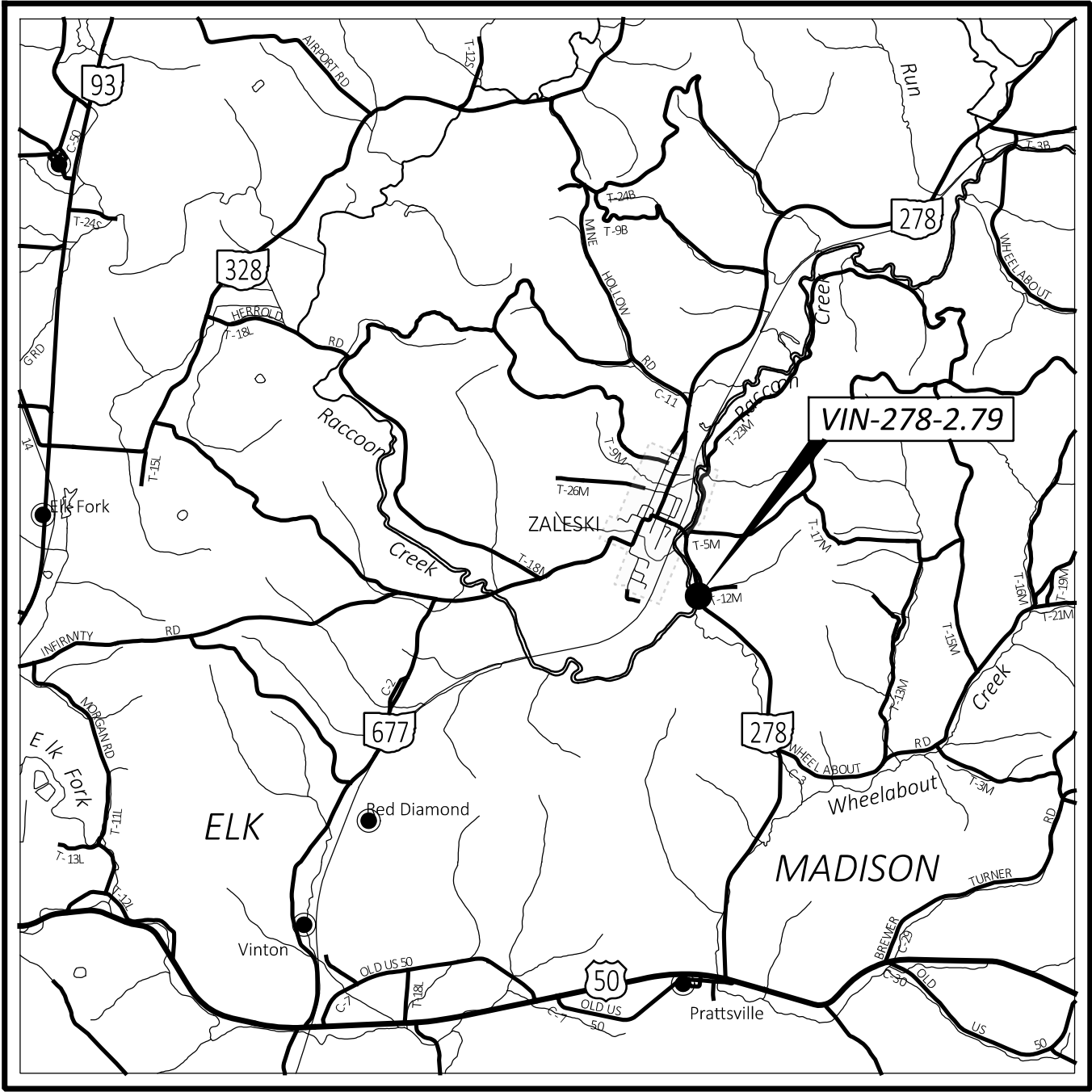
FREE WATER WAS OBSERVED IN B-003-0-25 AT EL. 700.9 FT. WATER AT COMPLETION OF DRILLING ACTIVITIES WAS OBSERVED IN B-002-0-25 AND B-003-0-25 AT EL. 705.8 AND 705.1 FT, RESPECTIVELY.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
STONE FRAGMENTS WITH SAND AND SILT	A-2-4	1	1
SANDY SILT	A-4a	2	-
SILT AND CLAY	A-6a	5	1
SILTY CLAY	A-6b	1	-
	TOTAL	9	2
CLAYSTONE	VISUAL		
SANDSTONE	VISUAL		
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
BORING OR WDCP LOCATION - PLAN VIEW.			
DRIVE SAMPLE AND ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WDCP SOUNDING PLOTTED TO VERTICAL SCALE ONLY.			
WC	INDICATES WATER CONTENT IN PERCENT.		
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.		
X/Y/D"	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.		
W—	INDICATES FREE WATER ELEVATION.		
▽—	INDICATES WATER AT COMPLETION.		
●	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.		
γ _d	INDICATES DRY UNIT WEIGHT OF SOIL.		
LOI	INDICATES ORGANIC CONTENT BY LOSS ON IGNITION, AASHTO T267.		
NP	INDICATES A NON-PLASTIC SAMPLE.		
QU	INDICATES UNCONFINED COMPRESSION TEST, AASHTO T208.		
SS	INDICATES A SPLIT SPOON SAMPLE.		
ST	INDICATES A SHELBY TUBE SAMPLE.		
δ	INDICATES UNIT WEIGHT OF ROCK.		
Q _c	INDICATES POINT LOAD STRENGTH VALUE, ASTM D5731.		
Q _u	INDICATES UNCONFINED COMPRESSION TEST, ASTM D7012.		
RC	N SERIES ROCK CORE BARREL OF "Q" WIRELINE BIT SIZE.		
TR	INDICATES TOP OF ROCK ELEVATION.		

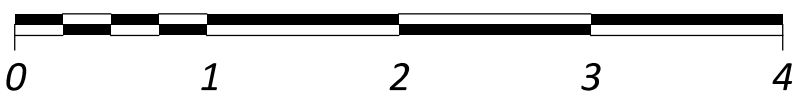
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2025.

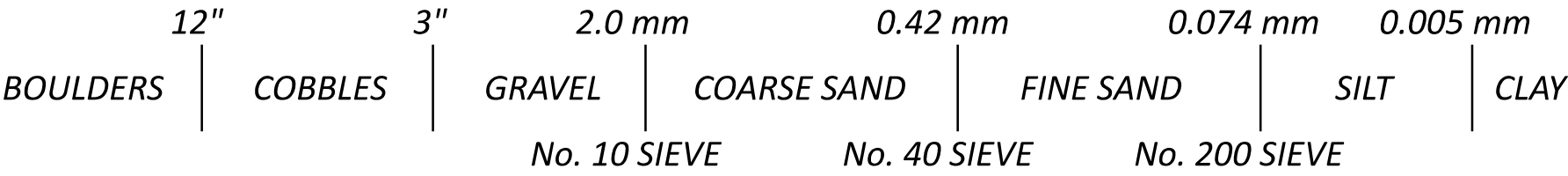


LOCATION MAP

SCALE IN MILES



PARTICLE SIZE DEFINITIONS



BEDROCK TEST SUMMARY					
EXPLOR. ID	SAMPLE ELEVATION	SAMPLE DEPTH	Q _u (PSI)	Q _c (PSI)	LITHOLOGY
B-002-0-25	700.9' - 700.6'	12.2' - 12.5'	3,022	-	SANDSTONE
	695.1' - 692.9'	18.0' - 20.2'	-	910	SANDSTONE
B-003-0-25	687.0' - 686.7'	25.1' - 25.4'	73	-	CLAYSTONE

ORGANIC CONTENT BY LOSS ON IGNITION TEST				
EXPLOR. ID	SAMPLE ID	SAMPLE ELEVATION	SAMPLE DEPTH	LOI (%)
B-002-0-25	SS-3	707.1' - 705.6'	6.0' - 7.5'	4.6
	ST-4	705.1' - 703.1'	8.0' - 10.0'	3.2
B-003-0-25	SS-4	703.6' - 702.1'	8.5' - 10.0'	5.7

RECON. - PPP 04/15/25
DRILLING - JFK 04/28-29/25
WDCP - DML 04/28/25
DRAWN - ARR 02/25/26
REVIEWED - SAT 02/25/26

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.





Unconfined Compressive Strength Test
AASHTO T 208
ODOT - Office of Geotechnical Engineering

Lab No.	OGE Geotechnical Lab
Report Date:	5/1/25
Tech:	awillis

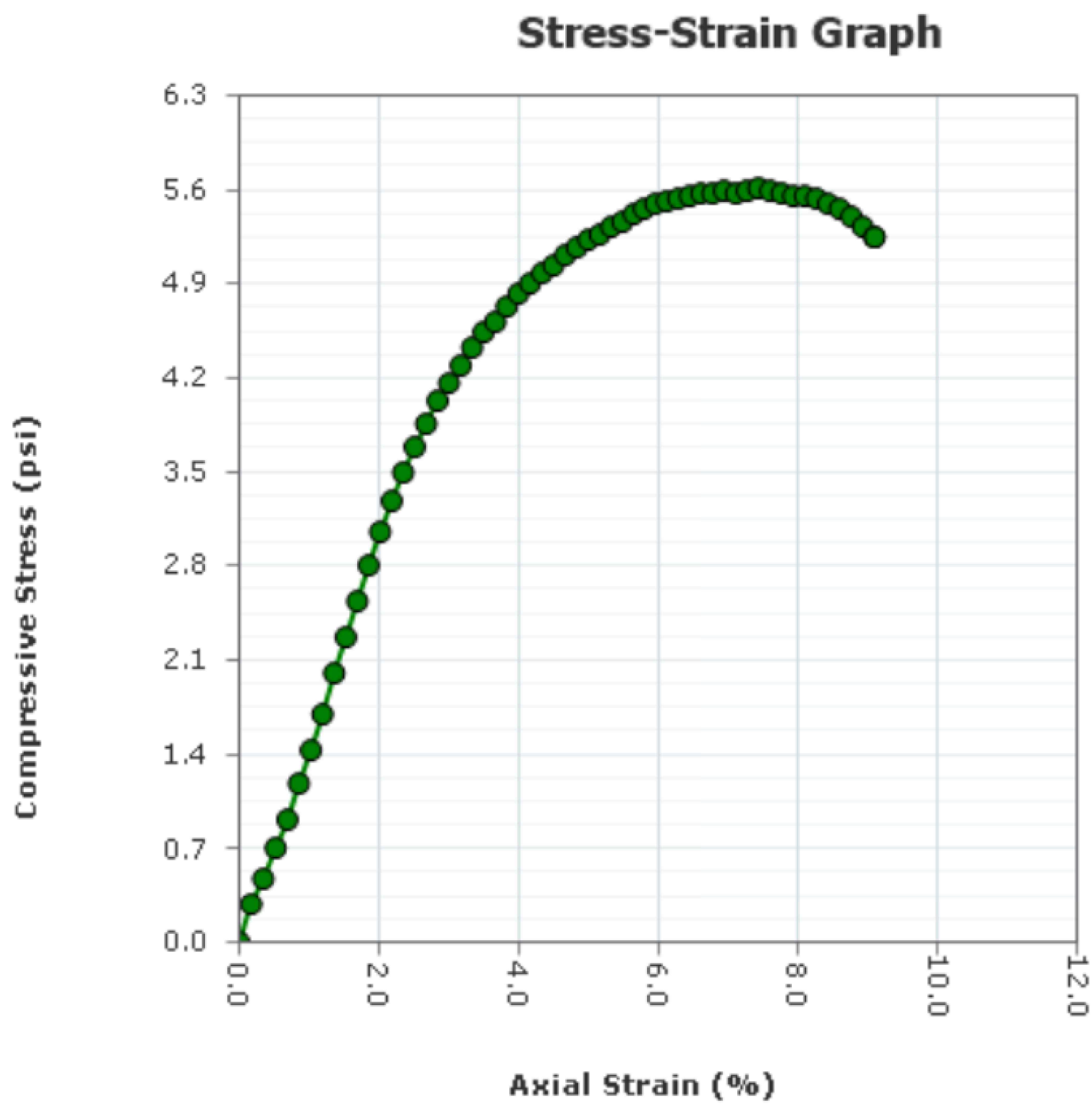
Site Name	VIN-278-2.79	Soil Description	A-4a	Sample No.	4
Job Ref	vin-278-2.79~pid120337	Top Depth (ft)	8.00	Sample Type	ST
Borehole/Pit No.	B-002-0-25	Bottom Depth (ft)	10.00	KeyLAB ID	OGEL202505018
Specimen Reference	2025-006-080	Ground Elevation (ft)	704.4	Latitude	39.274852
Specimen Depth (ft)	8.7	Date started	5/1/25	Longitude	-82.389457

Specimen Description	sandy silt, stiff, grayish brown, some clay, trace stone fragments, slightly organic, moist.
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Initial Conditions

Height	in	5.77
Diameter	in	2.81
Bulk Density	pcf	116.98
Water Content	%	29
Dry Density	pcf	93.45
Void Ratio		0.783
Degree of Saturation	%	86

Rate of Strain applied		1.0
At failure	Axial Strain	% 7.4
	Maximum Stress	psf 714.7



Remarks

Approved

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Fig. No.

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Sheet

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Lab Sheet Reference :



Unconfined Compressive Strength Test
AASHTO T 208
ODOT - Office of Geotechnical Engineering

Lab No.	OGE Geotechnical Lab
Report Date:	5/1/25
Tech:	awillis

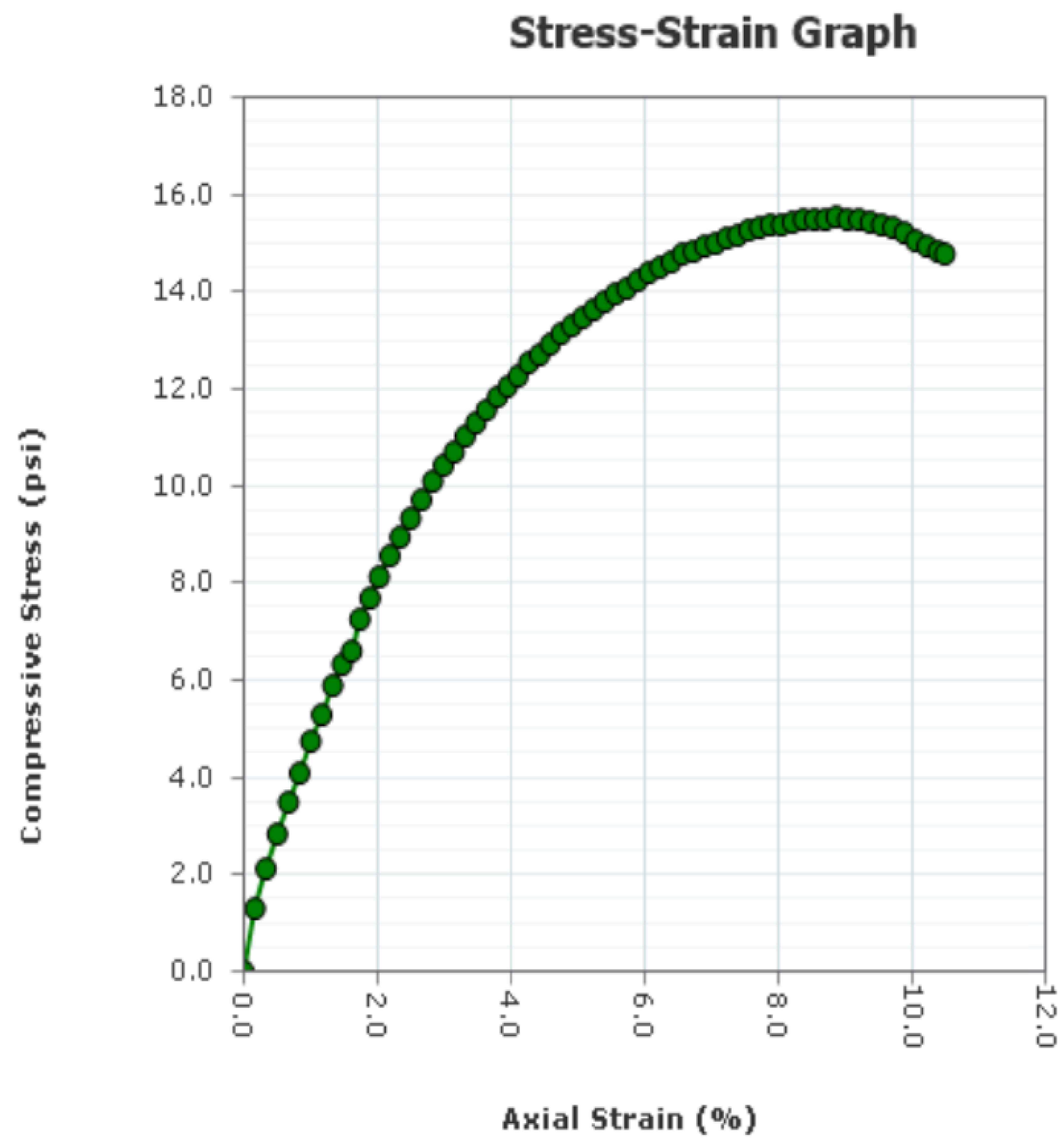
Site Name	VIN-278-2.79	Soil Description	A-6a	Sample No.	3
Job Ref	vin-278-2.79~pid120337	Top Depth (ft)	6.00	Sample Type	ST
Borehole/Pit No.	B-003-0-25	Bottom Depth (ft)	8.00	KeyLAB ID	OGEL202505012
Specimen Reference	2025-006-084	Ground Elevation (ft)	704.9	Latitude	39.274905
Specimen Depth (ft)	7.2	Date started	5/1/25	Longitude	-82.389507

Specimen Description	silt and clay, stiff, some sand, trace stone fragments
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Initial Conditions

Height	in	5.77
Diameter	in	2.88
Bulk Density	pcf	126.29
Water Content	%	19
Dry Density	pcf	103.80
Void Ratio		0.605
Degree of Saturation	%	96

Rate of Strain applied		1.0
At failure	Axial Strain	% 8.9
	Maximum Stress	psf 2210.4



Remarks

Approved

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Fig. No.

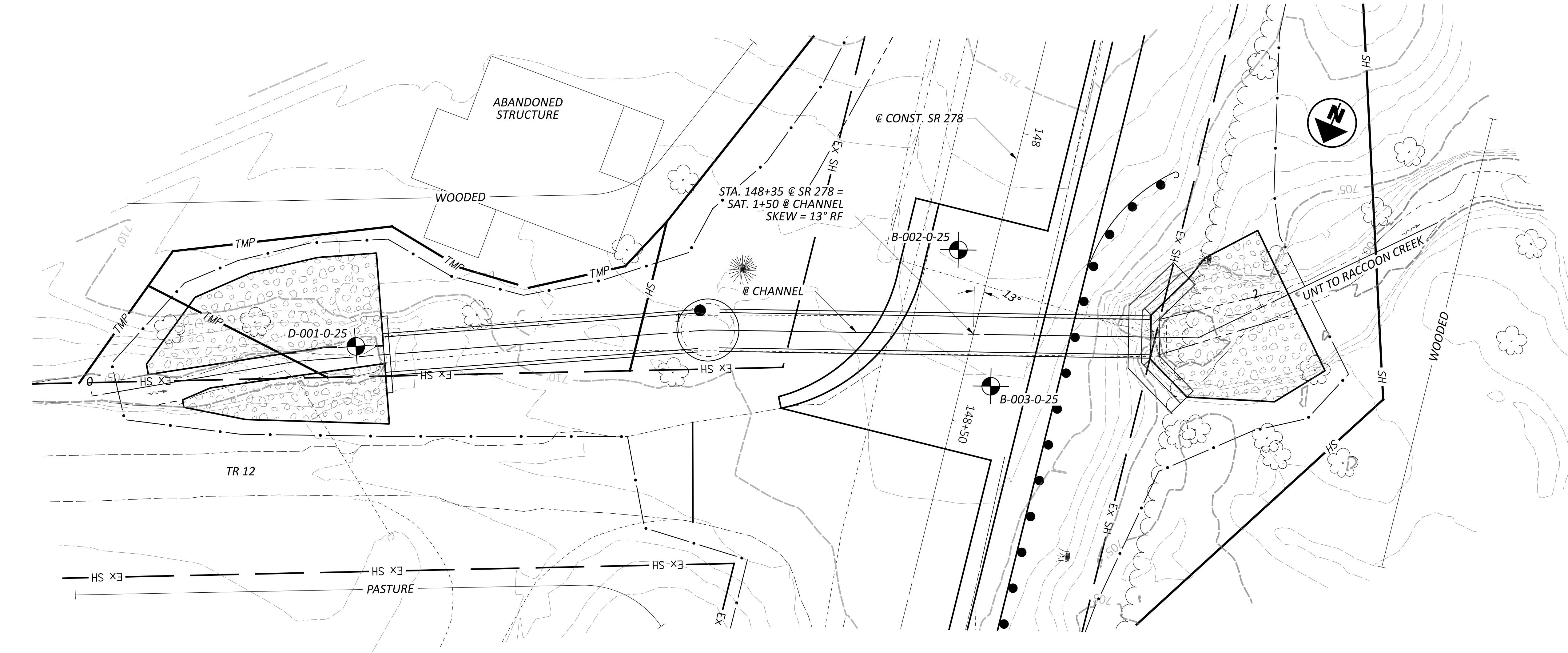
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Lab Sheet Reference :





Page 1 of 1

PROJECT NUMBER:	120337
DATE STARTED:	04-28-2025
DATE COMPLETED:	04-28-2025

SURFACE ELEVATION:	705.0
WATER ON COMPLETION:	Dry
HAMMER WEIGHT:	35 lbs.
CONE AREA:	10 sq. cm

NOTES: Latitude/Longitude/Elevation from District survey grade instruments

VIN-278-2.79

MODEL: B-002-0-25 Boring Log and Rock Core Photo PAPERSIZE: 34x22 (in.) DATE: 2/26/2026 TIME: 7:48:57 AM PLTDRN: OHDOT_PDF.pltGFG PENITBL: OHDOT_PENC.tbl USER: Adam.Ross@dot.ohio.gov WORKSPACE: OHDOTCEV02 WORKSET: 120337 PRODUCT: OpenRoadsDesigner 24.00.00.205
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PROJECT: VIN-278-2.79		DRILLING FIRM/OPERATOR: ODOT/M. Lewis		DRILL RIG: CME 75 Truck NWJ		STATION/OFFSET: 148+23, 6' Rt.		EXPLORATION ID													
TYPE: Culvert		LOGGING FIRM/LOGGER: ODOT/J. Kolberg		HAMMER: Automatic		ALIGNMENT: CL SR 278		B-002-0-25													
PID: 120337 CFN: 1998491 (P)		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 05/23/2024		ELEVATION: 713.1 (ft.) EOB: 211.5 ft.		PAGE													
START: 04/28/2025 END: 04/28/2025		SAMPLING METHOD: SPT/NQ2		ENERGY RATIO (%): 89		LAT/LONG: 39.274852, -82.389457		1 OF 1													
MATERIAL DESCRIPTION AND NOTES				ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL	
ASPHALT 15.0 IN																					
BASE 3.0 IN SILT AND CLAY, very stiff, brownish gray and black, some sand, little stone fragments, contains trace coal fragments, damp.				711.8	1																
				711.6	2	4	15	69	SS-1	3.00	10	3	18	28	41	34	19	15	14	A-6a(9)	
SANDY SILT, stiff, brown and gray, some clay, trace stone fragments, moist.				709.6	3	5															
					4	2	7	61	SS-2	2.00	4	2	38	26	30	25	15	10	16	A-4a(4)	
SILTY CLAY, very stiff, grayish brown, some sand, little stone fragments, moderately organic (loi = 4.6%), moist.				707.1	5	3															
					6	2	7														
SANDY SILT, stiff, grayish brown, some clay, trace stone fragments, slightly organic (loi = 3.2%), wet. @8.7 - 9.2"; QU = 715 PSF @ 7.4% STRAIN; γ _d = 93.45 PCF				705.1	7	3															
					8																
SANDSTONE. Gray to light brown, highly weathered to moderately weathered, slightly strong, fine grained to coarse grained, very thin to thin bedded, micaceous, argillaceous, iron stained, joint, fractured to moderately fractured, narrow, slightly rough; blocky, good. RQD 29%, REC 96%. @12.2 - 12.5"; δ = 148 pcf, Qu = 3,022 psi				702.1	9																
					10																
CLAYSTONE. Dark gray, highly weathered to moderately weathered, very weak to weak, very thin to thin bedded, joint, highly fractured to fractured, narrow, slightly rough; blocky, poor, RQD 0%, REC 75%.				697.6	11	50/3"		100	SS-5										9	Rock (V)	
				696.6	12	58		100	RC-1												
SANDSTONE. Dark gray, highly weathered to moderately weathered, weak, fine grained to medium grained, laminated to very thin bedded, micaceous, argillaceous, fossiliferous, contains thin layers of shale throughout, joint, highly fractured to fractured, narrow, slightly rough; blocky, fair, RQD 0%, REC 92%. @18.0 - 20.2"; σ _c = 910 psi @20.3 - 20.4"; high angle fracture @20.6 - 20.8"; high angle fracture @20.9 - 21.2"; high angle fracture				691.6	14			86	RC-2												Rock (V)
					15	0		88	RC-3												
					17	17		94	RC-4												
					18																
					19																
					20	22															
					21																
					22																
					23																
					24																
					25																
					26																
					27																
					28																
					29																

NOTES: Latitude/Longitude/Elevation from District survey grade instruments.

ABANDONMENT METHODS, MATERIALS, QUANTITIES:	Collapsed to 7.7": Auger cuttings mixed with 50 lbs. bentonite chips; Shoveled asphalt patch.




Office of Geotechnical Engineering

B-002-0-25



Run #:	Depth		Recovery		RQD	
RC-1	11.5'	13.5'	24/24	100%	14/24	58%
RC-2	13.5'	16.5'	31/36	86%	0/36	0%
RC-3	16.5'	18.5'	21/24	88%	4/24	17%
RC-4	18.5'	21.5'	34/36	94%	8/36	22%
VIN-278-2.79 PID 120337						

DESIGN AGENCY	
	
DESIGNER	
ARR	
REVIEWER	
SAT 02/25/26	
PROJECT ID	
120337	
SUBSET	TOTAL
5	6
SHEET	TOTAL
P.42	43

GEOTECHNICAL PROFILE - CULVERT
CULVERT AT VIN-278-2.79 OVER UNT TO RACCOON CREEK
BORING LOG AND ROCK CORE PHOTO FOR B-002-0-25

VIN-278-2.79

MODEL: B-003-0-25 Boring Log and Rock Core Photo PAPER SIZE: 34x22 (in.) DATE: 2/26/2026 TIME: 7:19:09 AM PLTDRW: OHDOT - OHDOT_PDF.plt CFG: PENITBL: OHDOT PenC.tbl USER: Adam.Ross@dot.ohio.gov WORKSPACE: OHDOTCEV02 WORKSET: 120337 PRODUCT: OpenRoads Designer: 24.00.00.205
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PROJECT: VIN-278-2.79		DRILLING FIRM/OPERATOR: ODOT/M. Lewis		DRILL RIG: CME 75 Truck NWJ		STATION/OFFSET: 148+44, 5' Lt.		EXPLORATION ID																													
TYPE: Culvert		LOGGING FIRM/LOGGER: ODOT/S. Daley		HAMMER: Automatic		ALIGNMENT: CL SR 278		B-003-0-25																													
PID: 120337 CFN: 1998491 (P)		DRILLING METHOD: 3.25" HSA		CALIBRATION DATE: 05/23/2024		ELEVATION: 712.1 (ft.)		EOB: 29.5 ft.																													
START: 04/29/2025		END: 04/29/2025		SPT/NQ2		ENERGY RATIO (%): 89		LAT/LONG: 39.274905, -82.389507																													
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS		SPT/ RQD		REC SAMPLE ID		HP (tsf)		GRADATION (%)		ATTERBERG		WC		ODOT CLASS (gi)		BACK FILL															
<p>ASPHALT 13.0 IN</p> <p>BASE 5.0 IN</p> <p>SILT AND CLAY, stiff, brown and gray, some stone fragments, little sand, wet.</p> <p>@3.5"; moist</p> <p>@6.0"; stiff, some sand, trace stone fragments</p> <p>@7.2 - 7.7"; QU = 2,210 PSF @ 8.9% STRAIN; γd = 103.80 PCF</p> <p>SILT AND CLAY, medium stiff, gray and brown, little sand, trace stone fragments, moderately organic (loi = 5.7%) with wood and roots, wet.</p> <p>SILT AND CLAY, medium stiff, grayish brown, some sand, trace stone fragments, moist to wet.</p>				711.0		1		5																													
				710.6		2		4		10		SS-1		1.50		32		5		14		21		28													
						3		3																													
						4		2		6		SS-2		1.00		-		-		-		-		-													
						5		2																													
						6																															
						7																															
						8																															
						9																															
						10																															
<p>STONE FRAGMENTS WITH SAND AND SILT, medium dense, brown, little clay, wet.</p> <p>SANDSTONE, Gray and black, highly weathered to moderately weathered, weak to slightly strong, fine grained to medium grained, laminated to very thin bedded, micaceous, argillaceous, carbonaceous, joint, highly fractured to fractured, narrow, slightly rough; blocky, fair, RQD 16%, REC 100%.</p> <p>@21.7 - 22.0": coal</p> <p>CLAYSTONE, Gray, highly weathered to moderately weathered, very weak, very thin to thin bedded, joint, highly fractured to fractured, narrow, slightly rough; blocky, poor, RQD 24%, REC 65%.</p> <p>@25.1 - 25.4"; δ = 153 pcf; Qu = 73 psi</p> <p>@25.1 - 26.2"; sandstone</p> <p>@27.5 - 27.8"; sandstone</p> <p>@29.0 - 29.5"; sandstone</p>				701.1		11		2		7		SS-5		1.00		2		3		26		42		27		31		20		11		28		A-6a(7)			
				698.6		13		3		4		13		SS-6		2.00		38		5		25		18		14		25		18		7		24		A-2-4(0)	
						14		4		5																											
						15																															
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						19																															
						20																															
						21																															
<p>CLAYSTONE, Gray, highly weathered to moderately weathered, very weak, very thin to thin bedded, joint, highly fractured to fractured, narrow, slightly rough; blocky, poor, RQD 24%, REC 65%.</p> <p>@25.1 - 25.4"; δ = 153 pcf; Qu = 73 psi</p> <p>@25.1 - 26.2"; sandstone</p> <p>@27.5 - 27.8"; sandstone</p> <p>@29.0 - 29.5"; sandstone</p>				690.0		22		0		19		RC-2																									
						23																															
						24																															
						25																															
						26																															
						27																															
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						EOB																															
						682.6																															

NOTES: Latitude/Longitude/Elevation from District survey grade instruments.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: Collapsed to 14.8"; Auger cuttings mixed with 100 lbs. bentonite chips; Shoveled asphalt patch.



Office of Geotechnical Engineering

B-003-0-25



Run #:	Depth	Recovery		RQD	
RC-1	19.5'	21.5'	24/24	100%	5/24
RC-2	21.5'	24.5'	7/36	19%	0/36
RC-3	24.5'	26.5'	22/24	92%	13/24
RC-4	26.5'	29.5'	36/36	100%	8/36
VIN-278-2.79 PID 120337					

GEOTECHNICAL PROFILE - CULVERT
CULVERT AT VIN-278-2.79 OVER UNT TO RACCOON CREEK
BORING LOG AND ROCK CORE PHOTO FOR B-003-0-25

DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT
PROJECT ID	120337
SUBSET	TOTAL
6	6
SHEET	TOTAL
P.43	43