

PROJECT DESCRIPTION

REPLACEMENT OF THE EXISTING THREE SPAN PRESTRESSED CONCRETE BRIDGE CARRYING S.R. 772 OVER RALSTON RUN WITH A SINGLE SPAN COMPOSITE DECK BRIDGE IN ROSS COUNTY.

HISTORIC RECORDS

A HISTORIC RECORD SEARCH WAS PERFORMED THROUGH ODOT'S TRANSPORTATION INFORMATION MANAGEMENT SYSTEM (TIMS). THE FOLLOWING REPORT/PLANS WERE AVAILABLE FOR REVIEW AND EVALUATION FOR THIS REPORT: 1) BRIDGE DESIGN FOUNDATION REPORT AND PROJECT BORING LOG FOR ROS-772-7.85, DATED AUGUST 29, 1973; 2) BRIDGE DESIGN FOUNDATION REPORT PROJECT BORING LOGS FOR ROS-772-0778, DATED MAY 21, 1973. TWO HISTORICAL SOIL BORINGS (B-002-0-73, AND B-007-0-73) THAT WERE DRILLED AS PART OF THE 1973 STRUCTURE EXPLORATION FOR ODOT PROJECT ROS-772-7.78 WERE REVIEWED AND ARE PRESENTED IN THE SHEET.

GEOLOGY

THE PROJECT SITE IS LOCATED WITHIN THE COLUMBUS LOWLAND TILL PLAINS, A SUBDIVISION OF THE SOUTHERN OHIO LOAMY TILL PLAIN. THE GEOLOGY AT THE PROJECT SITE IS MAPPED AS DISSECTED GROUND MORAINE OCCURS ON RIDGETOPS AND MIXED WITH WEATHERED BEDROCK AS COLLUVIUM ON SLOPES.

RECONNAISSANCE

A FIELD RECONNAISSANCE VISIT FOR THE OVERALL PROJECT AREA WAS CONDUCTED ON JANUARY 31st, 2024. THE LAND USE OF MOST OF THE PROJECT AREA CONSISTS OF ODOT ROW (RIGHT OF WAY), SINGLE FAMILY HOMES, AND WOODLAND.

BRIDGE CARRYING S.R. 772 OVER RALSTON RUN

THE EXISTING BRIDGE CARRYING OH- 772 OVER RALSTON RUN IS A THREE- SPAN, CONTINUOUS PRESTRESSED CONCRETE, MULTIPLE BOX BEAM BRIDGE WITH 2 LANES OF TRAFFIC ON A CONCRETE CAST-IN-PLACE DECK WITH AN ASPHALT WEARING COURSE. THE BRIDGE SITS ATOP CONCRETE PEDESTAL TYPE ABUTMENTS AND CONCRETE CANTILEVER PIERS ON SPREAD FOOTINGS SET ON SHALE BEDROCK. BEDROCK IN THE PROJECT AREA IS A LAMINATED TO VERY THINLY BEDDED BLACK SHALE WITH INTERSECTING HIGH ANGLE JOINT DISCONTINUITIES STRIKING 056° AND 320° DIPPING 80°NW AND 78°SW RESPECTIVELY. AT THE TIME OF THE VISIT, THERE WAS EVIDENCE OF SOME SCOURING AT THE BASE OF THE NORTHERN PIER. THE SPILL THROUGH SLOPES WERE OBSERVED TO BE COVERED IN RIPRAP WITH SOME SIGNS OF EROSION AT THE LOWER EDGES NEAR EACH PIER. THE PIERS WERE OBSERVED TO BE IN FAIR CONDITION WITH SOME EVIDENCE OF PITTING EROSION AT EACH FOOTING AND MINOR SURFACE CRACKING. THE UNDERSIDE OF THE BRIDGE DECK WAS OBSERVED TO BE IN FAIR CONDITION WITH EVIDENCE OF HEAVY EFFLORESCENCE. HEAVY SPALLING, HOLLOW CAVITIES, EXPOSED REBAR, AND DETACHED REBAR WERE OBSERVED AT EACH SIDE OF THE OUTER BOX BEAMS. BOTH ABUTMENTS WERE OBSERVED TO BE IN FAIR CONDITION WITH SOME EVIDENCE OF CRACKING AND MINOR SPALLING. THE EXISTING PAVEMENT CONDITION WAS OBSERVED TO BE IN GOOD CONDITION WITH NO SIGNS OF SURFACE WEAR. THE ROADWAY IS RELATIVELY LEVEL AND DRAINS TO THE SOUTH-SOUTHEAST. TO THE NORTHEAST OF THE BRIDGE SOME SIGNS OF SLOPE INSTABILITY WITH HUMMOCKY TERRAIN AND CURVING TREES INDICATING MOVEMENT WERE OBSERVED. THERE WERE NO OTHER APPARENT SIGNS OF DISTRESS DUE TO GEOTECHNICAL CONCERNS DURING OUR FIELD RECONNAISSANCE VISIT.

SUBSURFACE EXPLORATION

THE PROJECT SUBSURFACE EXPLORATION WAS CONDUCTED BY NEAS ON FEBRUARY 28, 2024, AND INCLUDED 2 BORINGS DRILLED TO DEPTHS RANGE BETWEEN 29.5 FT TO 38.7 FT BELOW GROUND SURFACE. PROJECT BORINGS WERE DRILLED USING A CME 45B TRUCK-MOUNTED DRILLING RIG UTILIZING 3.25- INCH (INNER DIAMETER) HOLLOW STEM AUGER. IN GENERAL, SOIL SAMPLES WERE RECOVERED CONTINUOUSLY TO END OF BORING, USING AN 18- INCH SPLIT SPOON SAMPLER (AASHTO T- 206 “STANDARD METHOD FOR PENETRATION TEST AND SPLIT BARREL SAMPLING OF SOILS.”). THE SOIL SAMPLES OBTAINED FROM THE EXPLORATION PROGRAM WERE VISUALLY OBSERVED IN THE FIELD BY THE NEAS FIELD REPRESENTATIVE AND PRESERVED FOR REVIEW BY A GEOLOGIST FOR POSSIBLE LABORATORY TESTING. STANDARD PENETRATION TESTS (SPT) WERE CONDUCTED USING A CME AUTO HAMMER CALIBRATED TO BE 72.6% EFFICIENT ON JANUARY 24, 2022.

EXPLORATION FINDINGS

THE SUBSURFACE PROFILE AT THE PROPOSED BRIDGE WIDENING SITE GENERALLY CONSISTS OF PRIMARILY VERY STIFF TO HARD COHESIVE FINE MATERIALS AND SOME MEDIUM DENSE TO VERY DENSE GRANULAR MATERIALS. BEDROCK WAS ENCOUNTERED IN BOTH PROJECT BORINGS AND HISTORIC BORINGS, RANGING FROM DEPTHS OF 3.5 FT TO 17.5 FT BELOW GROUND SURFACE (WITH ELEVATIONS BETWEEN 757.3 FT AND 768.2 FT ABOVE MEAN SEA LEVEL).

AT THE PROPOSED REAR ABUTMENT, THE SUBSURFACE SOILS ENCOUNTERED GENERALLY CONSISTED OF COHESIVE FINE-GRAINED SOILS UNDERLAIN BY NON-COHESIVE COARSE-GRAINED SOILS. THE COHESIVE FINE-GRAINED SOILS, CLASSIFIED AS SAND SILT (A- 4a), EXTEND TO 770.3 FT AMSL. UNDERNEATH THIS LAYER, THE STRATUM OF GRANULAR SOILS RANGES FROM ELEVATIONS OF 770.3 FEET TO 757.3 FEET ABOVE MEAN SEA LEVEL (AMSL), CLASSIFIED AS GRAVEL WITH SAND (A-1-b), STONE FRAGMENTS WITH SAND AND SILT (A-2-4), AND STONE FRAGMENTS WITH SAND, SILT, AND CLAY (A-2-6). THE COHESIVE SOILS CAN BE DESCRIBED AS HAVING A HARD CONSISTENCY. THE NON-COHESIVE SOILS AT THE REAR ABUTMENT LOCATION ARE DESCRIBED AS HAVING A RELATIVE COMPACTNESS OF MEDIUM DENSE TO VERY DENSE.

AT THE PROPOSED FORWARD ABUTMENT, THE SUBSURFACE SOILS ENCOUNTERED PRIMARILY CONSISTED COHESIVE FINE-GRAINED SOILS EXTENDING TO 768.2 FT. THE COHESIVE SOILS ARE CLASSIFIED ON THE BORING LOGS AS SILT (A- 4a), SILT AND CLAY (A- 6a), AND CLAY (A- 7- 6). THE COHESIVE SOILS CAN BE DESCRIBED AS HAVING A VERY STIFF TO HARD CONSISTENCY.

GROUNDWATER MEASUREMENTS WERE TAKEN DURING THE BORING DRILLING PROCEDURES AND/OR IMMEDIATELY FOLLOWING THE COMPLETION OF EACH BOREHOLE. GROUNDWATER WAS NOT OBSERVED IN ANY OF THE PROJECT BORINGS PERFORMED.

BEDROCK WAS DISCOVERED IN THE TWO PROJECT BORINGS AT TERMINATING DEPTHS OF 38.7 FEET FOR THE REAR ABUTMENT AND 29.5 FEET FOR THE FORWARD ABUTMENT. AT THE REAR ABUTMENT, BEDROCK WAS ENCOUNTERED AT A DEPTH OF 17.5 FEET BELOW GROUND SURFACE (757.3 FEET ABOVE MEAN SEA LEVEL), WHILE AT THE FORWARD ABUTMENT, IT WAS FOUND AT 8.7 FEET BELOW GROUND SURFACE (768.2 FEET ABOVE MEAN SEA LEVEL). ADDITIONALLY, BEDROCK WAS ENCOUNTERED IN THE HISTORICAL BORINGS BETWEEN DEPTHS OF 3.5 FEET AND 7.0 FEET BELOW GROUND SURFACE (WITH ELEVATIONS RANGING FROM 761.3 FEET TO 762.7 FEET ABOVE MEAN SEA LEVEL).BASED ON THE EXPLORATION AND TESTING CONDUCTED, BEDROCK AT THE PROJECT SITE WAS CLASSIFIED AS SLIGHTLY TO MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FRACTURED - HIGHLY FRACTURED TO INTACT, NARROW TO TIGHT SHALE. RECOVERY OF THE BEDROCK CORE PERFORMED RANGED FROM 95 TO 100 PERCENT WHILE THE ROCK QUALITY DESIGNATION (RQD) VALUES RANGED FROM 53 TO 100 PERCENT. ADDITIONALLY, SANDSTONE WAS ENCOUNTERED ON THE HISTORICAL BORINGS ABOVE SHALE, WHICH WAS DESCRIBED AS BUFF, FIRM, VERY FINE-GRAINED, JOINED WITH CORE LOSS RANGING FROM 66 % TO 72%.

LEGEND

GRAVEL WITH SAND

STINE FRAGMENTS WITH SAND AND SILT

STONE FRAGMENTS WTH SAND, SILT AND CLAY

SANDY SILT

SILT AND CLAY

CLAY

SHALE

SANDSTONE

PAVEMENT OR BASE = X = APPROXIMATE THICKNESS

SOD AND TOPSOIL = X = APPROXIMATE THICKNESS

BORING LOCATION - PLAN VIEW.

HISTORICAL 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.

N₆₀

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

X/Y/D"

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

SS

INDICATES A SPLIT SPOON SAMPLE.

TR

INDICATES TOP OF ROCK.

ODOT CLASS

A-1-b

A-2-4

A-2-6

A-4a

A-6a

A-7-6

TOTAL

VISUAL

VISUAL

VISUAL

VISUAL

CLASSIFIED MECH./VISUAL

2

1

1

4

3

1

8

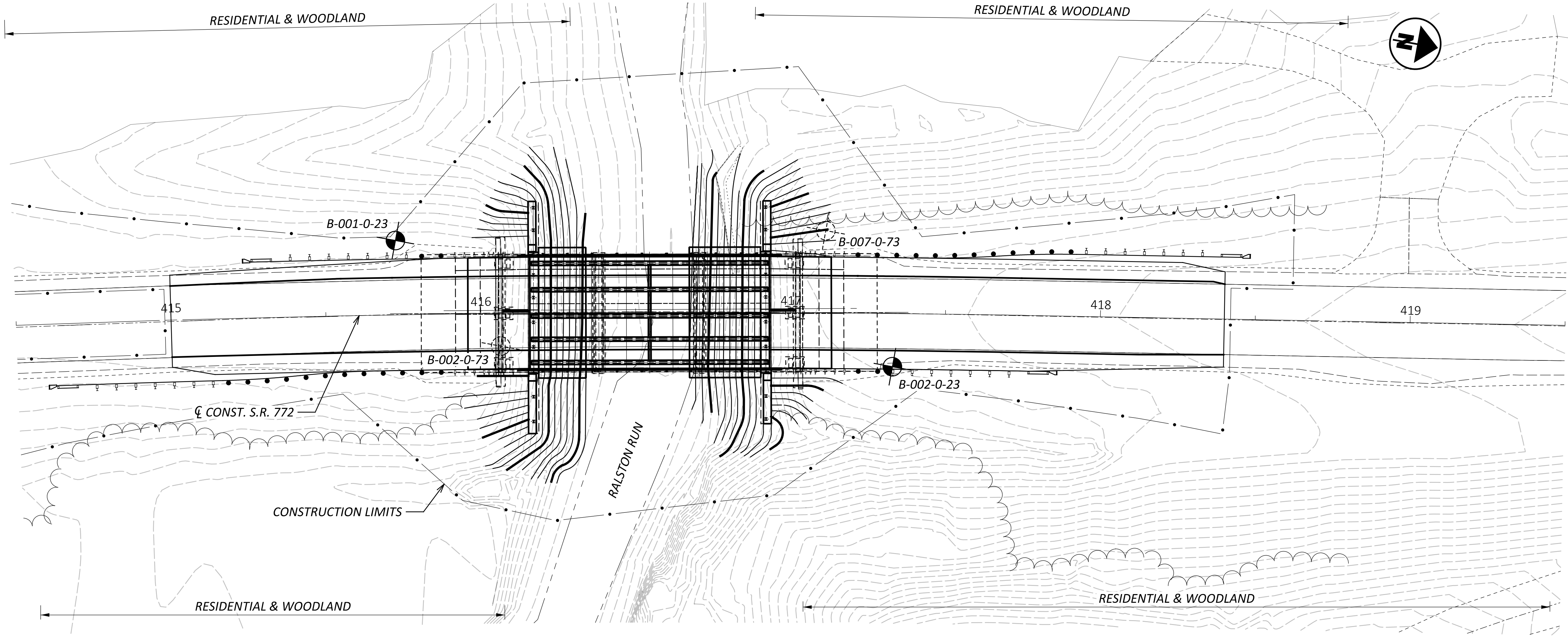
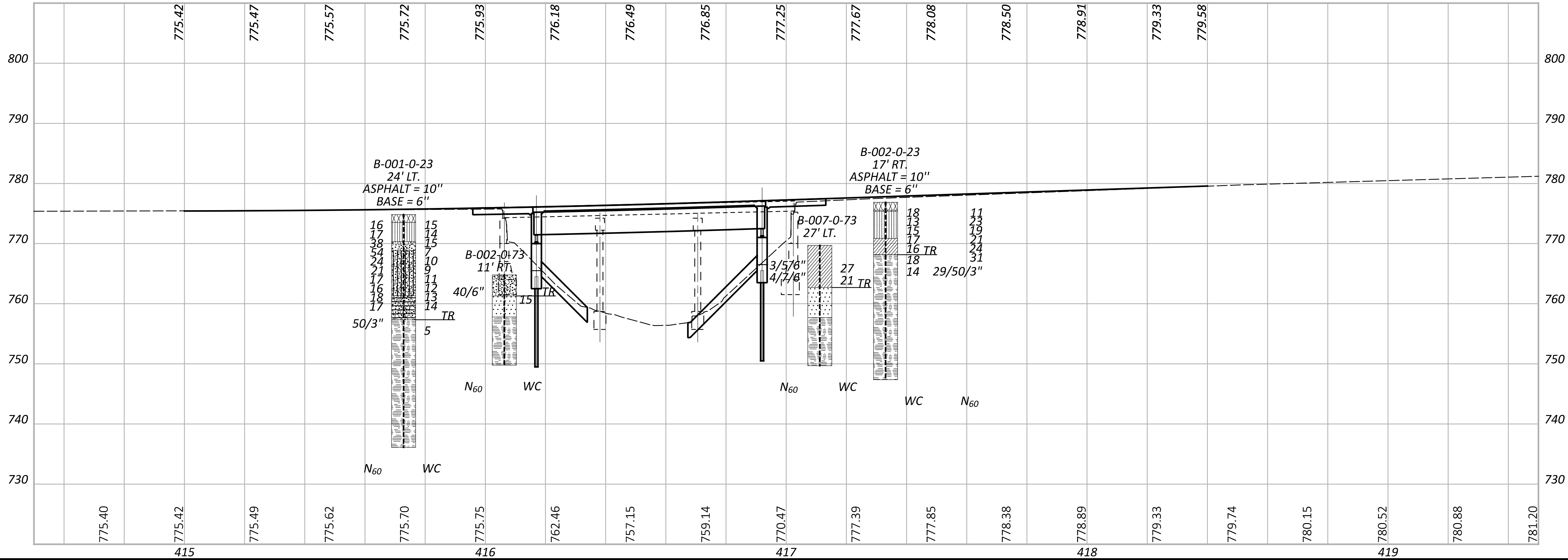
SPECIFICATIONS

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 2024.

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.

SCOUR SAMPLES						
BORING ID	SAMPLE ID	SAMPLE ELEVATION	D ₅₀ (mm)	τ _c VALUE (psf)	D ₅₀ , EQUIV (mm)	EROSION CATEGORY (EC)
B-002-0-73	SS-1	761.8'- 761.3'	2.611	0.055	2.611	2.700
	SS-1	766.7'- 765.7'	0.043	0.212	10.149	3.168
B-007-0-73	SS-2	764.7'- 763.7'	0.043	0.209	9.991	3.255
	SS-1	773.3'- 771.8'	0.052	0.290	13.875	2.975
B-001-0-23	SS-2	770.3'- 768.8'	2.611	0.055	2.611	2.700
	SS-3	768.8'- 767.3'	0.875	0.018	0.875	2.130
	SS-4	761.3'- 759.8'	0.880	0.061	2.913	3.075
	SS-1	775.4'- 773.9'	0.102	0.069	3.314	2.501
B-002-0-23	SS-2	773.9'- 772.4'	0.058	0.100	4.776	2.754
	SS-3	772.4'- 770.9'	0.042	0.239	11.461	2.868
	SS-4	770.9'- 769.4'	0.043	0.348	16.669	3.255



PROJECT: ROS-772-7.64 TYPE: BRIDGE		DRILLING FIRM / OPERATOR: CS / TS SAMPLING FIRM / LOGGER: NEAS / LR		DRILL RIG: CME 45B HAMMER: CME AUTOMATIC		STATION / OFFSET: 415+73.24' LT. ALIGNMENT: SR-772		EXPLORATION ID B-001-0-23																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
PID: 118518 SFN:		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 1/24/22		ELEVATION: 774.8 (MSL) EOB: 38.7 ft.		PAGE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
START: 2/8/24 END: 2/8/24		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 72.6		LAT / LONG: 39.255803, -83.049606		1 OF 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 9/26/24 11:35 - P:\OHDOT_V3\WORKSETS\118518\400-ENGINEERING\GEO\TECHNICAL\BASEMAPS\GINT\ROS-772-7.64.GPJ



DESIGNER	DT
REVIEWER	CH
PROJECT ID	118518
SUBSET	3
TOTAL	8
SHEET	P.52
TOTAL	57

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN
BORING LOG B-001-0-23



Office of Geotechnical Engineering

B-001-0-23



Run #:	Depth	Recovery	RQD
NQ2-1	18.7'	66"	44.5"
		100%	67%
ROS-772-7.64			



Office of Geotechnical Engineering

B-001-0-23



Run #:	Depth	Recovery	RQD
NQ2-2	24.2'	59"	59"
		98%	98%
ROS-772-7.64			



DESIGNER	DT
REVIEWER	CH
PROJECT ID	118518
SUBSET	TOTAL
4	8
SHEET	TOTAL
P.53	57

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN
ROCK CORE PHOTOS FOR B-001-0-23



5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: ROS-772-7.64, Boring Location: B-001-0-23, NQ2-1, Depth: 19.1-19.5ft)
Tested Date: 11/18/2024

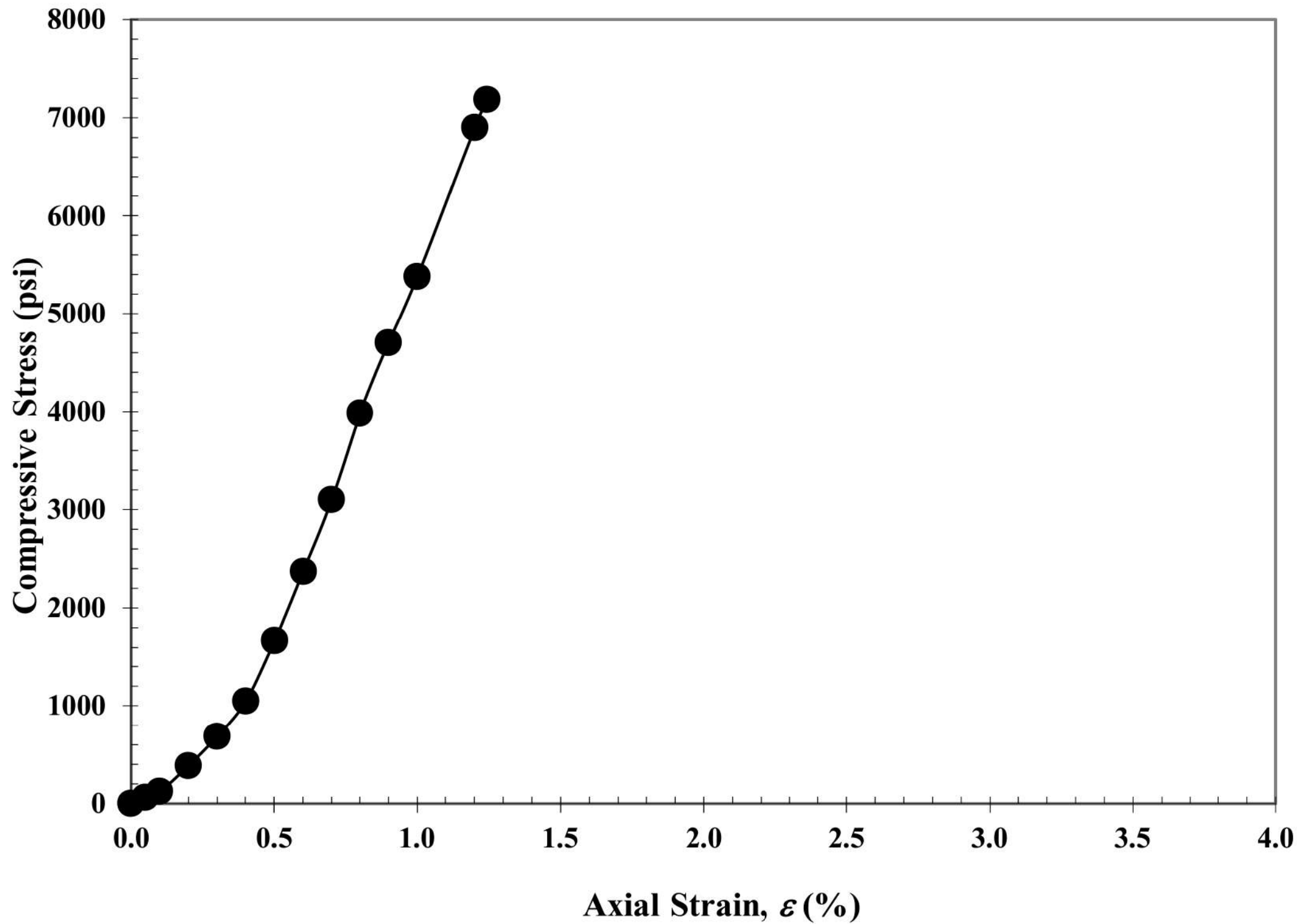
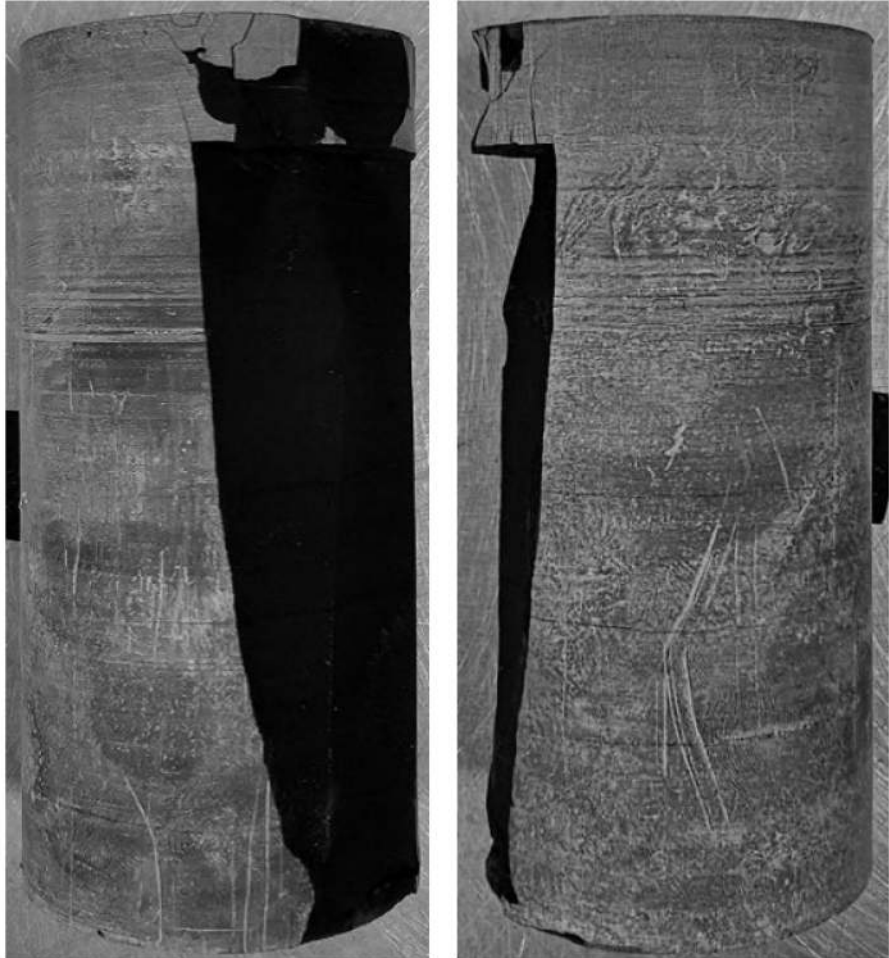
Specimen Properties

Average Dia., D_{avg} (in):	1.97
Average Height, H_{avg} (in):	4.35
Length to Diameter Ratio:	2.21
Area, A (in ²):	3.04
Volume, V (in ³):	13.20
Wet Mass of Specimen (lb):	1.0
Moisture Content (%):	1.4
Dry Mass of Specimen (lb):	1.0
Wet Unit Weight, γ (lb/ft ³):	135.6
Dry Unit Weight, γ_d (lb/ft ³):	133.7

Results

Unconfined Compressive Strength (psi):	7187
Strain (%):	1.2

Final Specimen Figure

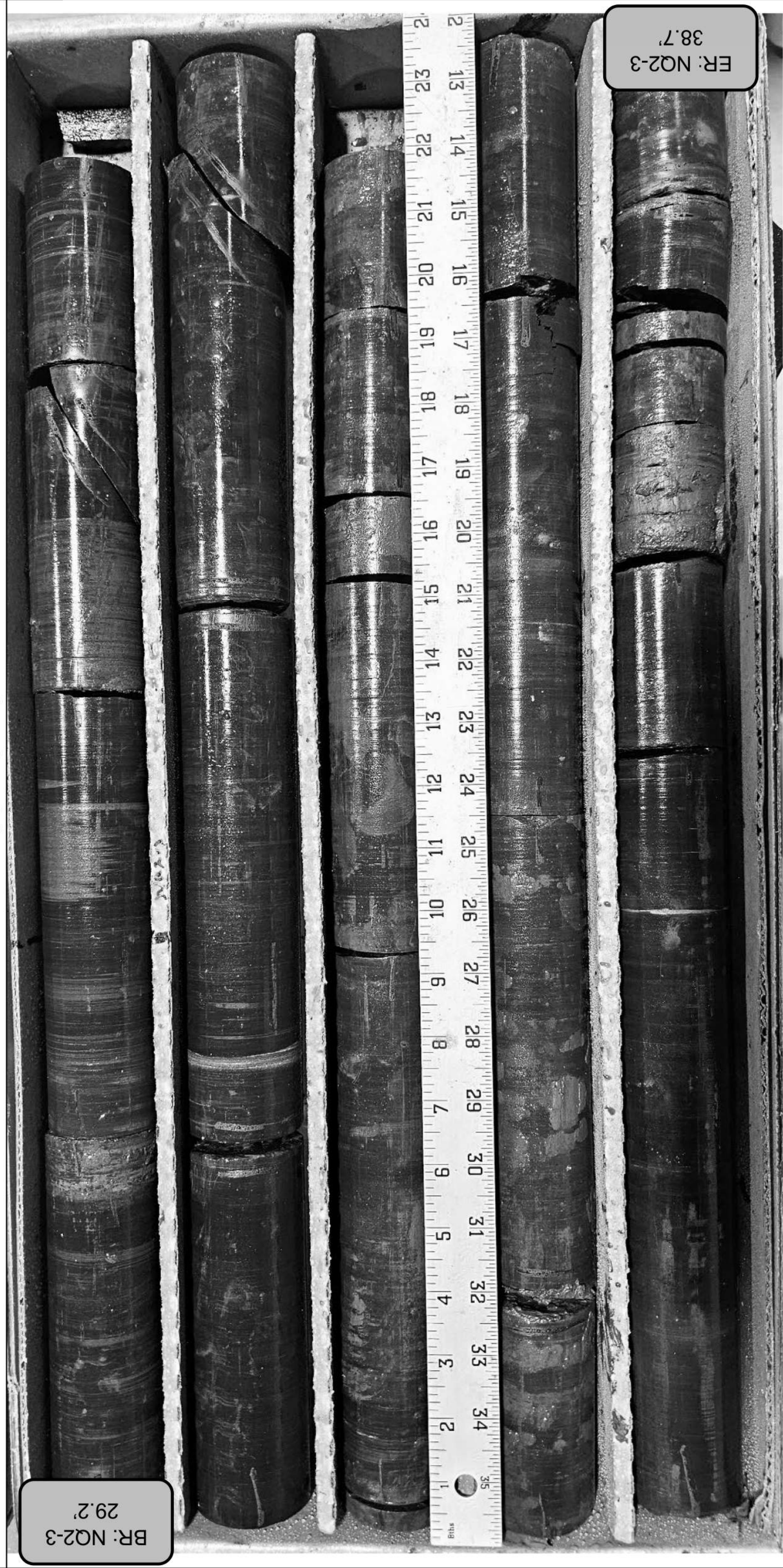


Notes: Shale, black, unweathered, moderately strong, slightly fissile.



Office of Geotechnical Engineering

B-001-0-23



Run #:	Depth	Recovery	RQD
NQ2-3	29.2' 38.7'	114" 100%	112" 98%
ROS-772-7.64			



DESIGNER	DT
REVIEWER	CH
PROJECT ID	118518
SUBSET	TOTAL
5	8
SHEET	TOTAL
P.54	57

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN
UNC TEST & PHOTOS OF ROCK CORE FOR B-001-0-23

ROS-772-07.64

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 4/16/2025 TIME: 11:05:08 AM USER: Malassi
P:\OHDOT v3\WorkSets\118518\400-Engineering\Geotechnical\Sheets\118518_ZL004.dgn

PROJECT: ROS-772-7.64			DRILLING FIRM / OPERATOR: CS / TS			DRILL RIG: CME 45B			STATION / OFFSET: 417+33, 17' RT.			EXPLORATION ID: B-002-0-23														
TYPE: BRIDGE			SAMPLING FIRM / LOGGER: NEAS / LR			HAMMER: CME AUTOMATIC			ALIGNMENT: SR-772																	
PID: SFN:			DRILLING METHOD: 3.25' HSA / NQ2			CALIBRATION DATE: 1/24/22			ELEVATION: 776.9 (MSL) EOB: 29.5 ft.			PAGE 1 OF 1														
START: 2/8/24 END: 2/8/24			SAMPLING METHOD: SPT / NQ2			ENERGY RATIO (%): 72.6			LAT / LONG: 39.256257, -83.049566																	
MATERIAL DESCRIPTION AND NOTES			ELEV.			SPT/ RQD			REC N ₆₀			HP (tsf)			GRADATION (%)			ATTERBERG			ODOT CLASS (GI)			HOLE SEALED		
10.0" ASPHALT AND 6.0" BASE			776.9			DEPTHS			4 5 4			SS-1			2.50			GR CS FS SI CL			WC			A-7-6 (V)		
VERY STIFF, BROWN AND ORANGISH BROWN, CLAY, SOME SILT, LITTLE SAND, TRACE GRAVEL, IRON STAINING, DAMP VERY STIFF TO HARD, BROWN AND ORANGISH BROWN, SANDY SILT, TRACE TO SOME GRAVEL, LITTLE TO SOME CLAY, IRON STAINING, SS-2 AND SS-3 CONTAIN NO INTACT SOIL FOR HP READINGS, DAMP VERY STIFF TO HARD, BROWN AND ORANGISH BROWN, SILT AND CLAY, LITTLE STONE FRAGMENTS, LITTLE SAND, IRON STAINING, DAMP TO MOIST SHALE, BLACK, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, LAMINATED TO VERY THIN BEDDED, FISSILE SHALE, BLACK, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO STRONG, LAMINATED TO VERY THIN BEDDED, FISSILE, PYRITIC, BEDDING DISCONTINUITIES: LOW ANGLE, JOINT DISCONTINUITIES: HIGH ANGLE FROM 11.5'-12.1' AND 21.3'-21.6', HIGHLY FRACTURED TO INTACT, NARROW TO TIGHT, SLIGHTLY ROUGH, BLOCKY TO INTACT, GOOD SURFACE CONDITION; RQD 85.3%, REC 97.6%. @13.0'-13.4'; Qu = 8648 PSI @ 1.9%			775.6			1			6 10 9			SS-2			-			28 8 17 32 15 24			18 6			13 A-4a (2)		
			775.4			2			7 5 11			SS-3			-			25 10 11 34 20 26			18 8			15 A-4a (4)		
			770.9			3			8 6 11			SS-4			4.50			7 18 43 22 28 19			9 17			A-4a (6)		
			768.2			4			6 9 11			SS-5			3.25			5 13 37 25 30 17			13 16			A-6a (7)		
			766.9			5			9 17			SS-6			4.50			-			-			-		
			766.9			6			29 50/3"			SS-7			-			-			-			14 Rock (V)		
						7																				
						8																				
						9																				
						10																				
						11																				
						12																				
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						29																				
						FOR																				

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING. HOLE DID NOT CAVE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED 0.5 BAG ASPHALT PATCH; PUMPED 45 GAL. BENTONITE GROUT



Office of Geotechnical Engineering



DESIGN AGENCY



KEAS

National Engineering & Architectural Services Inc.

DESIGNER	
DT	
REVIEWER	
CH	11-17-24
PROJECT ID	
118518	
SUBSET	TOTAL
6	8
SHEET	TOTAL
P.55	57

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN
BORING LOG & ROCK CORE PHOTO FOR B-002-0-23



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth	Recovery	RQD
NQ2-2	14.5'	114.5"	111"
93%			
ROS-772-7.64			



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth	Recovery	RQD
NQ2-3	24.5'	60"	60"
100%			
ROS-772-7.64			



DESIGNER	DT
REVIEWER	CH
PROJECT ID	118518
SUBSET	TOTAL
7	8
SHEET	TOTAL
P.56	57

GEOTECHNICAL PROFILE - BRIDGE
BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN
ROCK CORE PHOTOS FOR B-002-0-23



5710 Westbourne Avenue
Columbus, OH 43213
614-892-0162

Unconfined Compressive Strength of Rock Core (ASTM D7012 Method C)

(Project: ROS-772-7.64, Boring Location: B-002-0-23, NQ2-1, Depth: 13.0-13.4ft)

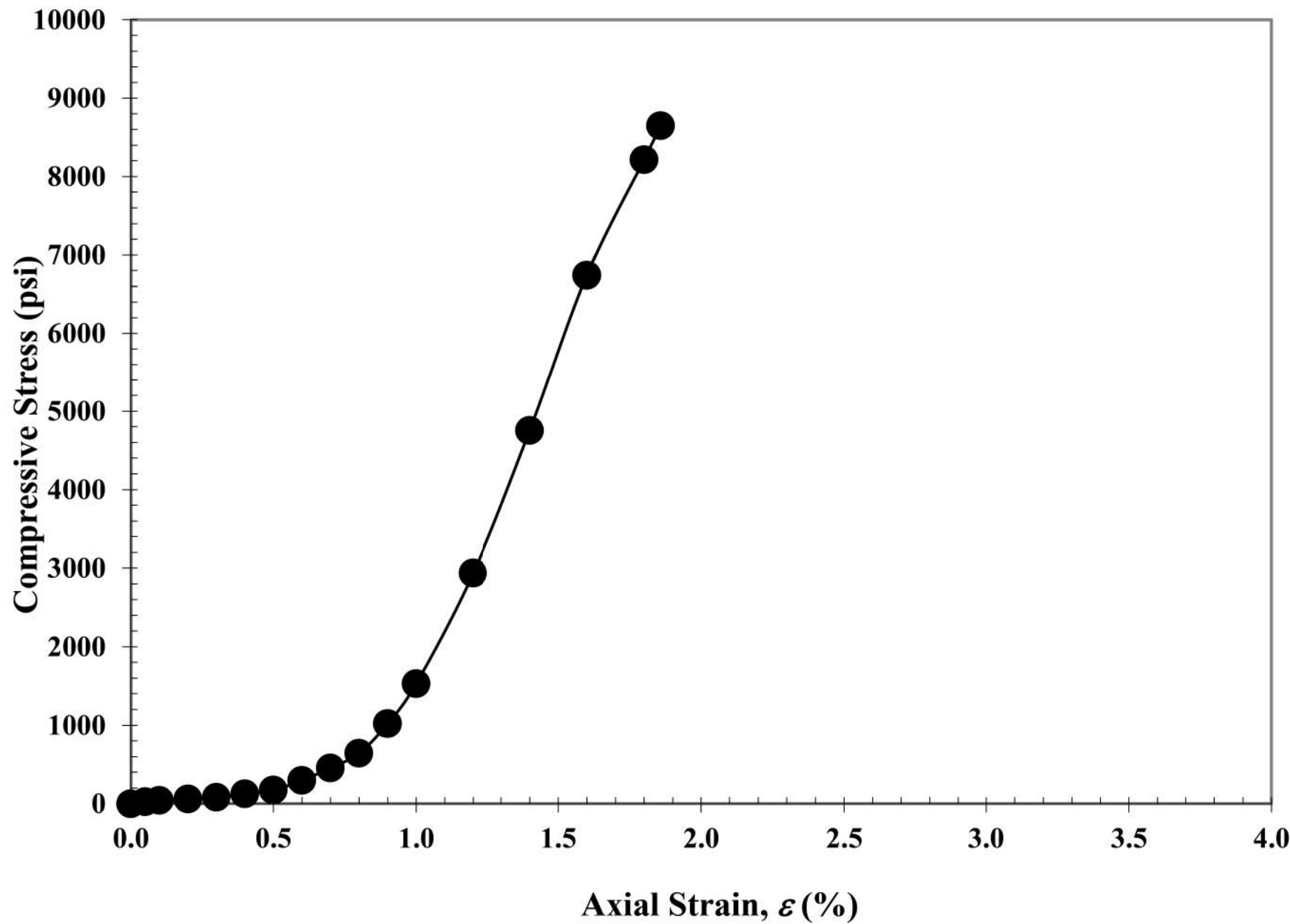
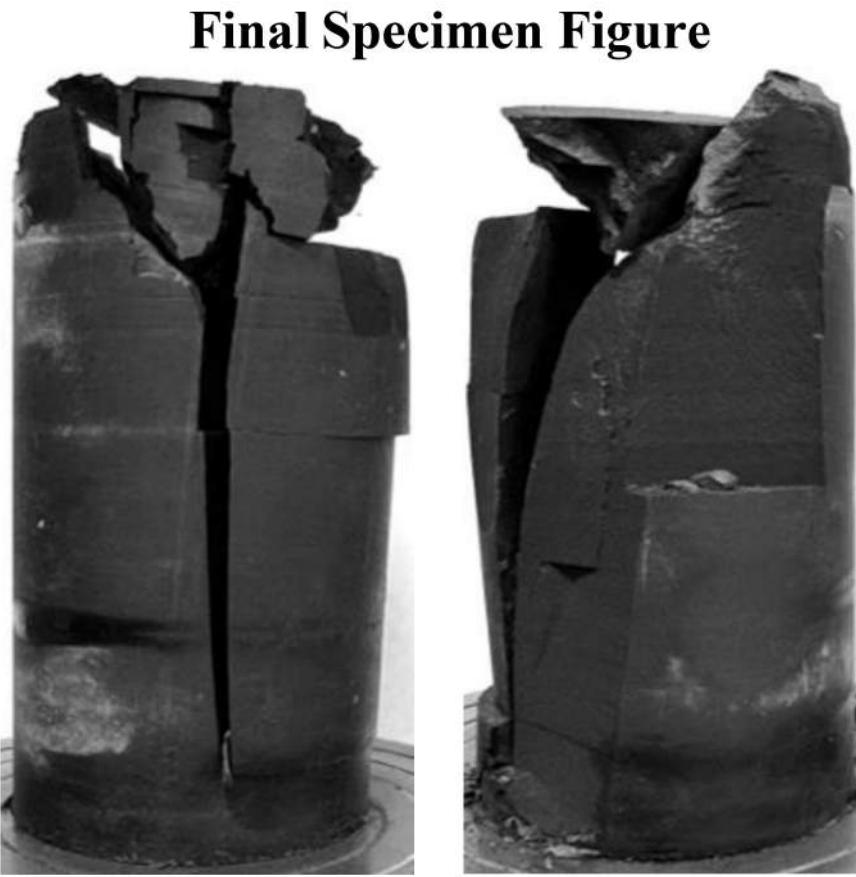
Tested Date: 11/20/2024

Specimen Properties

Average Dia., D_{avg} (in):	1.98
Average Height, H_{avg} (in):	4.04
Length to Diameter Ratio:	2.03
Area, A (in ²):	3.09
Volume, V (in ³):	12.47
Wet Mass of Specimen (lb):	1.0
Moisture Content (%):	1.5
Dry Mass of Specimen (lb):	1.0
Wet Unit Weight, γ (lb/ft ³):	135.8
Dry Unit Weight, γ_d (lb/ft ³):	133.9

Results

Unconfined Compressive Strength (psi):	8648	60	(MPa)
Strain (%):	1.9		



Notes: Shale, black, unweathered, strong, slightly fissile.

B-002-0-73

Date Started 8-6-73

Date Completed 8-7-73

Boring No B-2

LOG OF BORING
Sample Type SS Dia 1 3/8"
Casing Length 5' Dia 2 1/2"
Station & Offset 416+00.10' RT. (REAR ABUTMENT)

Notes Elev

Surface Elev 765.3'

Elev.	Depth	Std Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.	
							% Agg	% C.S.	% F.S.	% Sil	% Clay	LL	PI	W.C.				
765.3	0				BROWN SILTY SANDY GRAVEL TOP OF ROCK	2										A-3-b		
762.8	2	40/	1.2	0.3			SANDSTONE, BUFF, FIRM, VERY FINE-GRAINED, BROKEN AND JOINTED. CORE LOSS: 66%											
761.8	4																	
758.3	6				SHALE, DARK-GRAY, FIRM, CARBONACEOUS, FISSILE, BROKEN. CORE LOSS: 1%													
	8		2.9	1.1														
	10																	
	12																	
750.3	14		5.0	0.0														

B-007-0-73

Date Started 8-8-73

Date Completed 8-8-73

Boring No B-7

LOG OF BORING
Sample Type SS Dia 1 3/8"
Casing Length 10' Dia 3 1/2"
Station & Offset 417+05.27' LT. (FORWARD ABUTMENT)

Notes Elev

Surface Elev 770.2'

Elev.	Depth	Std Pen (N)	Rec ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg	% C.S.	% F.S.	% Sil	% Clay	LL	PI	W.C.	
770.2	0														
767.7	2	3/5			BROWN SILT & CLAY	1	6	3	5	53	33	32	12	27	4-6a
765.2	4				BROWN CLAY WITH SHALE FRAGMENTS										
763.2	6	4/7				2	26	6	5	35	28	32	13	21	A-6a
758.2	8				TOP OF ROCK										
	10		1.2	1.8	SANDSTONE, BUFF, FIRM, VERY FINE-GRAINED, BROKEN AND JOINTED. CORE LOSS: 72%										
	12														
	14		3.2	1.8											
750.2	16				SHALE, DARK-GRAY, FIRM, CARBONACEOUS, FISSILE, BROKEN AND JOINTED. NO CORE LOSS.										
	18		5.0	0.0											
	20														



DESIGNER
DT

REVIEWER
CH 11-17-24

PROJECT ID
118518

SUBSET TOTAL
8 8

SHEET TOTAL
P.57 57

GEOTECHNICAL PROFILE - BRIDGE

BRIDGE NO. ROS-772-07.64 OVER RALSTON RUN

UNC TEST OF B-002-0-23 AND HISTORICAL BORING LOGS B-002-0-73 & B-007-0-73