

PROJECT DESCRIPTION

THIS PROJECT, GAL-160-14.33, IS THE EXPLORATION FOR A LANDSLIDE ALONG STATE ROUTE (SR) 160 APPROXIMATELY 1 MILE EAST OF VINTON, GALLIA COUNTY, OHIO. THE LANDSLIDE IS OCCURRING ALONG A PORTION OF SR 160 THAT IS ALIGNED WITH ITS EAST SHOULDER. THE LANDSLIDE IS ENCROACHING INTO BOTH LANES OF THE ROADWAY, AS EVIDENCED BY LONGITUDINAL CRACKING AND FULL WIDTH ASPHALT REPAIR WITHIN THE SECTION. THE LANDSLIDE AFFECTS APPROXIMATELY 725 FEET OF THE ROAD.

HISTORIC RECORDS

ODOT TMS PROVIDES DOCUMENTATION FOR TWO GEOTECHNICAL EXPLORATIONS PERFORMED ALONG SR 160.

GAL-160-14.53 (PID 103068), WAS AN EXPLORATION FOR A GEOHAZARD REMEDIATION APPROXIMATELY 1000 FEET WEST OF THE PROJECT SITE. THE EXPLORATION CONSISTED OF THREE BORINGS DRILLED IN 2016. THE SURFACE MATERIALS ENCOUNTERED INCLUDED ASPHALT AND PAVEMENT BASE TO A DEPTH OF 2.5 TO 4 FEET BELOW THE GROUND SURFACE. THE OVERBURDEN SOILS CONSISTED OF SANDY SILT (A-4A), SILT AND CLAY (A-6A), SILTY CLAY (A-6B), AND CLAY (A-7-6). BORINGS WERE TERMINATED AT DEPTHS OF 35.0 TO 38.6 FEET BELOW THE GROUND SURFACE. BEDROCK WAS ENCOUNTERED AT THE DEPTHS OF 17.4 TO 19.3 FEET. THE BEDROCK CONSISTED OF CLAYSTONE UNDERLAIN BY SILTSTONE. THE CLAYSTONE WAS DESCRIBED AS GRAYISH RED, HIGHLY TO MODERATELY WEATHERED, WEAK, THINLY LAMINATED, AND MODERATELY TO HIGHLY FRACTURED. SIMILARLY, THE SILTSTONE WAS DESCRIBED AS GRAY, SLIGHTLY TO MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, THINLY LAMINATED, AND SLIGHTLY FRACTURED.

GAL-160-15.21 (PID 10647), CONSISTING OF TWO BORINGS, WAS AN EXPLORATON IN 1986 FOR A BRIDGE STRUCTURE OVER RACCOON CREEK, APPROXIMATELY 0.7 MILES WEST OF THE PROJECT SITE. THE OVERBURDEN SOILS CONSISTED OF COARSE AND FINE SAND (A-3A) AND SANDY SILT (A-4A). BEDROCK WAS ENCOUNTERED AT DEPTHS OF 27.5 TO 30.4 FEET. THE BEDROCK WAS DESCRIBED AS BROWN AND GRAY SANDSTONE. THE BORINGS WERE TERMINATED AT DEPTHS OF 32.5 AND 35.4 FEET AFTER CORING 5 FEET OF THE BEDROCK.

GEOLOGY

THE PROJECT SITE IS LOCATED WITHIN THE MARIETTA PLATEAU IN THE ALLEGHENY PLATEAUS. THE MARIETTA PLATEAU IS DESCRIBED AS A DISSECTED HIGH RELIEF PLATEAU. THE GEOLOGY MOSTLY CONSISTS OF FINE-GRAINED ROCKS, RED SHALES AND RED SOILS. LANDSLIDES ARE RELATIVELY COMMON WITH REMNANTS OF ANCIENT LACUSTRINE CLAY-FILLED TEAYS DRAINAGE SYSTEM. THE REGION HAS A HIGH RELIEF (GENERALLY 350 FEET TO 600 FEET NEAR THE OHIO RIVER) WITH ELEVATIONS OF 515 TO 1400 FEET. THE BEDROCK CONSISTS OF PENNSYLVANIAN-AGE UPPER CONEMAUGH GROUP THROUGH PERMIAN-AGE DUNKARD GROUP. THESE GROUPS CONSIST OF CYCLIC SEQUENCES OF RED AND GRAY SHALES, SILTSTONES, SANDSTONES, LIMESTONES AND COALS. THE SITE ALSO CONSISTS OF PLEISTOCENE (TEAYS)-AGE MINFORD CLAY, RED AND BROWN SILTY-CLAY LOAM COLLUVIUM, AND LANDSLIDE DEPOSITS.

RECONNAISSANCE

TERRACON REPRESENTATIVES VISITED THE SITE ON JUNE 16, 2025, TO OBSERVE THE SITE AND NOTED THE LAND SURROUNDING THE PROJECT SITE WAS DESCRIBED AS PRIMARILY RURAL, WITH SOME RESIDENTIAL AND BUSINESS LOCATIONS NEARBY. THE PAVEMENT HAD LONGITUDINAL CRACKS AND SETTLEMENT ALONG APPROXIMATELY 725 FEET OF THE ROAD. ASPHALT REPATCH WAS OBSERVED IN BOTH EASTBOUND AND WESTBOUND LANES OF THE PROJECT SITE.

SUBSURFACE EXPLORATION

TERRACON ADVANCED SEVEN BORINGS TO OBTAIN GEOTECHNICAL DATA FOR THE PROPOSED GEOHAZARD EXPLORATIONS.

- FIVE BORINGS WERE ADVANCED IN THE SOUTHBOUND LANE WITHIN THE PROJECT LIMITS OF SR 160.
- TWO BORINGS WERE ADVANCED ON PRIVATE PROPERTY TO THE NORTH OF THE ROAD ALIGNMENT.

THE BORINGS WERE PERFORMED WITH A MOBILE B-57 (#1181) TRACK-MOUNTED DRILL RIG USING 3¼-INCH INSIDE DIAMETER (ID) HOLLOW STEM AUGERS. STANDARD PENETRATION TEST (SPT) SAMPLING WAS PERFORMED CONTINUOUSLY OR AT 2.5-FOOT INTERVALS UNTIL REFUSAL WAS ENCOUNTERED. BORINGS WERE TERMINATED AFTER ROCK CORING FOR A TOTAL DEPTH RANGING FROM 20 TO 65 FEET. THE ENERGY RATIO (ER) OF MOBILE B-57 SAFETY HAMMER AND DRILL ROD SYSTEM WAS MEASURED TO BE 87.3 PERCENT ON MARCH 27, 2025.

EXPLORATION FINDINGS

THE SURFACE MATERIALS ENCOUNTERED INCLUDED APPROXIMATELY 7 TO 8 INCHES OF ASPHALT, UNDERLAIN BY APPROXIMATELY 4 TO 5 INCHES OF AGGREGATE BASE OR 8 INCHES OF TOPSOIL FOR BORINGS DRILLED OFF-ROAD. BELOW THE SURFACE MATERIALS, A 3.5 TO 6 FOOT LAYER OF FINE-GRAINED SOILS UNDERALIN BY WEATHERED BEDROCK WAS ENCOUNTERED IN BORINGS B-001-0-25 AND B-004-1-25. WEATHERED BEDROCK WAS ENCOUNTERED IN BORINGS B-002-0-25, B-003-0-25, B-004-0-25, B-005-0-25, AND B-006-0-25 BELOW THE SURFACE MATERIALS.

THE FINE-GRAINED SOILS WERE CLASSIFIED AS SILTY CLAY (A-6B) AND CLAY (A-7-6). THE SOILS WERE DESCRIBED AS BROWN TO GRAY, STIFF TO VERY STIFF, DAMP TO MOIST, AND HAVING MODERATE PLASTICITY.

WEATHERED BEDROCK WAS ENCOUNTERED AT DEPTHS OF 1.0 TO 6.0 FEET BELOW THE GROUND SURFACE AND WAS DESCRIBED AS BROWN TO GRAY SANDSTONE AND SHALE. THE WEATHERED BEDROCK WAS AUGERED TO A DEPTH OF 7.0 TO 15.0 FEET BEFORE ENCOUNTERING COREABLE BEDROCK. THE ELEVATION OF THE COREABLE BEDROCK VARIED FROM 691.0 FEET AT BORING B-006-0-25 TO 762.5 FEET AT BORING B-001-0-25. THE COREABLE BEDROCK WAS TYPICALLY INTERBEDDED SHALE AND SANDSTONE, SANDSTONE, SHALE, SILTSTONE WITH MINOR STRATA OF CLAYSTONE AND COAL.

SHALE WAS DESCRIBED AS BROWN TO GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, FINE TO MEDIUM GRAINED, LAMINATED, AND HIGHLY TO MODERATELY FRACTURED. SANDSTONE WAS DESCRIBED AS BROWN TO GRAY, HIGHLY TO SLIGHTLY WEATHERED, STRONG, FINE-GRAINED, THIN BEDDED, AND HIGHLY TO SLIGHTLY FRACTURED. SILTSTONE WAS DESCRIBED AS GRAY TO BROWN, MODERATELY TO SLIGHTY WEATHERED, FINE TO MEDIUM GRAINED, THIN BEDDED, AND MODERATELY TO SLIGHTLY FRACTURED. A FIVE-FOOT-THICK CLAYSTONE LAYER WAS ENCOUNTERED IN BORING B-004-1-25 AND DESCRIBED AS BROWN, HIGHLY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, AND FRACTURED TO MODERATELY FRACTURED. COAL SEAMS WERE ENCOUNTERED IN BORINGS B-005-0-25 (12 INCHES) AND B-006-0-25 (7 INCHES) AND WERE DESCRIBED AS BLACK, HIGHLY WEATHERED, VERY WEAK, AND HIGHLY FRACTURED.

EXPLORATION FINDINGS (CONTINUED)

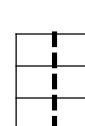
GROUNDWATER WAS NOT ENCOUNTERED IN THE BORINGS DURING THE DRILLING.

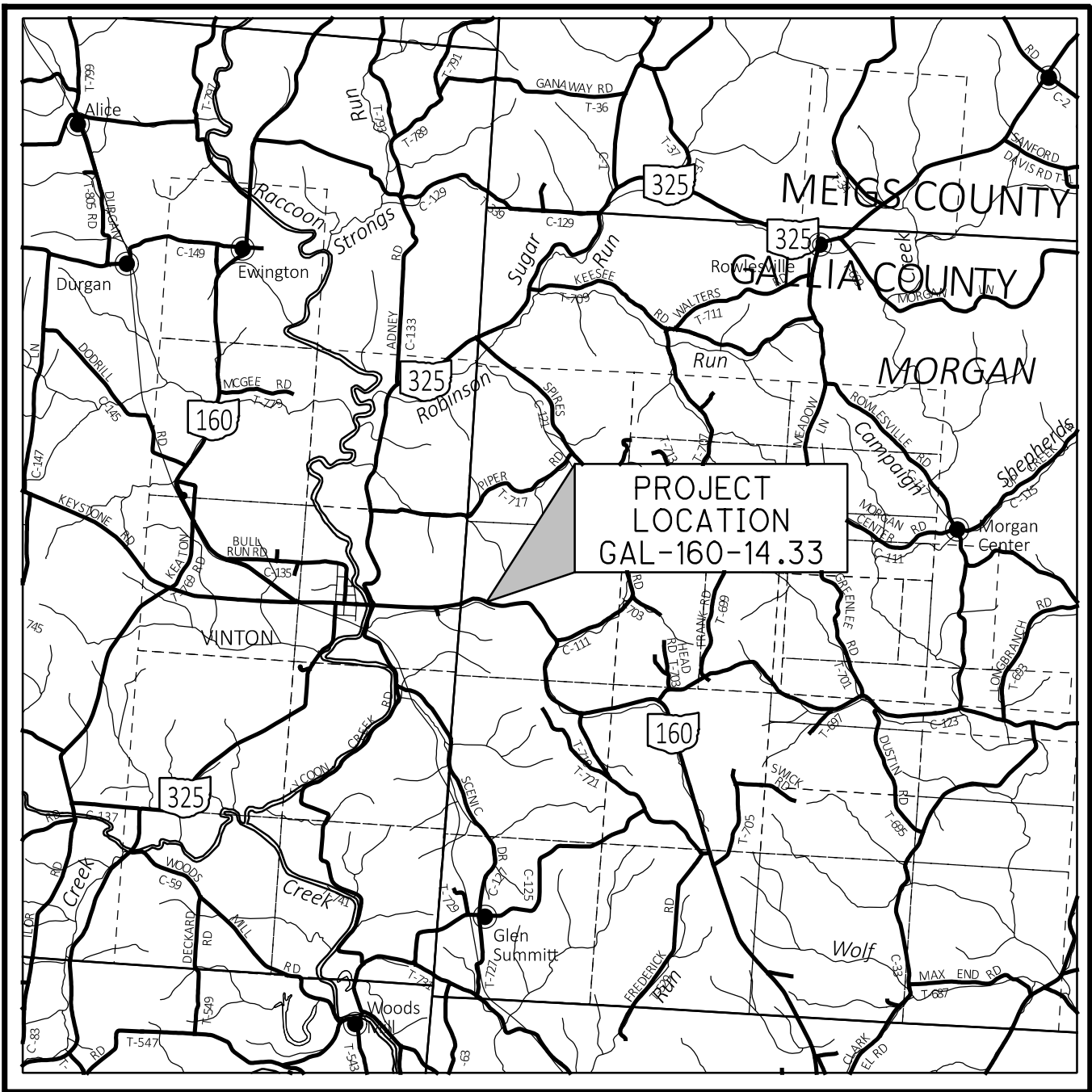
SPECIFICATIONS

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.

AVAILABLE INFORMATION

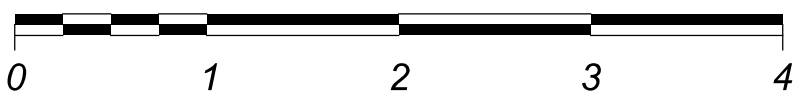
THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND				
DESCRIPTION		ODOT CLASS	CLASSIFIED MECH./VISUAL	
	SILTY CLAY	A-6b	1	0
	CLAY	A-7-6	2	0
	TOTAL		3	0
	CLAYSTONE	VISUAL		
	SANDSTONE	VISUAL		
	SHALE	VISUAL		
	SILTSTONE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	TOPSOIL= X = APPROXIMATE THICKNESS	VISUAL		
	PROJECT 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.			
TR	INDICATES TOP OF ROCK.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
ST	INDICATES A SHELBY TUBE SAMPLE.			
UCS	UNCONFINED COMPRESSIVE STRENGTH (SOIL) SHOWN IN (TSF).			
Qu	INDICATES UNCONFINED COMPRESSIVE TEST (ROCK), ASTM D7012.			
SDI (%)	SLAKE DURABILITY TEST, ASTM D4644.			

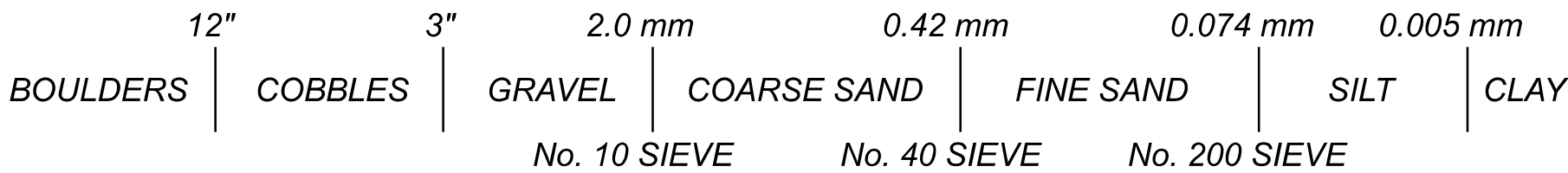


LOCATION MAP

SCALE IN MILES



PARTICLE SIZE DEFINITIONS



RECON. - AAS (TERRACON) 06/16/2025

DRILLING - BC & AAS (TERRACON) 06/16-24/2025

DRAWN - MJ 11/2025

REVIEWED - JRS 05/15/2026

SLAKE DURABILTY TEST RESULTS					
BORING	DEPTH (FT)	DESCRIPTION	FRAGMENT TYPE	MOISTURE CONTENT (%)	SDI (%)
B-001-0-25	43.0'	SHALE, GRAY WEATHERED	TYPE I	1	96
B-004-1-25	20.5'	SHALE, GRAY, WEATHERED	TYPE II	2	68
B-004-1-25	22.0'	SHALE, GRAY, WEATHERED	TYPE II	2	67
B-004-1-25	30.0'	SANDSTONE, GRAY, WEATHERED	TYPE I	3	98

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

MSJ

REVIEWER

JRS 05-15-26

PROJECT ID

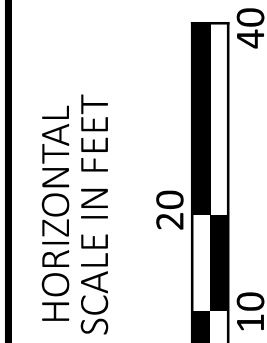
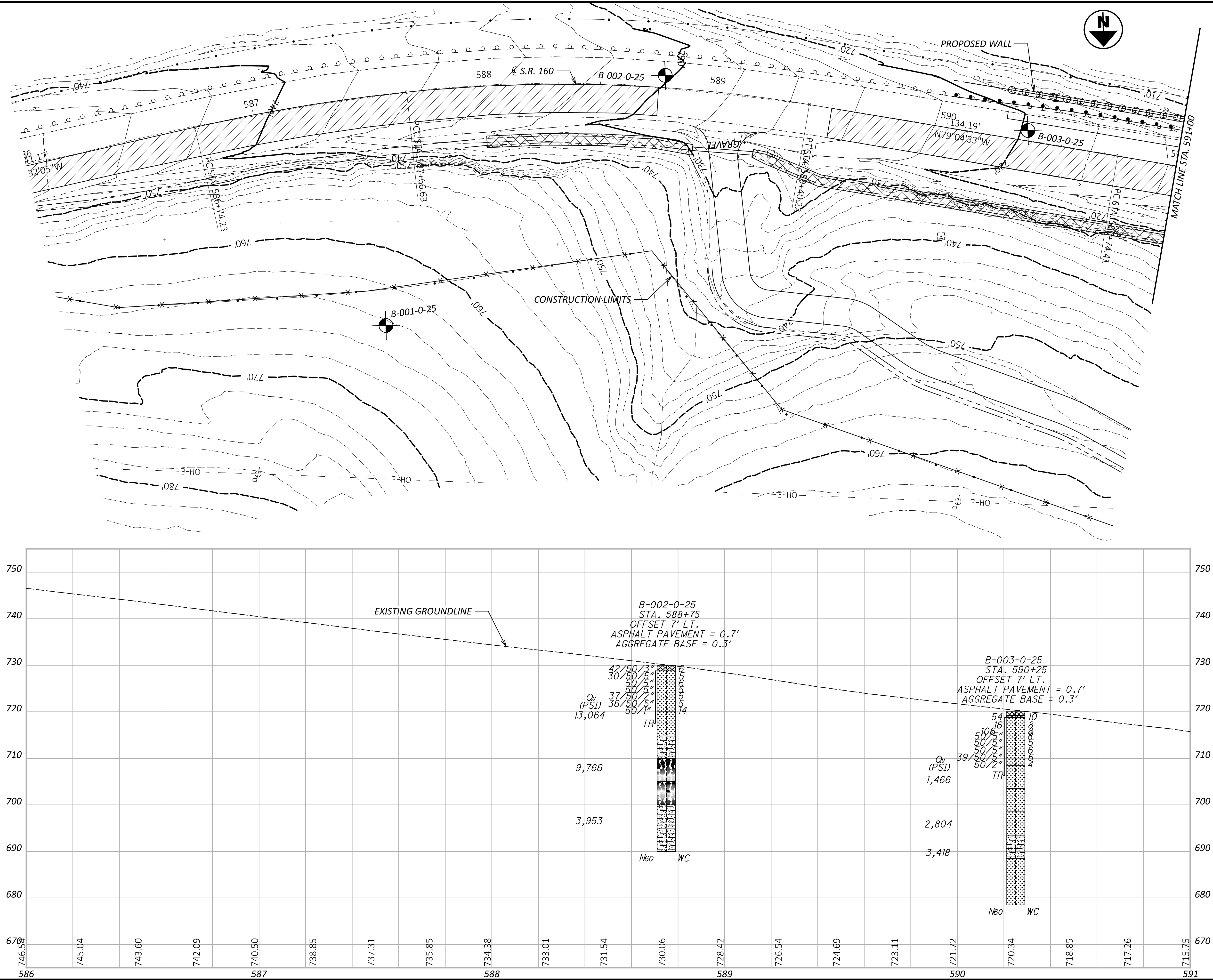
118701

SUBSET

1 33

SHEET

P.56 88



GEOTECHNICAL PROFILE - LANDSLIDE
STA. 596+00.00 TO STA. 591+00.00 S.R. 160

DESIGN AGENCY



DESIGNER

MSJ

REVIEWER

JRS 05-15-26

PROJECT ID

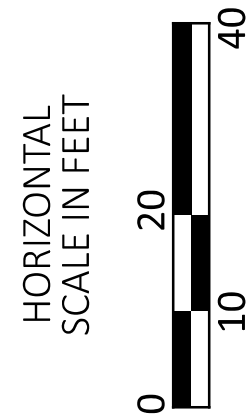
118701

SUBSET TOTAL

2 33

SHEET TOTAL

P.57 88



DESIGN AGENCY

Stantec
 10200 Alliance Road,
 Suite 300
 Cincinnati, OH 45242
 (513) 842-8200

DESIGNER

MSJ

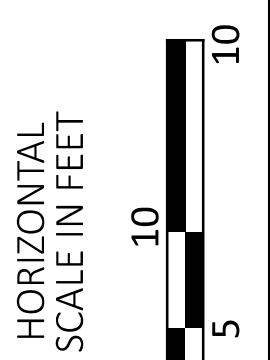
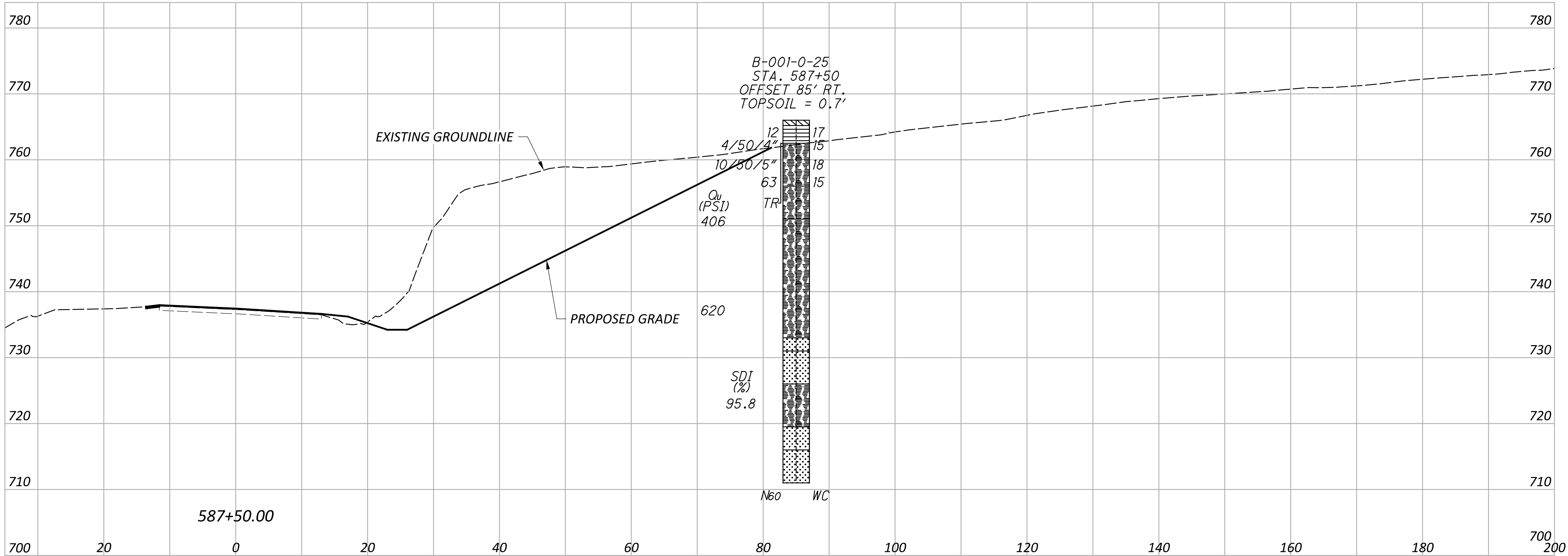
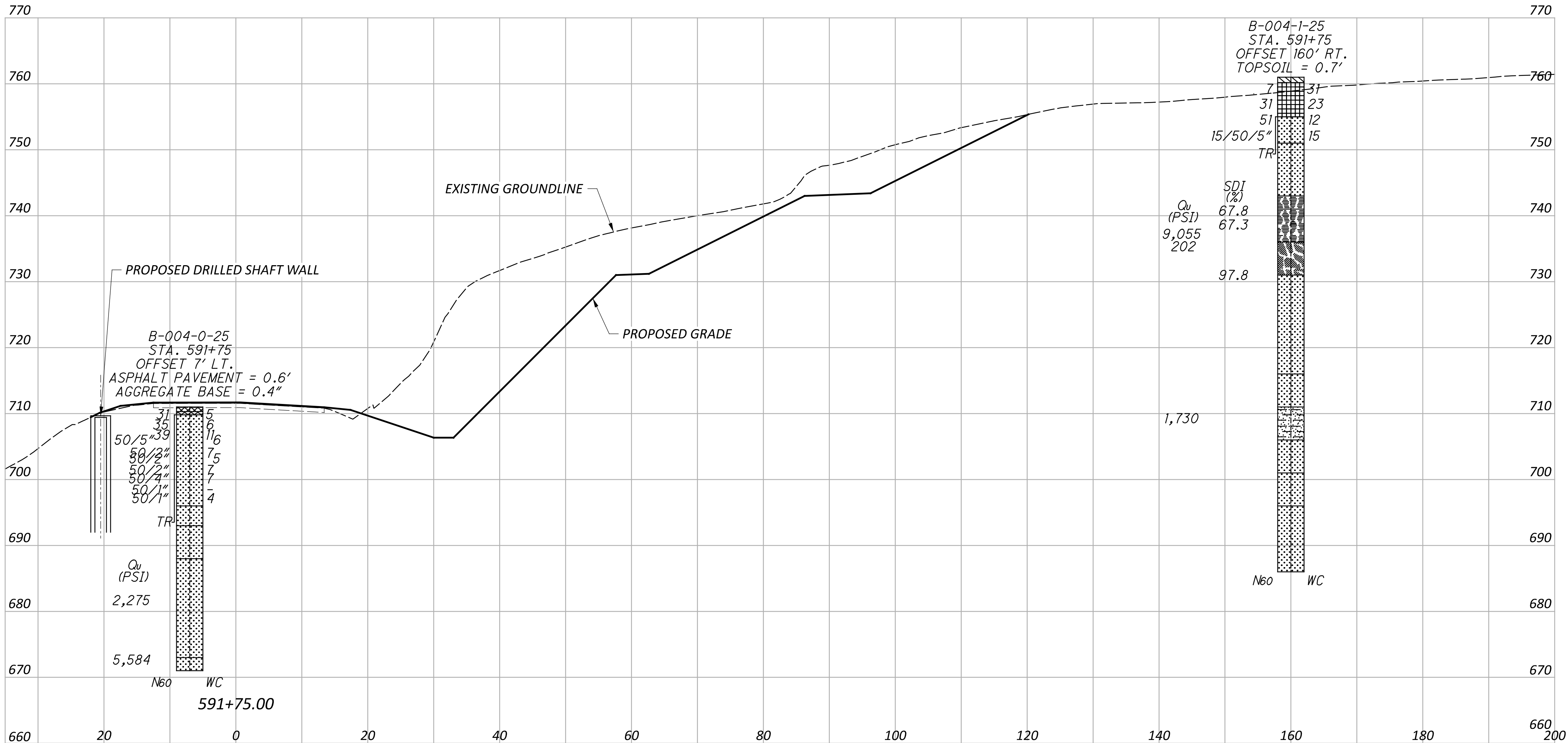
REVIEWER

JRS 05-15-2

PROJECT ID

118701

SUBSET	TOTAL
3	33
SHEET	TOTAL
P.58	88



GEOTECHNICAL PROFILE - LANDSLIDE
CROSS SECTIONS STA. 587+50.00 & 591+75.00 S.R. 160



DESIGNER	MSJ
REVIEWER	JRS
PROJECT ID	118701
SUBSET	4
TOTAL	33
SHEET	P.59
TOTAL	88

GAL-160-14.33

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:02:29 AM PLOTDRY: OHDOT_PDF.pltcfgr PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCev02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25
pw:\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 10\Galila\118701\402 Engineering_Stantec\Geotechnical\Sheets\118701_YL001.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE				DRILLING FIRM / OPERATOR: TC / B.COGAR				DRILL RIG: B-57 (#1181)				STATION / OFFSET: 587+50, 85' RT.				EXPLORATION N			
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		B-001-0-25		PAGE		ELEVATION: 766.0 (MSL) EOB: 55.0 ft.		LAT / LONG: 38.976309, -82.321761		1 OF 1			
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 3/27/25		ENERGY RATIO (%): 87.3		GR		CS		FS		SI		WC			
START: 6/24/25		END: 6/24/25		SAMPLING METHOD: SPT / NQ2		SPT / RQD		REC SAMPLE ID		HP (tsf)		GR		CS		FS			
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS		GRADATION (%)		ATTERBERG		ODOT CLASS (gt)		HOLE SEALED					
TOPSOIL (8")				766.0		1		N ₆₀		(%)		GR		CS		FS			
VERY STIFF, BROWN MOTTLED WITH GRAY, SILTY CLAY, "AND" FINE TO COARSE SAND, TRACE GRAVEL, DAMP				765.3		2		12		4.00		36		18		17			
				762.5		3		100		SS-1		4		36		18			
						4		-		SS-2		-		-		-			
						5													
						6		-		73		SS-3		-		-			
						7													
						8													
						9		63		100		SS-4		-		-			
INTERBEDDED SHALE (85%) AND SANDSTONE (15%), FRACTURED, NARROW, SLIGHTLY ROUGH, RQD 17%, REC. 100%; SHALE: BROWN, HIGHLY WEATHERED, WEAK, MEDIUM GRAINED, LAMINATED, ARGILLACEOUS; SANDSTONE: BROWN, HIGHLY WEATHERED, WEAK, FINE GRAINED, THIN BEDDED, ARENACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH.				756.0		10		17		26		-		-		15			
						11													
						12		100		NQ2-1									
						13													
						14													
						15													
						16													
						17		57		100		NQ2-2							
INTERBEDDED SHALE (85%) AND SANDSTONE (15%), FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH, RQD 57%, REC. 100%; SHALE: GRAY, HIGHLY WEATHERED, WEAK, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS; SANDSTONE: BROWN, HIGHLY WEATHERED, WEAK, FINE GRAINED, THIN BEDDED, ARENACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH. @15' to 15.5' ; UNIT WEIGHT= 146 pcf, Qu= 406 psi.				736.0		18		100		NQ2-3						CORE			
						19													
						20													
						21													
						22													
						23													
						24													
						25													
SHALE, GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 92%, REC 100%.				733.0		26		100		NQ2-4						CORE			
						27													
						28													
						29													
						30													
						31													
						32													
						33													
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 92%, REC 100%. SANDSTONE: GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.				731.0		34		100		NQ2-5						CORE			
						35													
						36													
						37													
						38													
						39													
						40													
						41													
SHALE, GRAY, SLIGHTLY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 96%, REC 100%.				726.0		42		100		NQ2-6						CORE			
						43													
						44													
						45													
						46													
						47													
						48													
						49													
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 81%, REC 100%.				719.5		50		100		NQ2-7						CORE			
						51													
						52													
						53													
						54													
						55													
						56													
						57													
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY TO SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.				711.0		58		100		NQ2-8						CORE			
						59													
						60													
						61													
						62													
						63													
						64													
						65													

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED BENTONITE GROUT; POURED QUICKCRETE

B-001-0-25



Run #:	Depth	Recovery	RQD
NQ2-1	10.0'	60"/60"	10"/60"
NQ2-2	15.0'	60"/60"	34"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			
			17%
			57%

B-001-0-25



Run #:	Depth	Recovery	RQD
NQ2-3	20.0'	60"/60"	33"/60"
NQ2-4	25.0'	60"/60"	35"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			
			55%
			58%

B-001-0-25



Run #:	Depth	Recovery	RQD
NQ2-5	30.0'	60"/60"	100%
NQ2-6	35.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-001-0-25



Run #:	Depth	Recovery	RQD
NQ2-7	40.0'	60"/60"	100%
NQ2-8	45.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-001-0-25



Run #:	Depth	Recovery	RQD
NQ2-9	50.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

GAL-160-14-33

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:15:05 AM PLTDRV: OHDOT_PDF.pltctg PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCv02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25 pw:\ohdot-pw.bentley.com\ohdot-pw-02\Documents\01 Active Projects\District 10\Galila\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL005.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE			DRILLING FIRM / OPERATOR: TC / B.COGAR		DRILL RIG: B-57 (#1181)		STATION / OFFSET: 588+75, 7' LT.		EXPLORATION ID	
TYPE: LANDSLIDE			SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		B-002-0-25	
PID: 118701	SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 3/27/25		ELEVATION: 730.0 (MSL) EOB: 40.0 ft.		PAGE	
START: 6/16/25	END: 6/17/25		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 87.3		LAT / LONG: 38.976016, -82.322191		1 OF 1	
MATERIAL DESCRIPTION AND NOTES			ELEV.		REC SAMPLE		GRADATION (%)		HOLE	
			730.0		ID		GR CS FS SI CL LL PL PI WC		ODOT CLASS (G)	
ASPHALT (8")			729.3		78 SS-1				Rock (V)	
AGGREGATE BASE (4")			729.0							
SANDSTONE, BROWN, SEVERELY WEATHERED.					73 SS-2				Rock (V)	
					100 SS-3				Rock (V)	
					100 SS-4				Rock (V)	
					88 SS-5				Rock (V)	
					82 SS-6				Rock (V)	
			720.0		100 SS-7				Rock (V)	
SANDSTONE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 60%, REC 72%, @10.6' to 11.1' ; UNIT WEIGHT= 166.1 pcf, Qu= 13,064 psi.					72 NQ2-1				CORE	
SILTSTONE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 87%, REC 100%.			715.0		100 NQ2-2				CORE	
SHALE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE GRAINED, THIN BEDDED, ARGILLACEOUS, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100% @22 to 22.5' ; UNIT WEIGHT= 161.4 pcf, Qu= 9,766 psi.			710.0		100 NQ2-3				CORE	
SHALE, GRAY, MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, FINE GRAINED, THIN BEDDED, ARGILLACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 90%, REC 100%.			705.0						CORE	
SILTSTONE, GRAY, HIGHLY TO MODERATELY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, VERY THIN BEDDED, ARENACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 72%, REC 100%.			700.0		100 NQ2-5				CORE	
SILTSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, VERY THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.			695.0		100 NQ2-6				CORE	
			690.0							
			EOB							
			40							

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; TREMIED BENTONITE GROUT

B-002-0-25



Run #:	Depth	Recovery	RQD
NQ2-1	10.0'	43"/60"	36"/60"
NQ2-2	15.0'	60"/60"	52"/60"

GAL-SR 160-14.33 Landslide (PID 118701)

DESIGN AGENCY

Stantec

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

MSJ

REVIEWER

JRS 05-15-26

PROJECT ID

118701

SUBSET

9 TOTAL 33

SHEET

P.64 TOTAL 88

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-002-0-25 & ROCK CORE PHOTO

B-002-0-25



Run #:	Depth	Recovery	RQD
NQ2-3	20.0'	60"/60	100%
NQ2-4	25.0'	60"/60	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-002-0-25



Run #:	Depth	Recovery	RQD
NQ2-5	30.0'	60"/60"	100%
NQ2-6	35.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

GAL-160-14.33

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:21:06 AM PLTDRV: OHDOT_PDF.pltctg PENTBL: OHDOT_Pen.tbl USER: Mart.Jennings@stantec.com WORKSPACE: OHDOTCEV02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25
pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL007.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE				DRILLING FIRM / OPERATOR: TC / B.COGAR				DRILL RIG: B-57 (#1181)				STATION / OFFSET: 590+25, 7' LT.				EXPLORATION ID B-003-0-25					
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		ELEVATION: 720.0 (MSL) EOB: 41.5 ft.		PAGE 1 OF 1							
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 87.3		CALIBRATION DATE: 3/27/25		ELEVATION: 720.0 (MSL) EOB: 41.5 ft.		LAT / LONG: 38.976090, -82.322721									
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS		SPT/ RQD		REC SAMPLE ID		HP (tsf)		GRADATION (%)		ATTERBERG		HOLE SEALED			
ASPHALT (8")				720.0		TR		17		44		-		-		-		-			
				719.3				18		54		SS-1		-		-		-		-	
				719.0				8		16		SS-2		-		-		-		-	
								5		106		SS-3		-		-		-		-	
								6		-		SS-4		-		-		-		-	
								20		78		SS-5		-		-		-		-	
								26		-		SS-6		-		-		-		-	
								47		-		SS-7		-		-		-		-	
								50/5"		-		SS-8		-		-		-		-	
								50/5"		-		SS-5		-		-		-		-	
								50/5"		-		SS-6		-		-		-		-	
SANDSTONE, BROWN, SEVERELY WEATHERED.				708.5				39		36		-		-		-		-			
								50/5"		100		SS-8		-		-		-		-	
								11		83		NQ2-1									
								12													
								13													
								14													
								15													
								16													
								17													
								18													
								19													
SANDSTONE, GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, INTERBEDDED WITH SHALE, HIGHLY TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 35%, REC 83%. @14.5' to 15' ; UNIT WEIGHT= 156.8 pcf, Qu= 1,466 psi.				703.5				90		100		NQ2-2									
								20													
								21													
								22													
								23													
								24													
								25													
								26													
								27													
								28													
								29													
SANDSTONE, GRAY, MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, VERY THIN BEDDED, ARENACEOUS, HIGHLY TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 90%, REC 100%.				698.5				80		100		NQ2-3									
								23													
								24													
								25													
								26													
								27													
								28													
								29													
								30													
								31													
								32													
SANDSTONE, GRAY, MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.				688.5				100		100		NQ2-4									
								29													
								30													
								31													
								32													
								33													
								34													
								35													
								36													
								37													
								38													
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.				678.5				100		100		NQ2-5									
								39													
								40													
								41													
								EOB													

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; TREMIED BENTONITE GROUT

B-003-0-25



Run #:	Depth		Recovery		RQD	
NQ2-1	11.5'	16.5'	50"/60"	83%	21"/60"	35%
NQ2-2	16.5'	21.5'	60"/60"	100%	54"/60"	90%

GAL-SR 160-14.33 Landslide (PID 118701)

DESIGN AGENCY

Stantec

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

MSJ

REVIEWER

JRS 05-15-26

PROJECT ID

118701

SUBSET

11 TOTAL 33

SHEET

P.66 TOTAL 88

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-003-0-25 & ROCK CORE PHOTO

B-003-0-25



Run #:	Depth	Recovery	RQD
NQ2-3	21.5'	60"/60"	80%
NQ2-4	26.5'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-003-0-25



Run #:	Depth	Recovery	RQD
NQ2-5	31.5'	60"/60"	100%
NQ2-6	36.5'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

GAL-160-14-33

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:29:45 AM PLTDRV: OHDOT_PDF.pltctg PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCev02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL009.dgn

PROJECT: GAL-SR 160-14-33 LANDSLIDE				DRILLING FIRM / OPERATOR: TC / B.COGAR				DRILL RIG: B-57 (#1181)				STATION / OFFSET: 591+75, 7' LT.				EXPLORATION ID B-004-0-25																					
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		ELEVATION: 711.0 (MSL) EOB: 40.0 ft.		PAGE 1 OF 1																							
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 3/27/25		ENERGY RATIO (%): 87.3		CALIBRATION DATE: 3/27/25		ENERGY RATIO (%): 87.3		LAT / LONG: 38.976172, -82.323248		LAT / LONG: 38.976172, -82.323248																							
START: 6/18/25 END: 6/18/25				SAMPLING METHOD: SPT / NQ2				SPT / RQD				REC SAMPLE ID				GRADATION (%)				ATTERBERG				HOLE SEaled													
MATERIAL DESCRIPTION AND NOTES				ELEV.				DEPTHS				N ₆₀				GR				LL				PL		WC		ODOT CLASS (GI)									
ASPHALT (7") AGGREGATE BASE (5") SANDSTONE, BROWN, SEVERELY WEATHERED.				711.0				TR				11				31				-				-				-		5		Rock (V)					
				710.4								12				35				-				-				-		6		Rock (V)					
				710.0								10				39				-				-				-		11		Rock (V)					
												50/5"				-				-				-				-		6		Rock (V)					
												6																									
												60/2"				-				-				-				-		7		Rock (V)					
												8				-				-				-				-		5		Rock (V)					
												9																									
												10				-				-				-				-		7		Rock (V)					
												11				50/4"				-				-				-				-		7		Rock (V)	
												12																									
												13				50/1"				-				-				-				-		Rock (V)			
												14				50/1"				-				-				-				-		4		Rock (V)	
								696.0																													
@11.0'; GRAY												33				44				NQ2-1												CORE					
																90				100				NQ2-2												CORE	
@29.4' to 29.9' ; UNIT WEIGHT= 148.2 pcf, Qu= 2,275 psi.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, WEAK TO MODERATELY STRONG, FINE TO MEDIUM GRAINED, VERY THIN BEDDED, ARENACEOUS, INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, WEAK TO MODERATELY STRONG, FINE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 90%, REC 100%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 70%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 70%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 70%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 70%.																																CORE					
SANDSTONE: GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 70%.																																CORE					
																				</																	

B-004-0-25



Run #:	Depth		Recovery		RQD	
NQ2-3	23.0'	28.0'	60"/60"	100%	60"/60"	100%
NQ2-4	28.0'	33.0'	60"/60"	100%	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)						

B-004-0-25



Run #:	Depth		Recovery		RQD	
NQ2-5	33.0'	38.0'	60"/60"	100%	60"/60"	100%
NQ2-6	38.0'	40.0'	24"/24"	100%	19"/24"	79%
GAL-SR 160-14.33 Landslide (PID 118701)						

GAL-160-14.33

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:32:48 AM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCev02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25 pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL011.dgn

PROJECT: GAL-SR 160-14-33 LANDSLIDE			DRILLING FIRM / OPERATOR: TC / B.COGAR			DRILL RIG: B-57 (#1181)			STATION / OFFSET: 591+75, 160' RT.			EXPLORATION ID: B-004-1-25															
TYPE: LANDSLIDE			SAMPLING FIRM / LOGGER: TC / A. AL SAWI			HAMMER: SAFETY HAMMER			ALIGNMENT: SR 160			PAGE															
PID: 118701 SFN: N/A			DRILLING METHOD: 3.25" HSA / NQ2			CALIBRATION DATE: 3/27/25			ELEVATION: 761.0 (MSL) EOB: 75.0 ft.			1 OF 2															
START: 6/20/25			END: 6/24/25			SAMPLING METHOD: SPT / NQ2			ENERGY RATIO (%): 87.3			LAT / LONG: 38.976625, -82.323198															
MATERIAL DESCRIPTION AND NOTES						ELEV.		DEPTHS		SPT/ RQD		REC SAMPLE ID		HP (tsf)		GRADATION (%)		ATTERBERG		ODOT CLASS (GI)		HOLE SEALED					
TOPSOIL (8")						761.0		1		3																	
STIFF TO VERY STIFF, BROWN, CLAY, TRACE FINE TO COARSE SAND, TRACE TO LITTLE GRAVEL, LITTLE TO SOME SILT, MOIST TO DAMP						760.3		2		4		7		1.00		11		58		29		31					
								3																			
								4		9		31		2.50		2		1		20		76		47		23	
								5		12																	
								6		10		51		-		-		-		-		-		-		15	
SANDSTONE, BROWN, SEVERELY WEATHERED.						755.0		TR		5		100		SS-2		2		1		1		20					
								7		15		44		-		-		-		-		-		-			
								8		15		51		-		-		-		-		-		-			
								9		15		51		-		-		-		-		-		-			
								10		15		51		-		-		-		-		-		-			
SHALE, GRAY, MODERATELY WEATHERED, WEAK, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 24%. REC 100%.						743.0				17		100		NQ2-2													
								18		20		90		NQ2-3													
								19		20		90		NQ2-3													
								20		20		90		NQ2-3													
								21		20		90		NQ2-3													
SHALE, GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 65%, REC 90%. Interbedded with sandstone @24' to 24.5' ; UNIT WEIGHT= 164.7 pcf, Qu= 9,055 psi.						741.0				22		100		NQ2-1													
								23		22		65		90		NQ2-3											
								24		22		65		90		NQ2-3											
								25		22		65		90		NQ2-3											
								26		22		65		90		NQ2-3											
CLAYSTONE, BROWN, HIGHLY WEATHERED, WEAK TO MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 25%. REC 50%. Interbedded with shale @25.5' to 26' ; Qu= 202 psi.						736.0				27		100		NQ2-5													
								28		27		100		100		NQ2-5											
								29		27		100		100		NQ2-5											
								30		27		100		100		NQ2-5											
								31		27		100		100		NQ2-5											
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%. Interbedded with shale						731.0				32		100		NQ2-6													
								33		32		100		100		NQ2-6											
								34		32		100		100		NQ2-6											
								35		32		100		100		NQ2-6											
								36		32		100		100		NQ2-6											
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%. Interbedded with shale						716.0				37		100		NQ2-7													
								38		37		100		100		NQ2-7											
								39		37		100		100		NQ2-7											
								40		37		100		100		NQ2-7											
								41		37		100		100		NQ2-7											
SILTSTONE, GRAY, SLIGHTLY WEATHERED, WEAK TO MODERATELY STRONG, FINE GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%. Interbedded with sandstone @51' to 51.5' ; UNIT WEIGHT= 160.3 pcf, Qu= 1,730 psi.						711.0				42		100		NQ2-8													
								43		42		100		100		NQ2-8											
								44		42		100		100		NQ2-8											
								45		42		100		100		NQ2-8											
								46		42		100		100		NQ2-8											
SHALE, GRAY, SLIGHTLY WEATHERED, WEAK, FINE GRAINED, THIN BEDDED, ARGILLACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						706.0				47		100		NQ2-9													
								48		47		100		100		NQ2-9											
								49		47		100		100		NQ2-9											
								50		47		100		100		NQ2-9											
								51		47		100		100		NQ2-9											
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM GRAINED, VERY THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						701.0				52		100		NQ2-10													
								53		52		100		100		NQ2-10											
								54		52		100		100		NQ2-10											
								55		52		100		100		NQ2-10											
								56		52		100		100		NQ2-10											
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						696.0				57		100		NQ2-11													
								58		57		100		100		NQ2-11											
								59		57		100		100		NQ2-11											
								60		57		100		100		NQ2-11											
								61		57		100		100		NQ2-11											
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						692.0				62		100		NQ2-12													
								63		62		100		100		NQ2-12											
								64		62		100		100		NQ2-12											
								65		62		100		100		NQ2-12											
								66		62		100		100		NQ2-12											

GAL-160-14.33

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 8:35:03 AM PLTDRY: OHDOT_PDF.pltcfgr PENTBL: OHDOT Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCev02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25
pw:\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402 Engineering_Stantec\Geotechnical\Sheets\118701_YL012.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE				DRILLING FIRM / OPERATOR:				TC / B.COGAR									
TYPE: LANDSLIDE				SAMPLING FIRM / LOGGER:				TC / A. AL SAWI									
PID: 118701 SFN: N/A				DRILLING METHOD: 3.25" HSA / NQ2													
START: 6/20/25 END: 6/24/25				SAMPLING METHOD: SPT / NQ2													
MATERIAL DESCRIPTION AND NOTES								ELEV.		DEPTHS							
								692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.										70							
										71							
										72							
										73							
										74							
										75							
								686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR									
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI									
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2											
START: 6/20/25 END: 6/24/25		SAMPLING METHOD: SPT / NQ2											
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS							
				692.0		69							
(CONTINUED) SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG; FINE TO MEDIUM GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.						70							
						71							
						72							
						73							
						74							
						75							
				686.0		EOB							

PROJECT: GAL-SR 160-14.33 LANDSLIDE		DRILLING FIRM / OPERATOR:		TC / B.COGAR	
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER:		TC / A. AL SAWI	
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2			
START: 6/20/2					

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH BENTONITE GROUT; POURED QUICKCRETE

B-004-1-25



Run #:	Depth		Recovery		RQD	
NQ2-1	10.0'	15.0'	60"/60"	100%	5"/60"	8%
NQ2-2	15.0'	20.0'	60"/60"	100%	17"/60"	28%

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-3	20.0'	54"/60"	39"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-4	25.0'	30"/60"	50%
NQ2-5	30.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-6	35.0'	60"/60"	100%
NQ2-7	40.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-8	45.0'	60"/60"	100%
NQ2-9	50.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-10	55.0'	60"/60"	100%
NQ2-11	60.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

B-004-1-25



Run #:	Depth	Recovery	RQD
NQ2-12	65.0'	60"/60"	100%
NQ2-13	70.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			

GAL-160-14.33

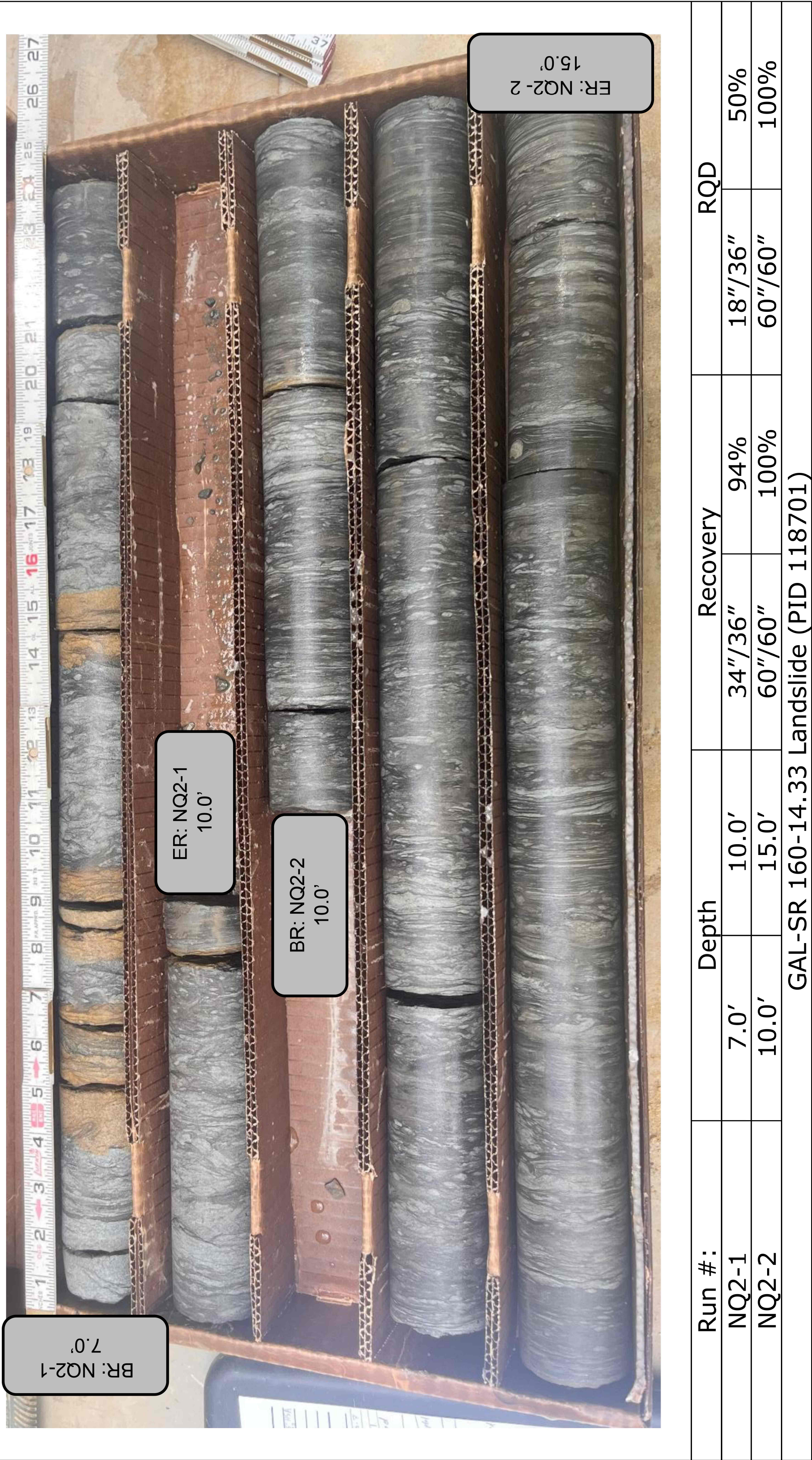
MODEL: Sheet PAPER: 34x22 (in.) DATE: 5/15/2026 TIME: 8:46:48 AM PLTDRV: OHDOT_PDF.pltctg PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCv02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL016.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE				DRILLING FIRM / OPERATOR: TC / B.COGAR				DRILL RIG: B-57 (#1181)				STATION / OFFSET: 593+25, 7' LT.				EXPLORATION ID B-005-0-25													
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		ELEVATION: 703.0 (MSL) EOB: 40.0 ft.		PAGE 1 OF 1															
PID: 118701	SFN: N/A	DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 3/27/25		ELEVATION: 703.0 (MSL) EOB: 40.0 ft.		CALIBRATION DATE: 3/27/25		ELEVATION: 703.0 (MSL) EOB: 40.0 ft.		LAT / LONG: 38.976299, -82.323763		LAT / LONG: 38.976299, -82.323763															
START: 6/18/25	END: 6/18/25	SAMPLING METHOD: SPT / NQ2		SPT / NQ2		SPT / NQ2		SPT / NQ2		SPT / NQ2		SPT / NQ2		SPT / NQ2															
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS		SPT/ RQD		REC N ₆₀		HP (tsf)		GR		CS FS SI		CL LL PL PI		WC		ODOT CLASS (GI)		HOLE SEALED					
ASPHALT (8") AGGREGATE BASE (4") SANDSTONE, BROWN, SEVERELY WEATHERED.				703.0		TR		10		32		-		-		-		-		10		Rock (V)							
				702.3				12		41		SS-1		-		-		-		-		12		Rock (V)					
				702.0				12		41		SS-2		-		-		-		-		12		Rock (V)					
								12		70		SS-3		-		-		-		-		12		Rock (V)					
								50/5"		-		SS-4		-		-		-		-		9		Rock (V)					
								696.0				50/3"		33		SS-5		-		-		-		5		Rock (V)			
												50		94		NQ2-1										CORE			
								693.0				100		100		NQ2-2										CORE			
@15.5' to 16' ; UNIT WEIGHT= 143.9 pcf, Qu= 1,359 psi.				683.0				100		100		NQ2-3												CORE					
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, VERY THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 90%, REC 100%.				673.0				90		100		NQ2-4												CORE					
SANDSTONE, GRAY, MODERATELY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 35%, REC 100%. COAL, BLACK, HIGHLY WEATHERED, VERY WEAK, VERY FINE GRAINED, LAMINATED TO THIN BEDDED, CARBONACEOUS, HIGHLY FRACTURED, OPEN, SLICKENSIDED; RQD 0%, REC 100%. SHALE, GRAY, HIGHLY WEATHERED, WEAK, FINE GRAINED, THIN BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 21%, REC 100%. SHALE, GRAY, HIGHLY WEATHERED, WEAK, MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 48%, REC 90%. @35.5' to 36' ; Qu= 148 psi.				671.0				30		98		NQ2-6												CORE					
				670.0																									
				668.0																									

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; TREMIED BENTONITE GROUT

B-005-0-25



B-005-0-25



Run #:	Depth	Recovery	RQD
NQ2-3	15.0'	60"/60"	100%
NQ2-4	20.0'	60"/60"	54"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			
			90%

B-005-0-25



Run #:	Depth	Recovery	RQD
NQ2-5	25.0'	60"/60"	54"/60"
NQ2-6	30.0'	59"/60"	18"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			
			30%

B-005-0-25



Run #:	Depth	Recovery	RQD
NQ2-7	35.0'	54"/60"	29"/60"
GAL-SR 160-14.33 Landslide (PID 118701)			
		90%	48%

GAL-160-14.33

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 5/15/2026 TIME: 9:05:44 AM PLTDRV: OHDOT_PDF.pltctg PENTBL: OHDOT_Pen.tbl USER: Matt.Jennings@stantec.com WORKSPACE: OHDOTCev02 WORKSET: 118701 PRODUCT: OpenRoadsDesigner 24.00.02.25

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 10\Gallia\118701\402-Engineering_Stantec\Geotechnical\Sheets\118701_YL019.dgn

PROJECT: GAL-SR 160-14.33 LANDSLIDE				DRILLING FIRM / OPERATOR: TC / B.COGAR		DRILL RIG: B-57 (#1181)		STATION / OFFSET: 594+75, 7' LT.										EXPLORATION ID B-006-0-25							
TYPE: LANDSLIDE		SAMPLING FIRM / LOGGER: TC / A. AL SAWI		HAMMER: SAFETY HAMMER		ALIGNMENT: SR 160		ELEVATION: 692.0 (MSL) EOB: 40.0 ft.										PAGE 1 OF 1							
PID: 118701 SFN: N/A		DRILLING METHOD: 3.25" HSA / NQ2		SPT / NQ2		ENERGY RATIO (%): 87.3		LAT / LONG: 38.976491, -82.324240																	
START: 6/19/25		END: 6/19/25		SAMPLING METHOD:				SPT/ RQD		REC SAMPLE ID		HP (tsf)		GR		GRADATION (%)		ATTERBERG		ODOT CLASS (GI)		HOLE SEALED			
MATERIAL DESCRIPTION AND NOTES				ELEV.		DEPTHS																			
ASPHALT (8") AGGREGATE BASE (4")				692.0		TR		8		23		SS-1		-		-		-		-		Rock (V)			
				691.3				10		28		SS-2		-		-		-		-		Rock (V)			
				691.0				9		10		39		SS-2		-		-		-		Rock (V)			
								8		9		28		SS-3		-		-		-		Rock (V)			
SANDSTONE, BROWN, SEVERELY WEATHERED.				687.0				15		58		SS-4		-		-		-		-		Rock (V)			
								17		23		-		SS-5		-		-		-		Rock (V)			
								22		50/5"		-		SS-6		-		-		-		Rock (V)			
								50/4"		-		100		SS-6		-		-		-		Rock (V)			
SANDSTONE, BROWN, MODERATELY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 73%, REC 100%. @11.2'; GRAY @12' to 12.5' ; UNIT WEIGHT= 159.8 pcf, Qu= 9,213 psi.				682.0				50/2"		-		SS-7		-		-		-		-		Rock (V)			
								10				100		NQ2-1										CORE	
								73																	
SANDSTONE, BROWN, SLIGHTLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED TO INTACT, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 100%.				677.0				100		100		NQ2-2													
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, MEDIUM TO COARSE GRAINED, THIN BEDDED, ARENACEOUS, SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 100%, REC 28%. COAL, BLACK, HIGHLY WEATHERED, VERY WEAK, VERY FINE GRAINED, LAMINATED TO THIN BEDDED, CARBONACEOUS, HIGHLY FRACTURED, OPEN, SLICKENSIDED; RQD 0%, REC 100%. SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK, MEDIUM GRAINED, THICK BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 53%, REC 100%.				672.0				33		80		NQ2-3													
SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK, MEDIUM GRAINED, THICK BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 53%, REC 100%.				670.6																					
				669.8																					
SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK, MEDIUM GRAINED, THICK BEDDED, ARGILLACEOUS, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; RQD 53%, REC 100%.				652.0		EOB		52		100		NQ2-6										CORE			

@32' to 32.5' : Qu= 75 psi.

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PLACED ASPHALT PATCH; TREMIED BENTONITE GROUT

B-006-0-25



Run #:	Depth	Recovery	RQD
NQ2-1	10.0'	60"/60"	44"/60"
NQ2-2	15.0'	60"/60"	60"/60"

GAL-SR 160-14.33 Landslide (PID 118701)

B-006-0-25



Run #:	Depth	Recovery	RQD
NQ2-3	20.0'	48"/60"	80%
NQ2-4	25.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			
		19"/60"	32%
		30"/60"	50%

B-006-0-25



Run #:	Depth	Recovery	RQD
NQ2-5	30.0'	60"/60"	100%
NQ2-6	35.0'	60"/60"	100%
GAL-SR 160-14.33 Landslide (PID 118701)			
		35"/60"	58%
		31"/60"	52%



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-001-0-25 Run No.: R-2
Depth (ft): 15.0'
Description: SHALE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 4.153 2) 4.153 3) 4.153 Avg. 4.153 in

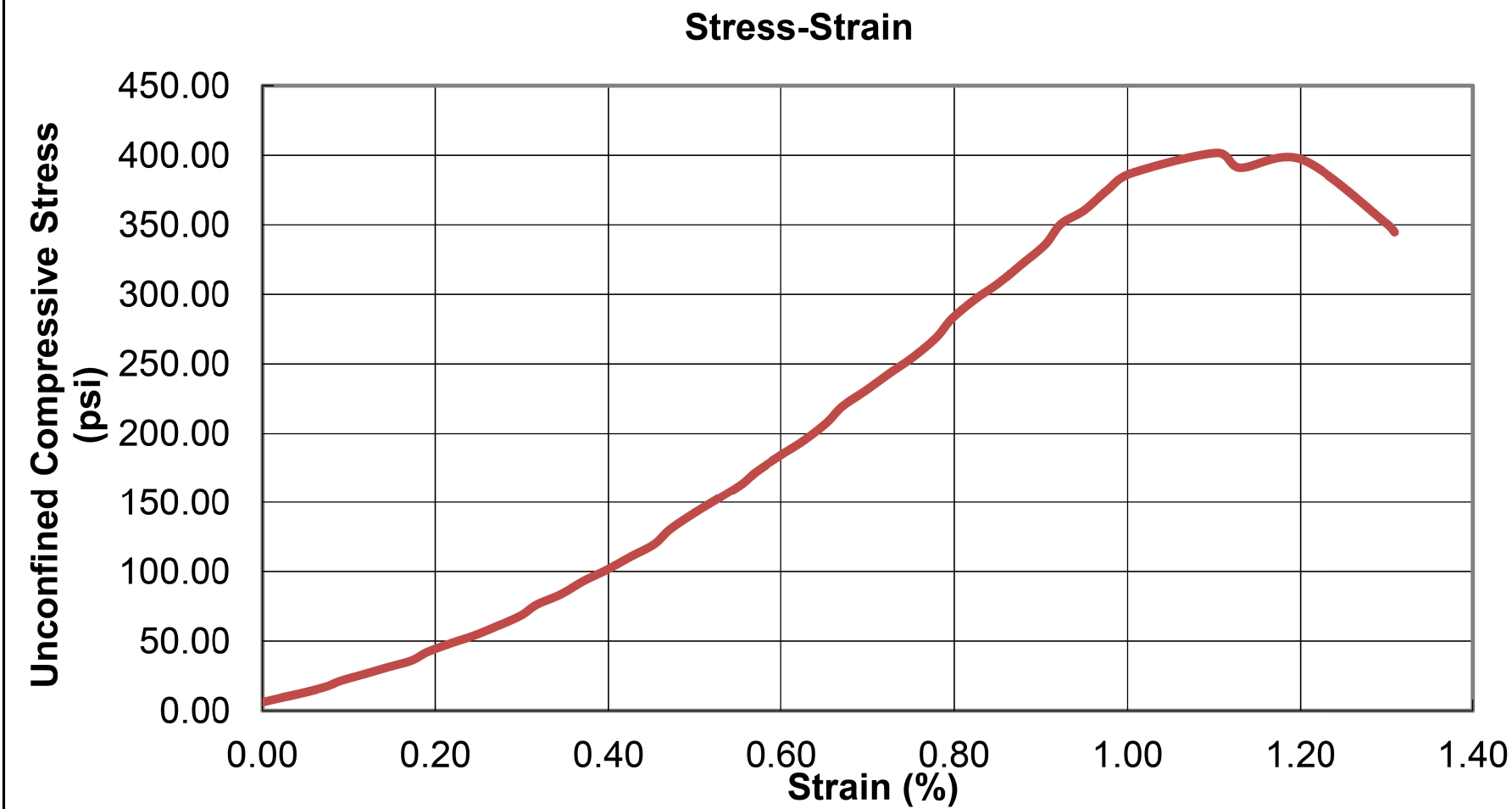
Diameter (in): 1) 1.974 2) 1.974 3) 1.974 Avg. 1.974 in

Uniaxial Compressive Strength: 406 psi Mass: 487.12 g

Load: 1,243 lbs. Wet Unit Weight: 146.0 pcf

L/D: 2.1 Dry Unit Weight: 140.4 pcf

Water Content: 4.0 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-001-0-25 Run No.: R-4
Depth (ft): 28.5-29.0'
Description: SHALE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 4.205 2) 4.205 3) 4.205 Avg. 4.205 in

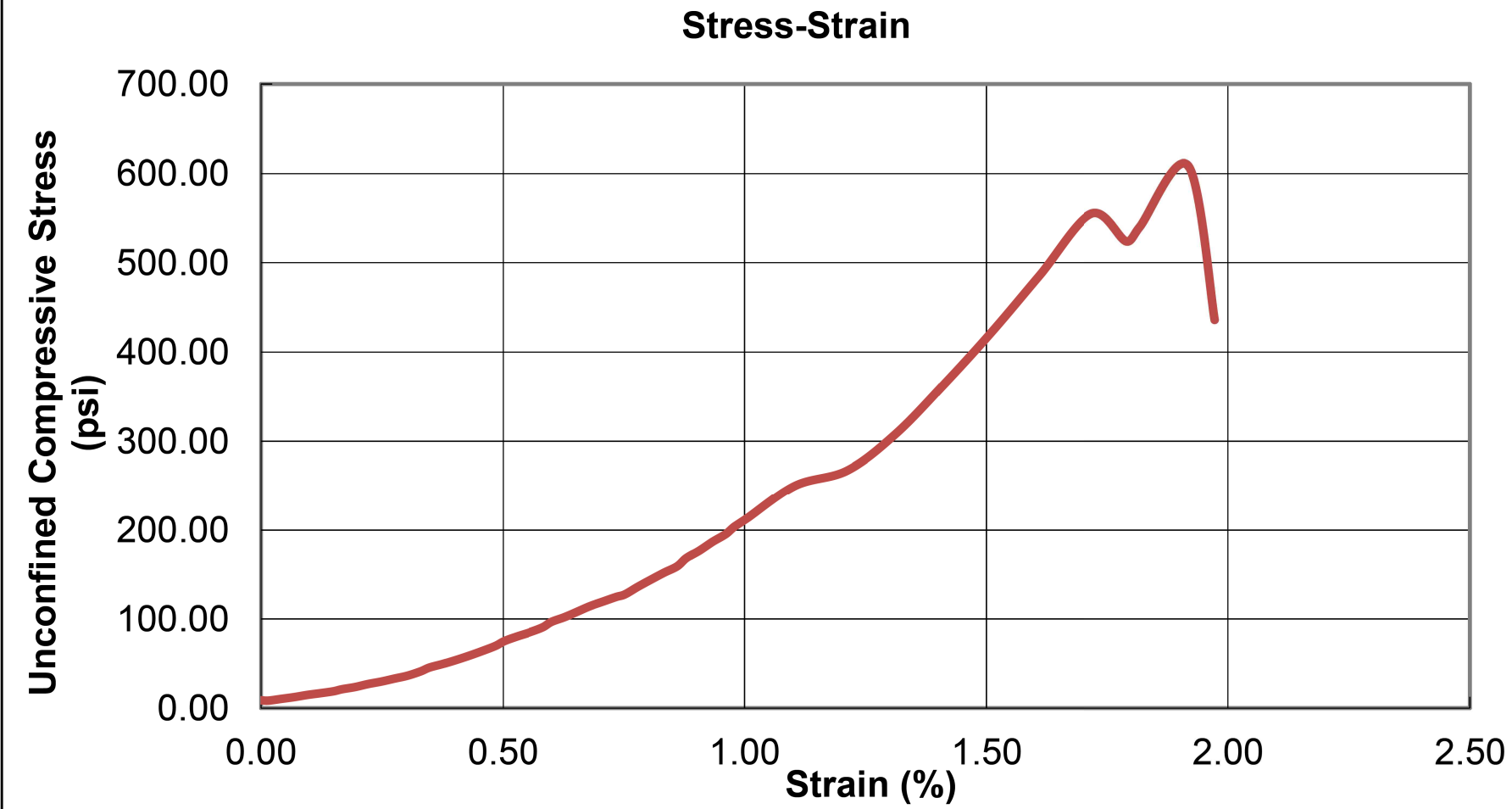
Diameter (in): 1) 1.950 2) 1.950 3) 1.950 Avg. 1.950 in

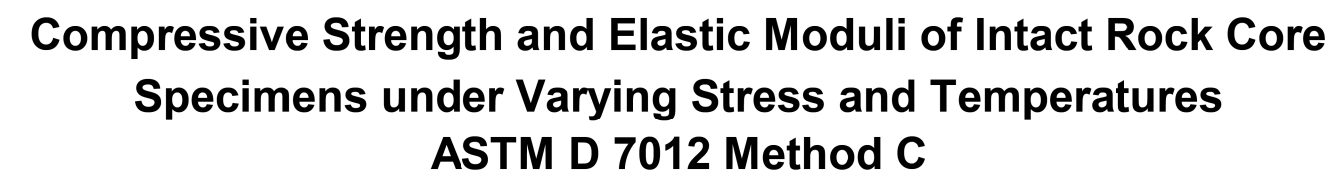
Uniaxial Compressive Strength: 620 psi Mass: 527.36 g

Load: 1,853 lbs. Wet Unit Weight: 160.0 pcf

L/D: 2.2 Dry Unit Weight: 157.1 pcf

Water Content: 1.8 %





Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

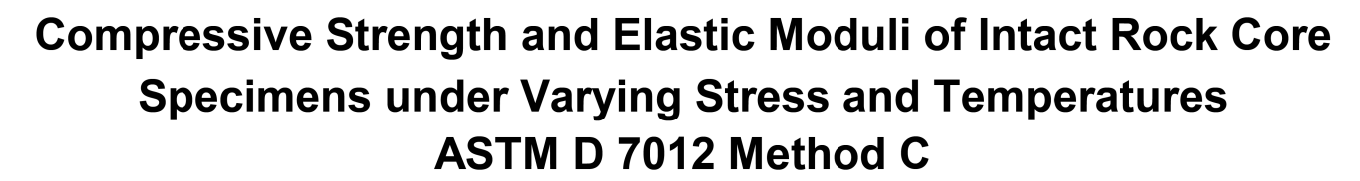
TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0004	in	Diameter 1b	0.0013	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0002	in	Diameter 2b	0.0005	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00020		Diameter 1b	0.00010		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00066		Diameter 2b	0.00025		≤ 0.0043	Tolerance Met	Yes

Water Content:

0.2

 %



Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maxumum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0013	in	Diameter 1b	0.0009	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0003	in	Diameter 2b	0.0003	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00065		Diameter 1b	0.00015		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00045		Diameter 2b	0.00015		≤ 0.0043	Tolerance Met	Yes

Water Content:

1.0

 %





Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-002-0-25 Run No.: R-5
Depth (ft): 33.4-33.9'
Description: SILTSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 4.056 2) 4.056 3) 4.056 Avg. 4.056 in

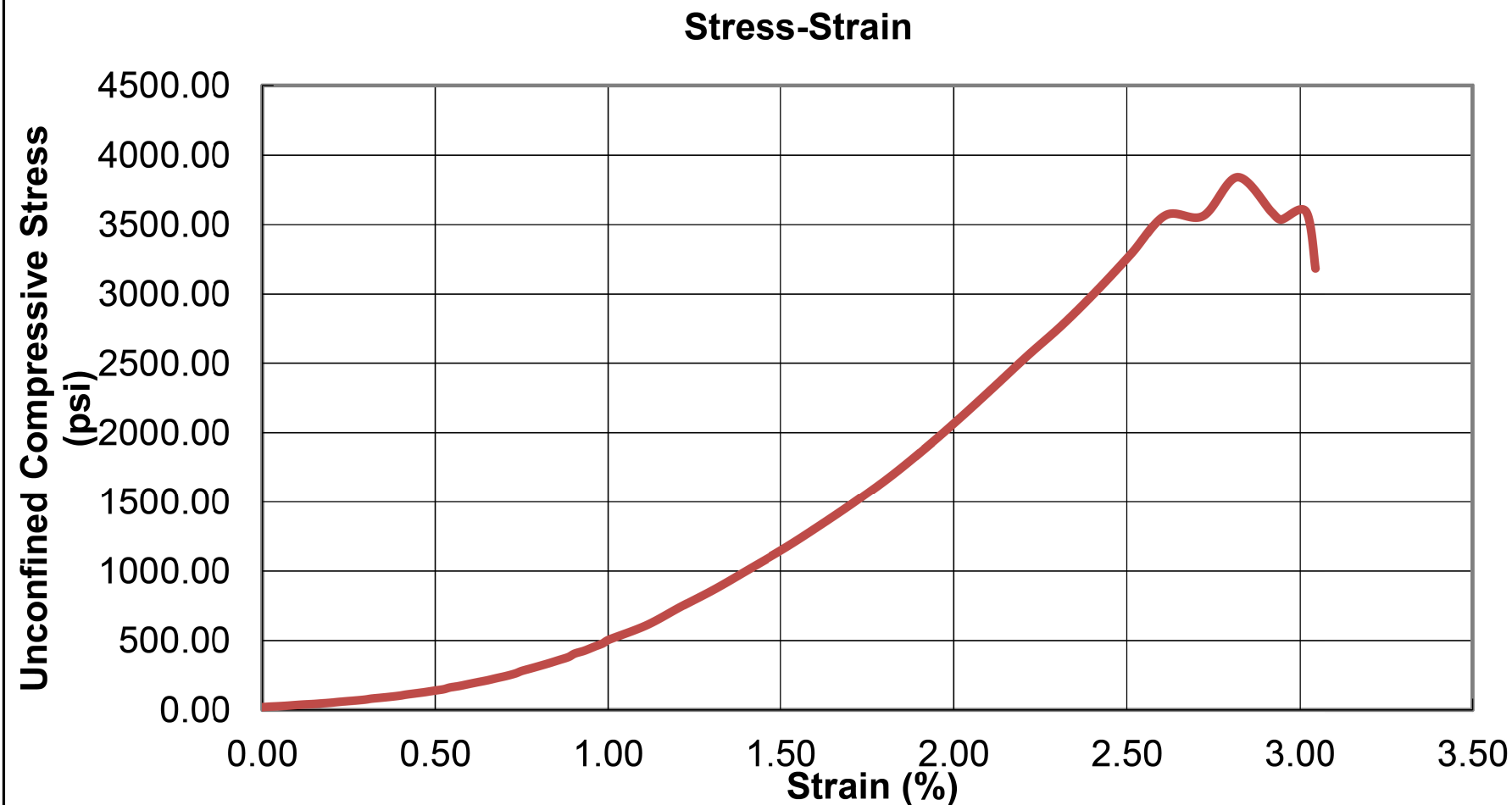
Diameter (in): 1) 1.978 2) 1.978 3) 1.978 Avg. 1.978 in

Uniaxial Compressive Strength: 3,953 psi Mass: 508.19 g

Load: 12,147 lbs. Wet Unit Weight: 155.3 pcf

L/D: 2.1 Dry Unit Weight: 154.5 pcf

Water Content: 0.6 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-003-0-25 Run No.: R-1
Depth (ft): 14.5-15.0'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 3.736 2) 3.736 3) 3.736 Avg. 3.736 in

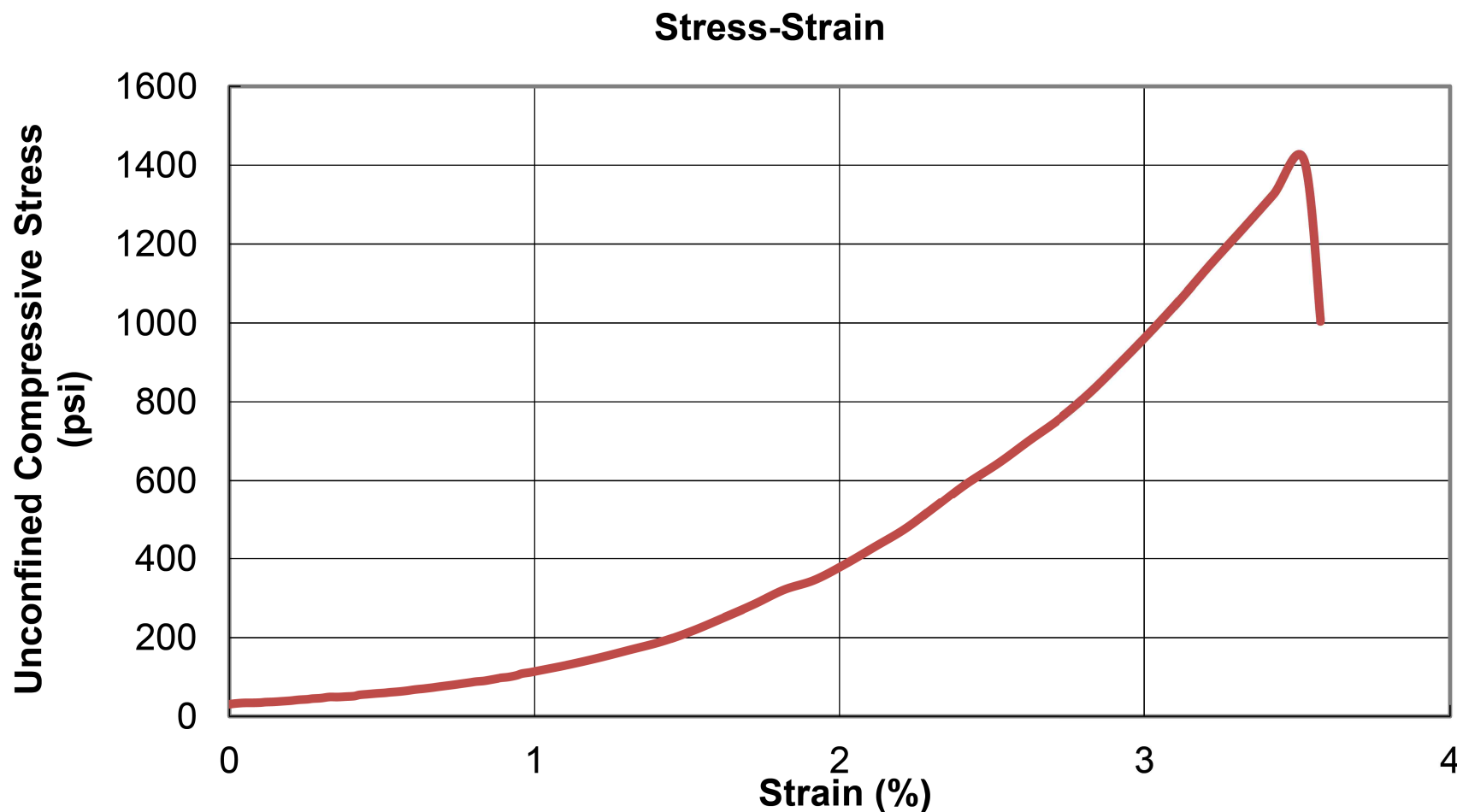
Diameter (in): 1) 1.982 2) 1.982 3) 1.982 Avg. 1.982 in

Uniaxial Compressive Strength: 1,466 psi Mass: 474.50 g

Load: 4,522 lbs. Wet Unit Weight: 156.8 pcf

L/D: 1.9 Dry Unit Weight: 154.3 pcf

Water Content: 1.6 %





Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-003-0-25 Run No.: R-3
Depth (ft): 24.0-24.5'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.					Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Yes

Length (in): 1) 4.200 2) 4.200 3) 4.200 Avg. 4.200 in

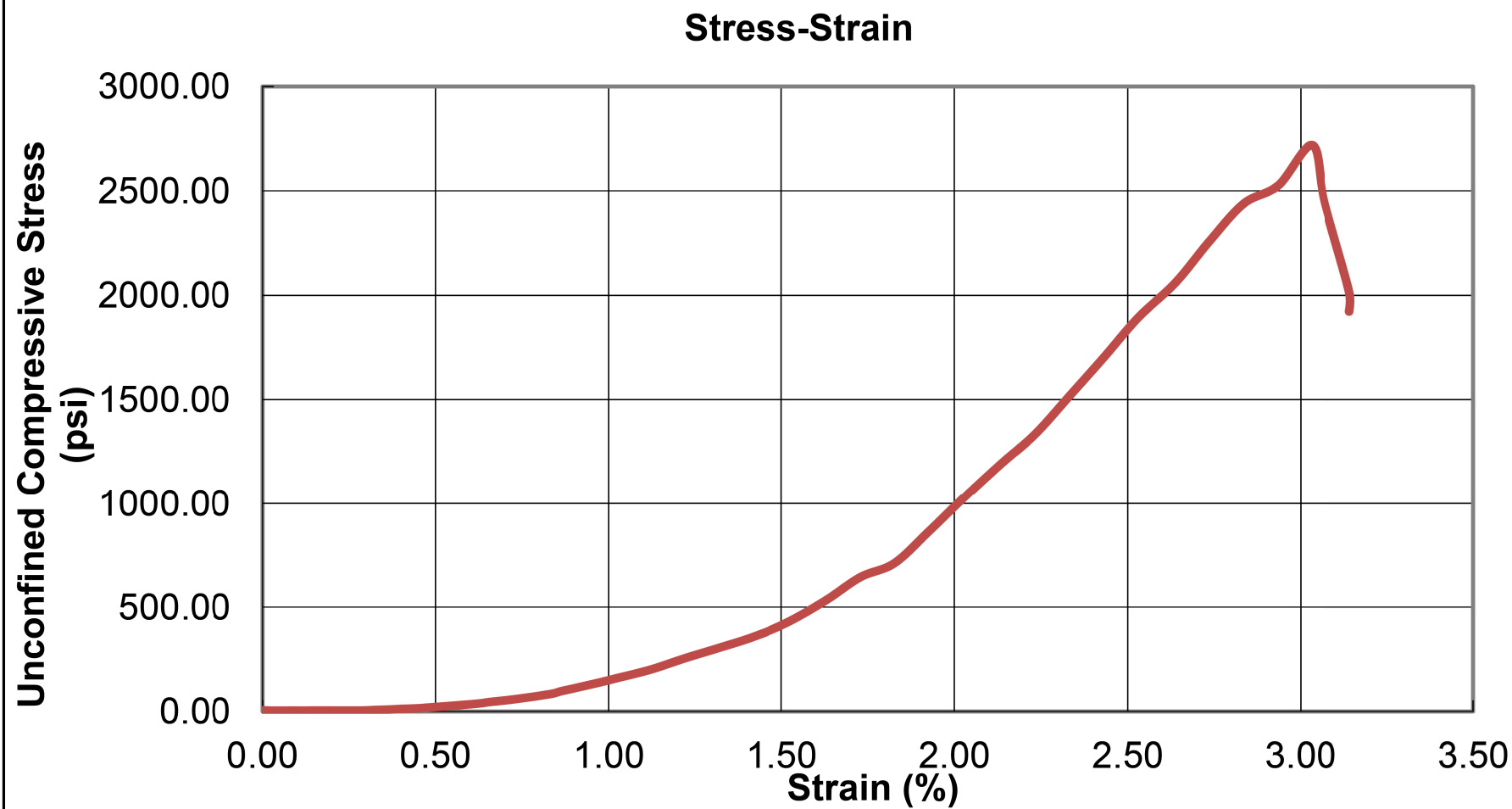
Diameter (in): 1) 1.990 2) 1.990 3) 1.990 Avg. 1.990 in

Uniaxial Compressive Strength: 2,804 psi Mass: 542.84 g

Load: 8,721 lbs. Wet Unit Weight: 158.3 pcf

L/D: 2.1 Dry Unit Weight: 155.4 pcf

Water Content: 1.9 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-003-0-25 Run No.: R-4
Depth (ft): 30-30.5'
Description: SILTSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.					Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Yes

Length (in): 1) 4.045 2) 4.045 3) 4.045 Avg. 4.045 in

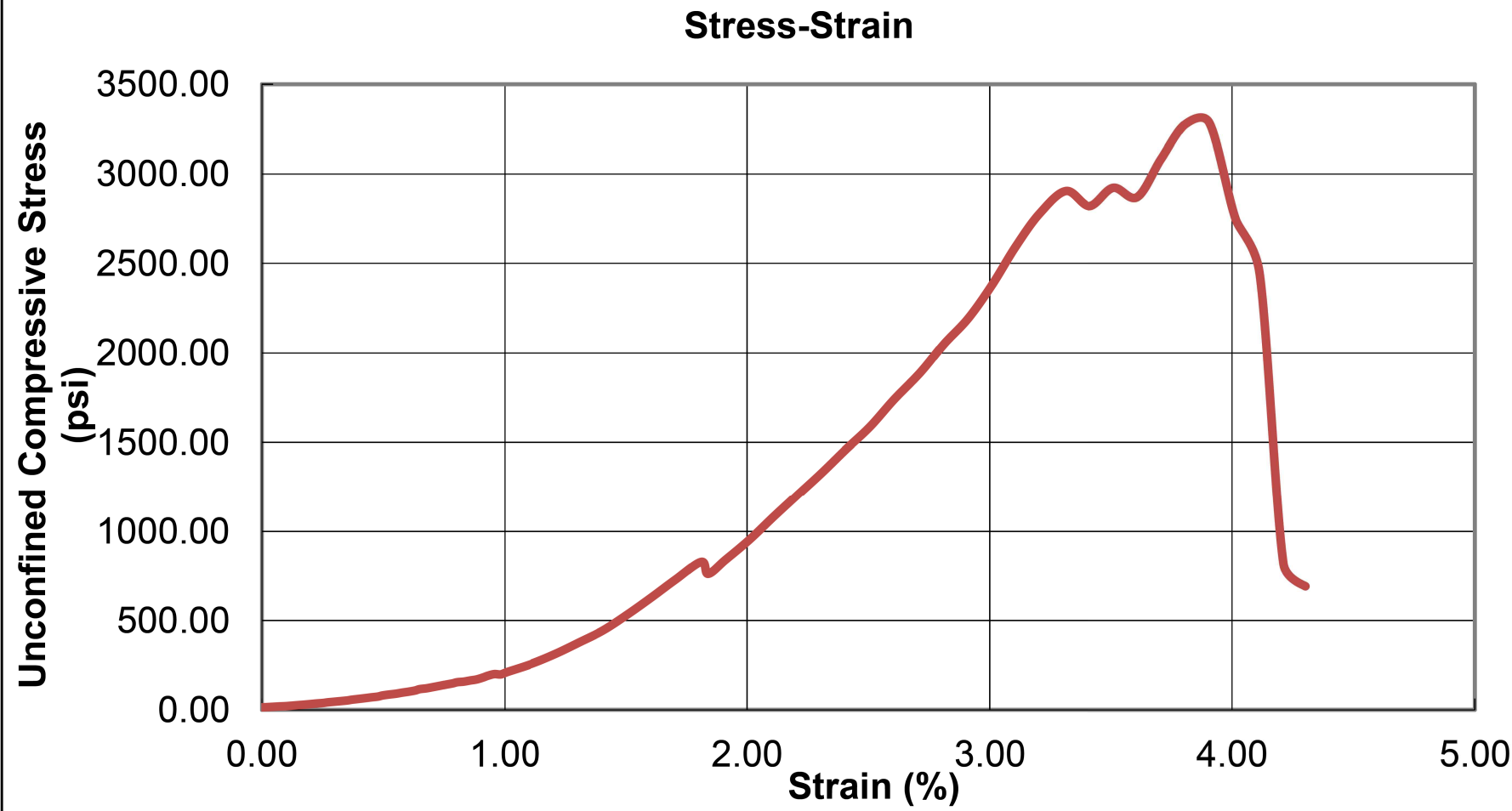
Diameter (in): 1) 1.984 2) 1.984 3) 1.984 Avg. 1.984 in

Uniaxial Compressive Strength: 3,418 psi Mass: 506.06 g

Load: 10,566 lbs. Wet Unit Weight: 154.2 pcf

L/D: 2.0 Dry Unit Weight: 153.0 pcf

Water Content: 0.8 %





Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-004-0-25 Run No.: R-4
Depth (ft): 29.4-29.9'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.							Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met	Yes

Length (in): 1) 4.158 2) 4.158 3) 4.158 Avg. 4.158 in

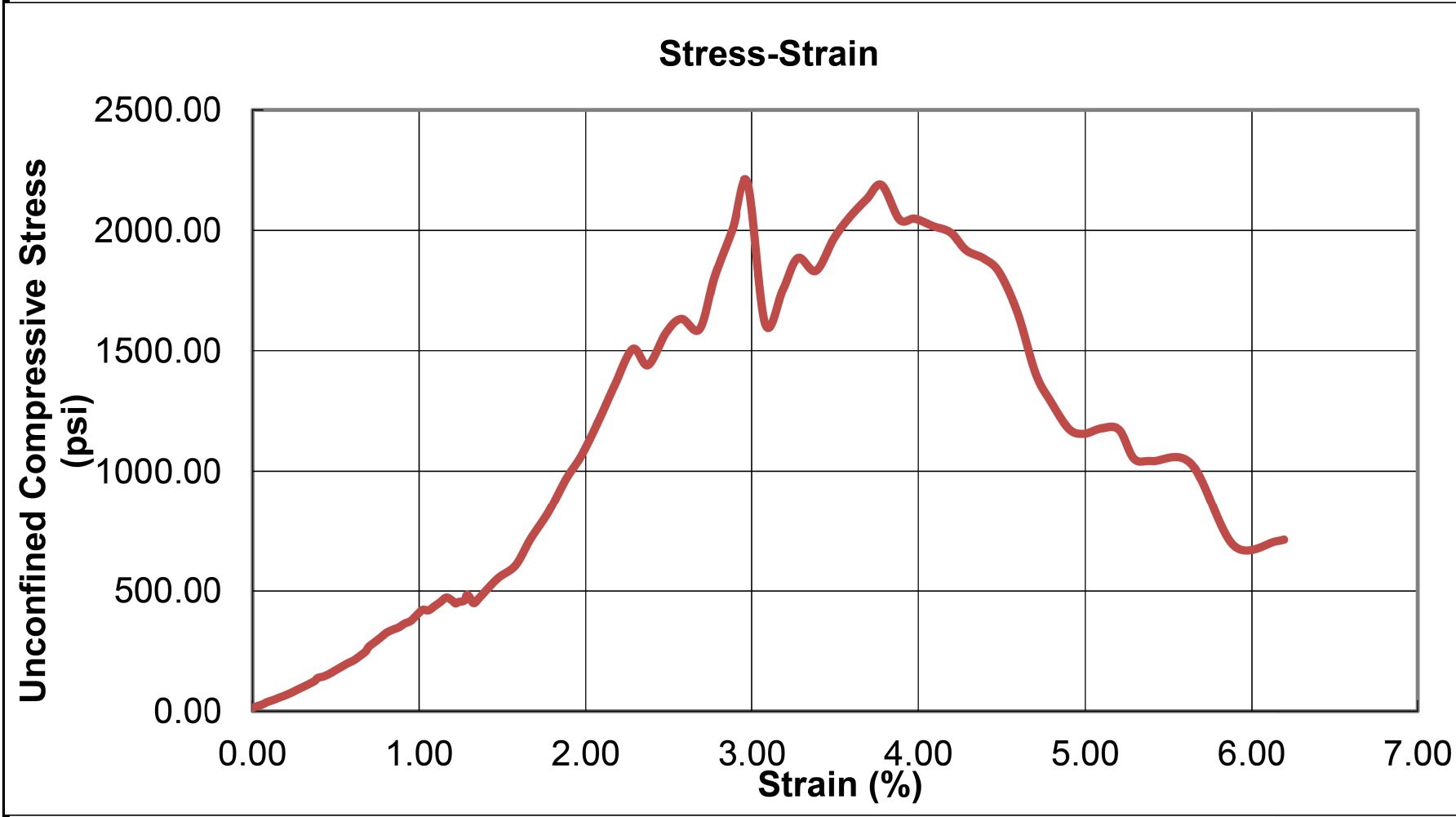
Diameter (in): 1) 1.978 2) 1.978 3) 1.978 Avg. 1.978 in

Uniaxial Compressive Strength: 2,275 psi Mass: 497.19 g

Load: 6,990 lbs. Wet Unit Weight: 148.2 pcf

L/D: 2.1 Dry Unit Weight: 146.0 pcf

Water Content: 1.5 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-004-0-25 Run No.: R-6
Depth (ft): 38.3-38.8'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0006	in	Diameter 1b	0.0004	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0003	in	Diameter 2b	0.0005	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00030		Diameter 1b	0.00015		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00020		Diameter 2b	0.00025		≤ 0.0043	Tolerance Met	Yes

Length (in): 1) 3.941 2) 3.941 3) 3.941 Avg. 3.941 in

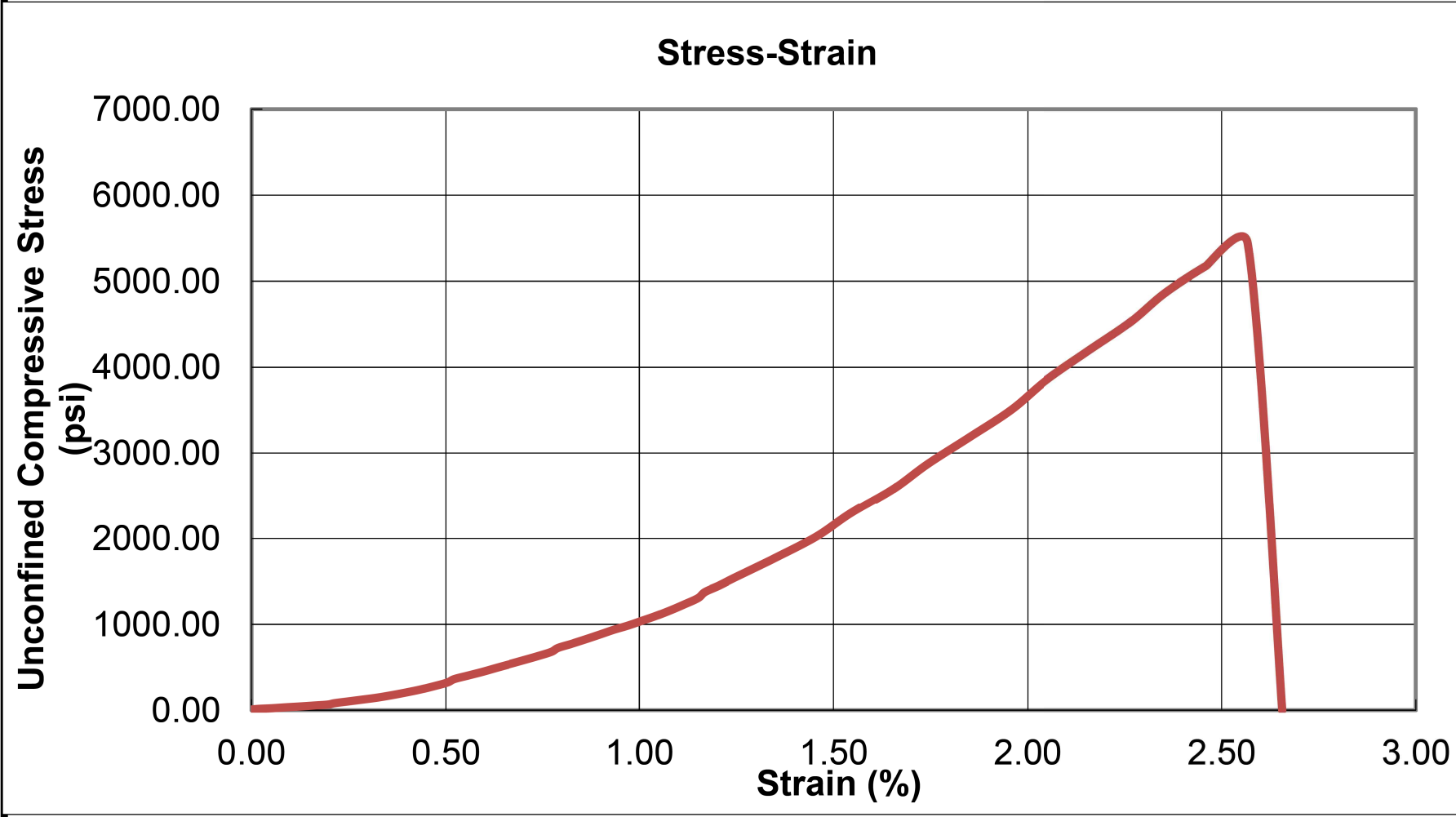
Diameter (in): 1) 1.984 2) 1.984 3) 1.984 Avg. 1.984 in

Uniaxial Compressive Strength: 5,584 psi Mass: 470.20 g

Load: 17,262 lbs. Wet Unit Weight: 147.0 pcf

L/D: 2.0 Dry Unit Weight: 146.3 pcf

Water Content: 0.5 %





Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-004-1-25 Run No.: R-3
Depth (ft): 24.0'
Description: SHALE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0011	in	Diameter 1b	0.0006	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0009	in	Diameter 2b	0.0011	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00055		Diameter 1b	0.00045		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00030		Diameter 2b	0.00055		≤ 0.0043	Tolerance Met	Yes

Length (in): 1) 3.980 2) 3.980 3) 3.980 Avg. 3.980 in

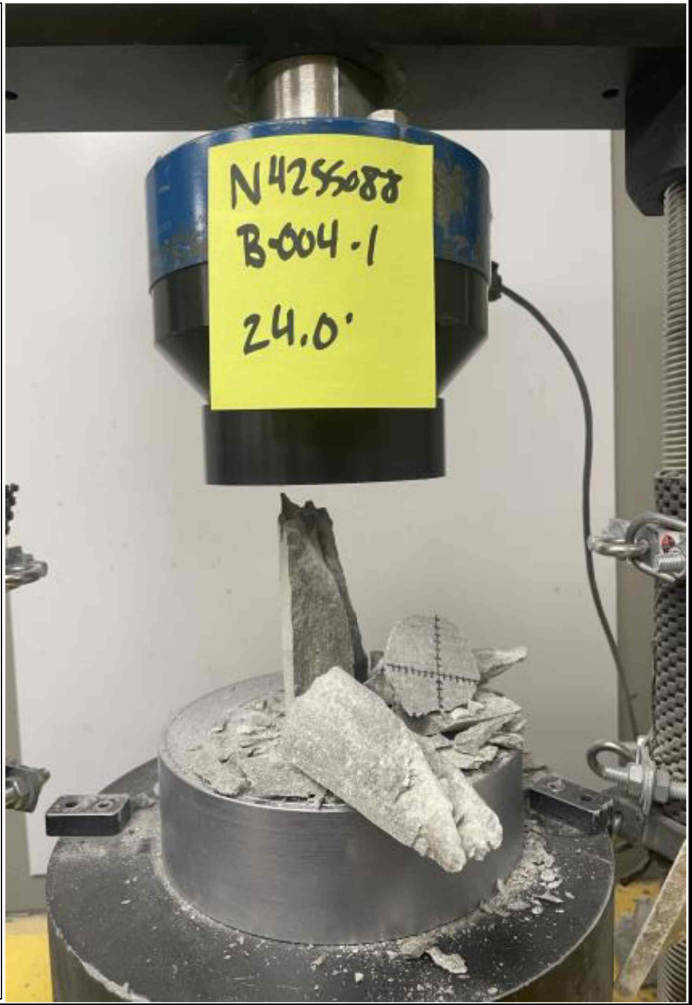
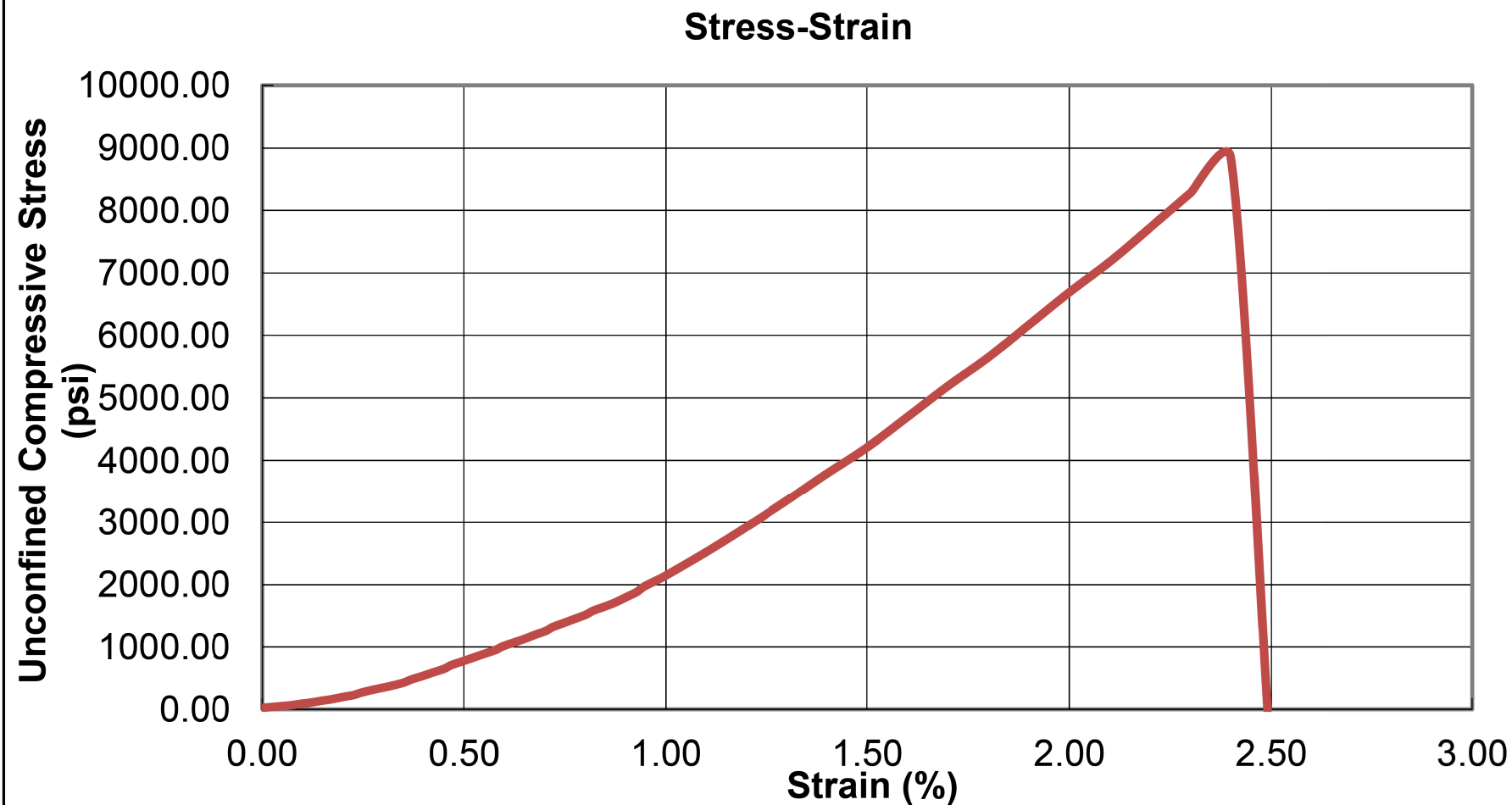
Diameter (in): 1) 1.989 2) 1.989 3) 1.989 Avg. 1.989 in

Uniaxial Compressive Strength: 9,055 psi Mass: 534.71 g

Load: 28,134 lbs. Wet Unit Weight: 164.7 pcf

L/D: 2.0 Dry Unit Weight: 164.3 pcf

Water Content: 0.3 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-004-1-25 Run No.: R-9
Depth (ft): 51-51.5'
Description: SILTSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness		Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met	Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met	Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met	Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met	Yes

Length (in): 1) 3.982 2) 3.982 3) 3.982 Avg. 3.982 in

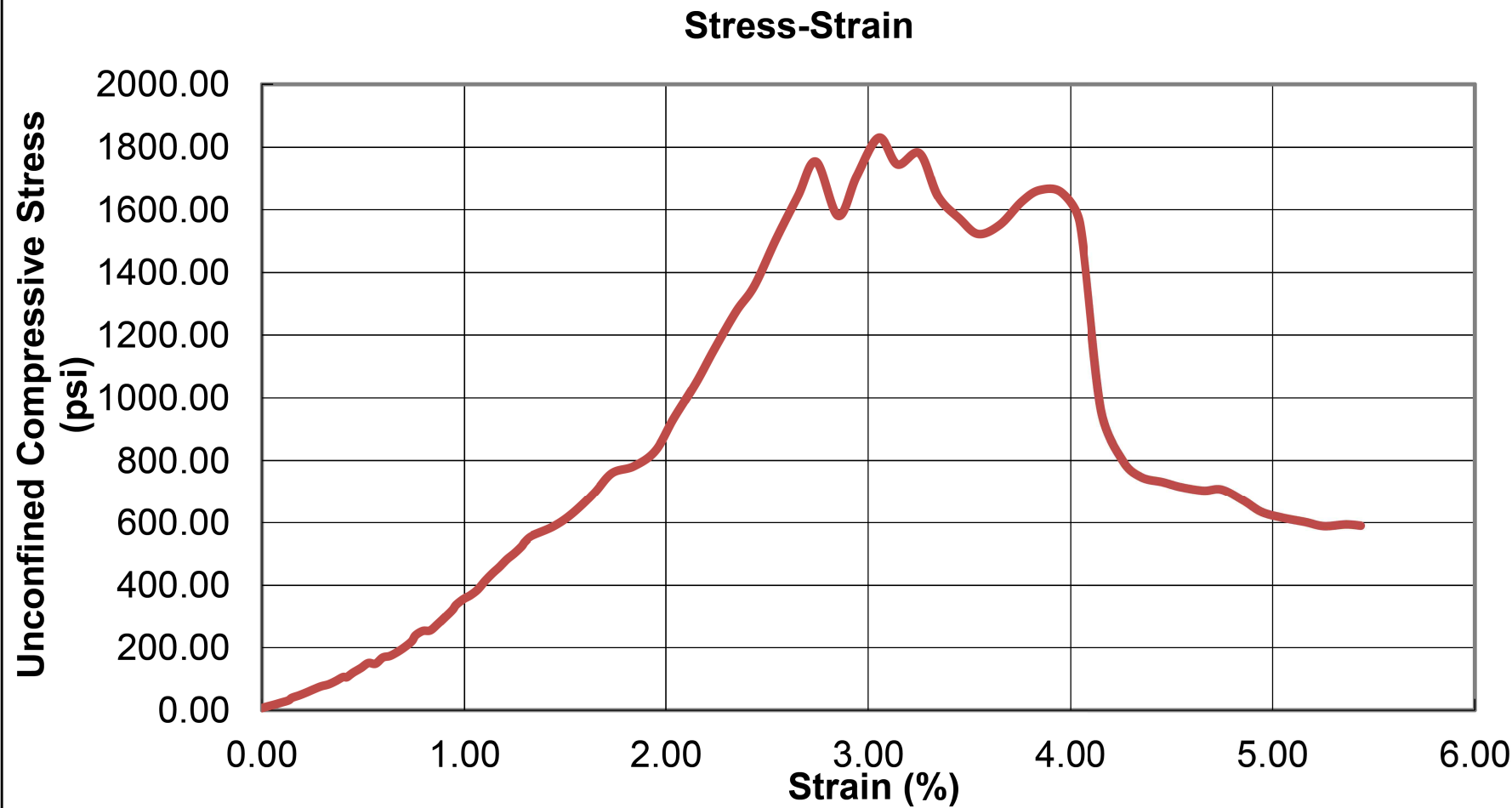
Diameter (in): 1) 1.981 2) 1.981 3) 1.981 Avg. 1.981 in

Uniaxial Compressive Strength: 1,730 psi Mass: 516.50 g

Load: 5,331 lbs. Wet Unit Weight: 160.3 pcf

L/D: 2.0 Dry Unit Weight: 157.8 pcf

Water Content: 1.6 %





Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-005-0-25 Run No.: R-1
Depth (ft): 7.7-8.2'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0005	in	Diameter 1b	0.0020	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0006	in	Diameter 2b	0.0007	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00025		Diameter 1b	0.00030		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00101		Diameter 2b	0.00035		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 4.008 2) 4.008 3) 4.008 Avg. 4.008 in

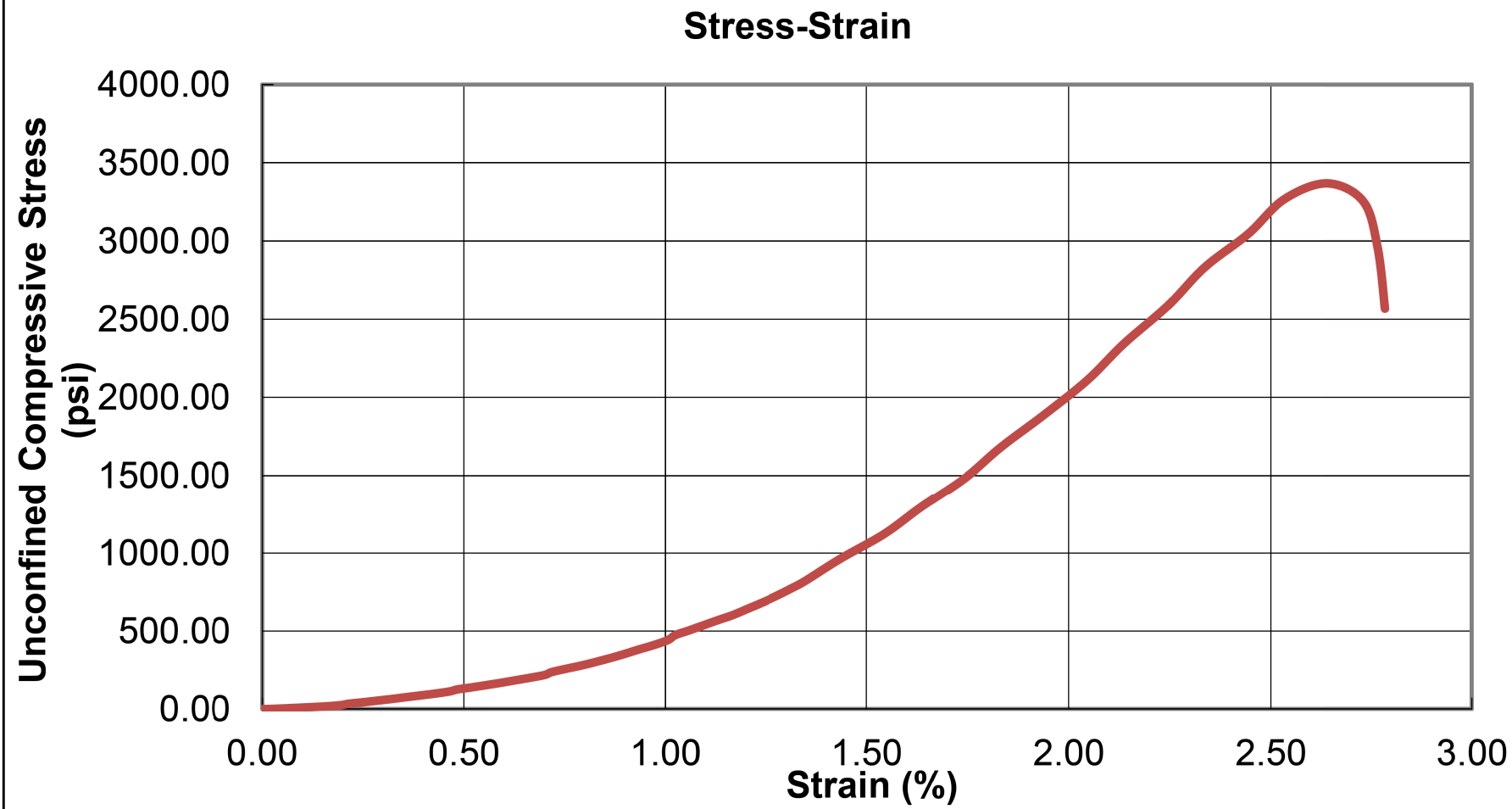
Diameter (in): 1) 1.980 2) 1.980 3) 1.980 Avg. 1.980 in

Uniaxial Compressive Strength: 3,461 psi Mass: 488.97 g

Load: 10,658 lbs. Wet Unit Weight: 150.9 pcf

L/D: 2.0 Dry Unit Weight: 149.9 pcf

Water Content: 0.7 %



Compressive Strength and Elastic Moduli of Intact Rock Core
Specimens under Varying Stress and Temperatures
ASTM D 7012 Method C

Project No.: N4255088 Tested By: EL Date: 7/16/2025
Project Name: GAL-SR 160-14.33 Landslide (PID 118701) Calculated By: JMR Date: 7/16/2025
Checked By: AA-H Date: 7/16/2025

Boring No. B-005-0-25 Run No.: R-3
Depth (ft): 15.5-16.0'
Description: SANDSTONE

Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness	Maximum Gap ≤ 0.020 in.						Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0000	in	Diameter 1b	0.0000	in	≤ 0.0020	Tolerance Met Yes
End Flatness: Max.	Diameter 2a	0.0000	in	Diameter 2b	0.0000	in	≤ 0.0020	Tolerance Met Yes
Perpendicularity Slope	Diameter 1a	0.00000		Diameter 1b	0.00000		≤ 0.0043	Tolerance Met Yes
Perpendicularity Slope	Diameter 2a	0.00000		Diameter 2b	0.00000		≤ 0.0043	Tolerance Met Yes

Length (in): 1) 4.125 2) 4.125 3) 4.125 Avg. 4.125 in

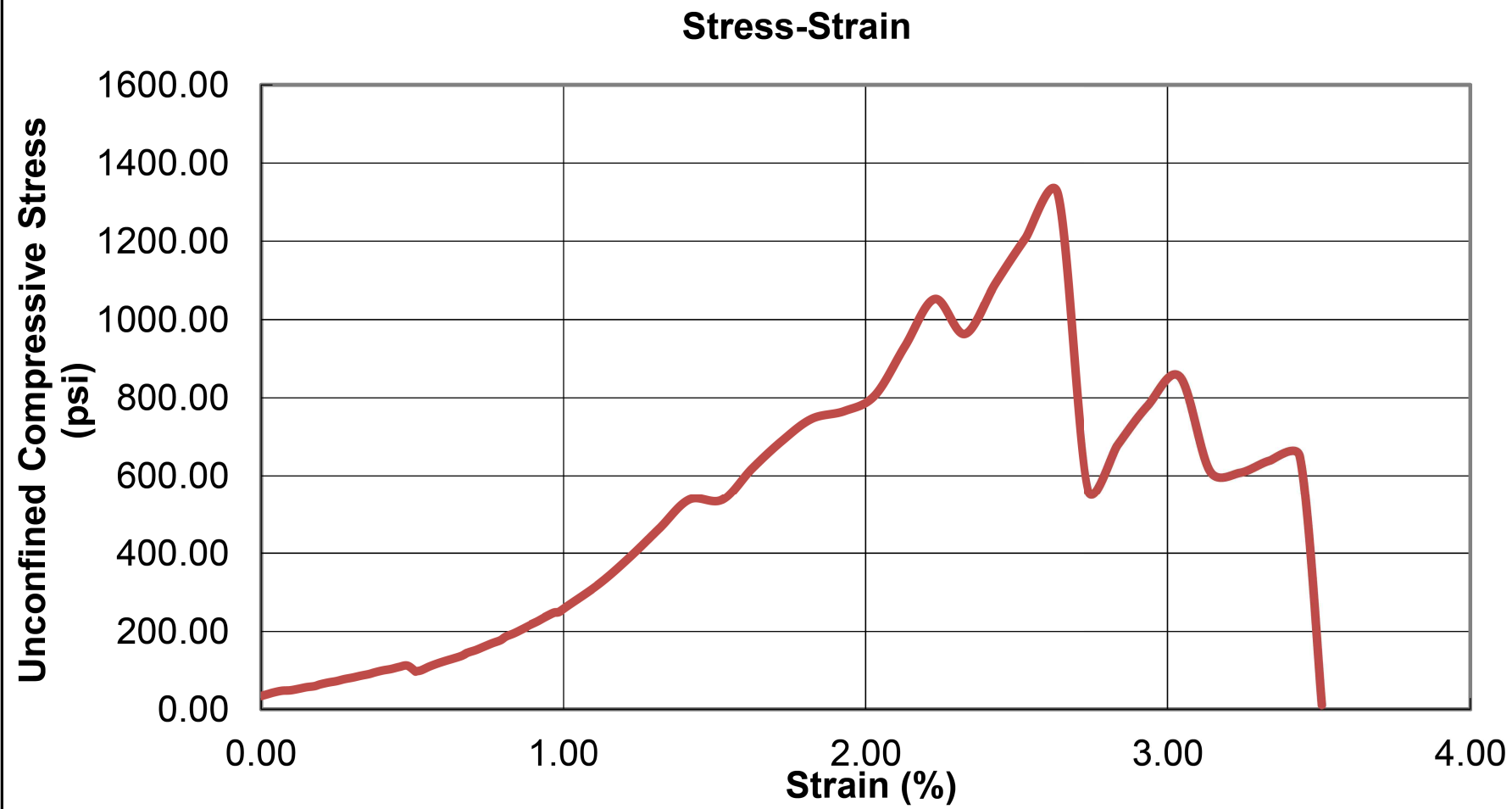
Diameter (in): 1) 1.985 2) 1.985 3) 1.985 Avg. 1.985 in

Uniaxial Compressive Strength: 1,359 psi Mass: 482.04 g

Load: 4,207 lbs. Wet Unit Weight: 143.9 pcf

L/D: 2.1 Dry Unit Weight: 140.7 pcf

Water Content: 2.2 %



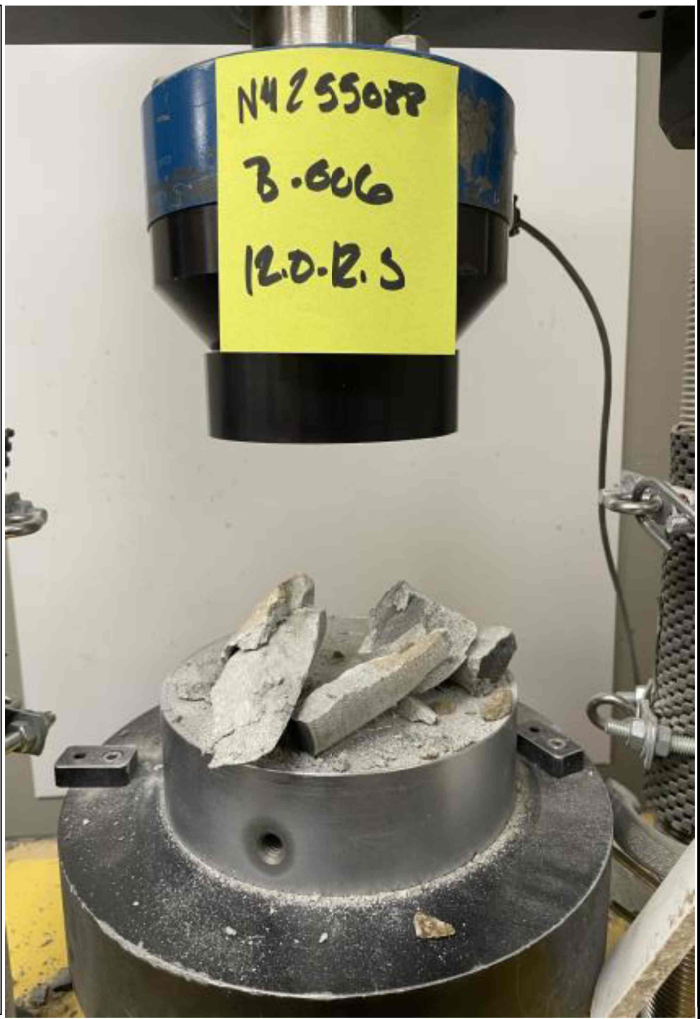


Rock Sample Moisture Condition at Test: ☒ As Received ☐ See Remarks
☐ Saturated ☐ Oven Dry

TOLERANCE CHECK

Side Straightness								Maximum Gap ≤ 0.020 in.		Tolerance Met	Yes
End Flatness: Max.	Diameter 1a	0.0002	in	Diameter 1b	0.0005	in	≤ 0.0020	Tolerance Met	Yes		
End Flatness: Max.	Diameter 2a	0.0007	in	Diameter 2b	0.0012	in	≤ 0.0020	Tolerance Met	Yes		
Perpendicularity Slope	Diameter 1a	0.00010		Diameter 1b	0.00035		≤ 0.0043	Tolerance Met	Yes		
Perpendicularity Slope	Diameter 2a	0.00025		Diameter 2b	0.00061		≤ 0.0043	Tolerance Met	Yes		

Water Content: 0.4 %



Client: Stantec Consulting Services Inc

Project No.: N4255088
Project Name: GAL-SR 160-14.33 Landslide (PID 118701)
Date: 07/17/25

07/17/25

Determination of the Point Load Strength Index of Rock ASTM D 5731

[illegible]

Orientation of applied point load: Diametral

- a Point load is corrected to assume a specimen diameter of 50 mm.
- b Estimated compressive strength is determined by multiplying the uncorrected point load index by the strength conversion factor of 24.5.



Stanted

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

MS.

REVIEWER

JRS 05-15

PROJECT ID

118701

SUBSET	TOTAL
--------	-------

SUBSET	TOTAL
33	2

32	3
----	---

SHEET	TOTAL
-------	-------

P.87	8
------	---

SLAKE DURABILITY INDEX (SDI) TEST SUMMARY (ASTM D4644)						
Client: Stantec Consulting Services, inc.			Date: 7/10/2025			
Project: GAL- SR 160 - 14.33 Landslide			Project Number: N4255088			
Location: Vinton County, OH						
Boring No.		B-001-0-25				
Depth (ft)		43.0				
Tare Weight:		843.7				
Moist weight (Sample+Tare):		1630.20				
Dry weight (Sample+Tare):		1620.52				
Natural Moisture Content (%):		1.2				
After Cycle No. 1						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
73.6	73.9	73.8	1605.7			
After Cycle No. 2						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
72.3	74.7	73.5	1588.0			
SLAKE DURABILITY INDEX:		95.8				
Fragments Retained - Type:		I				
Material Description:		SHALE				
Notes/Comments:						



N4255088
B-001
43.0'

N4255088
B-001
43.0'

Before Test

After Test

Boring No.				B-004-1-25		
Depth (ft)				30.0		
Tare Weight:				840.4		
Moist weight (Sample+Tare):				1505.8		
Dry weight (Sample+Tare):				1488.9		
Natural Moisture Content (%):				2.6		
After Cycle No. 1						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
73.6	73.8	73.8	1479.1			
After Cycle No. 2						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
72.3	74.1	74.1	1474.7			
SLAKE DURABILITY INDEX:				97.8		
Fragments Retained - Type:				I		
Material Description:		SANDSTONE				
Notes/Comments:						

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

SLAKE DURABILITY INDEX (SDI) TEST SUMMARY (ASTM D4644)						
Client: Stantec Consulting Services, inc.			Date: 7/10/2025			
Project: GAL- SR 160 - 14.33 Landslide			Project Number: N4255088			
Location: Vinton County, OH						
Boring No.		B-004-1-25				
Depth (ft)		20.5				
Tare Weight:		843.7				
Moist weight (Sample+Tare):		1647.89				
Dry weight (Sample+Tare):		1634.45				
Natural Moisture Content (%):		1.7				
After Cycle No. 1						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
70.0	70.2	70.1	1537.4			
After Cycle No. 2						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
71.6	72.9	72.3	1379.6			
SLAKE DURABILITY INDEX:		67.8				
Fragments Retained - Type:		II				
Material Description:		SHALE				
Notes/Comments:						



Boring No.				B-004-1-25		
Depth (ft)				22.0		
Tare Weight:				840.2		
Moist weight (Sample+Tare):				1679.0		
Dry weight (Sample+Tare):				1664.2		
Natural Moisture Content (%):				1.8		
After Cycle No. 1						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
70.3	70.5	70.5	1558.3			
After Cycle No. 2						
Temperature (°F)			Dry Weight (Sample+Tare)			
Start	End	Average				
71.6	73.2	73.2	1394.4			
SLAKE DURABILITY INDEX:				67.3		
Fragments Retained - Type:				II		
Material Description:		SHALE				
Notes/Comments:						

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.