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NC Firm No. 0819
Terracon.com

October 29, 2025

KCI Associates of North America
4800 Falls of Nuese Road, Suite 200
Raleigh, NC 27609

Attn: Mr. Rob DCola, PE, DBIA
P: (919) 278-2483
E: rob.decola@kci.com

Re: Geotechnical Screening Report
NCEM Number: 044-01-EA41A
County: Haywood
Description: Replace Bridge on Scott Drive over Hominy Creek
Terracon Project No. 71255174

Dear Mr. DeCola:

Terracon completed a geologic review, visited the site, and performed a limited subsurface exploration in the vicinity of the proposed structure. Terracon presents this summary of our findings and preliminary foundation recommendations for the proposed structure.

Geologic Review

The project site is located within the Blue Ridge Physiographic Province and the Tugaloo terrane based on the 1985 North Carolina Geologic map. The Tugaloo terrane consists of metamorphosed sedimentary and volcanic rocks. The geologic formation in the vicinity of the project site is Muscovite-biotite gneiss (Zatm) also including mica schist, amphibolite, and hornblende gneiss.

Subsurface Findings

Artificial fill was encountered at the project site consisting of loose, silty sand (A-2-4) and stiff to medium stiff, sandy silt (A-4) with varying amounts of mica and gravel to a depth of 8.5 feet below the existing ground surface. Below the artificial fill, alluvial soils were encountered consisting of medium stiff to hard, sandy silt (A-4) to a depth of 16.0 feet below the existing ground surface. Beneath the alluvial soils, Crystalline Rock consisting of granitic muscovite-biotite gneiss was encountered extending to the boring termination depth of 26.0 feet below the existing ground surface. Groundwater was

encountered at a depth of 13.0 feet below the existing ground surface at the termination of drilling.

Preliminary Foundation Recommendations

Terracon understands that the proposed structure will consist of a 55’-0” span bridge. The bridge will be supported at each end bent by four HP 12x53 piles spaced at 6’-0” on center. Each bent will be topped with a 2’-6” reinforced concrete abutment cap.

Closing

We appreciate the opportunity to be of continued service on this project. If you have any questions or concerns, please do not hesitate to contact us.

Sincerely,

Terracon

10/29/2025

J. Nic Chittick, PE
Group Manager

Thomas R. Wells, PE, DBIA
Senior Engineer
NC PE: No. 037998

Attachments

Terracon Bore Log, Core Log, and Core Photograph

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 044-01-EA41A	**TIP** N/A	**COUNTY** HAYWOOD	**GEOLOGIST** Posadas, A.	
SITE DESCRIPTION Replace Bridge on Scott Drive over Hominy Creek				**GROUND WTR (ft)**
BORING NO. B-1	**STATION** 10+24	**OFFSET** 9 ft LT	**ALIGNMENT** -L-	**0 HR.** 13.0
COLLAR ELEV. 2,337.2 ft	**TOTAL DEPTH** 26.0 ft	**NORTHING** 671,719	**EASTING** 872,320	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE TER4106 Geoprobe 3126GT 98% 01/24/2025		**DRILL METHOD** Casing Advancer W/SPT		**HAMMER TYPE** Automatic
DRILLER Burnette, B.	**START DATE** 10/15/25	**COMP. DATE** 10/15/25	**SURFACE WATER DEPTH** N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
2340										2,337.2 GROUND SURFACE	0.0
2335	2,336.2	1.0	5	5	6	11		M		**ARTIFICIAL FILL** LOOSE, GRAY, BROWN, SILTY FINE TO COARSE SAND, TRACE MICA (A-2-4)	
	2,333.7	3.5	4	4	5	9		M		2,334.2	3.0
2330	2,331.2	6.0	6	3	3	6		M		STIFF TO MEDIUM STIFF, BROWN, FINE TO COARSE SANDY SILT, TRACE MICA, TRACE GRAVEL (A-4)	
	2,328.7	8.5	3	3	4	7		M		2,328.7	8.5
2325	2,323.7	13.5	11	17	19	36		M		**ALLUVIAL** MEDIUM STIFF TO HARD, GRAY, BROWN, FINE TO COARSE SANDY SILT, TRACE OF ORGANIC MATTER, TRACE GRAVEL, TRACE MICA (A-4)	
2320	2,321.2	16.0	60/0.0			60/0.0				2,321.2	16.0
2315										**CRYSTALLINE ROCK** GRAY, WHITE, FRESH, HARD, CLOSE FRACTURE SPACING, GRANITIC MUSCOVITE-BIOTITE GNEISS (GSI 90-100)	
										2,311.2	26.0
										Boring Terminated at Elevation 2,311.2 ft in CRYSTALLINE ROCK, GRANITIC MUSCOVITE-BIOTITE GNEISS	

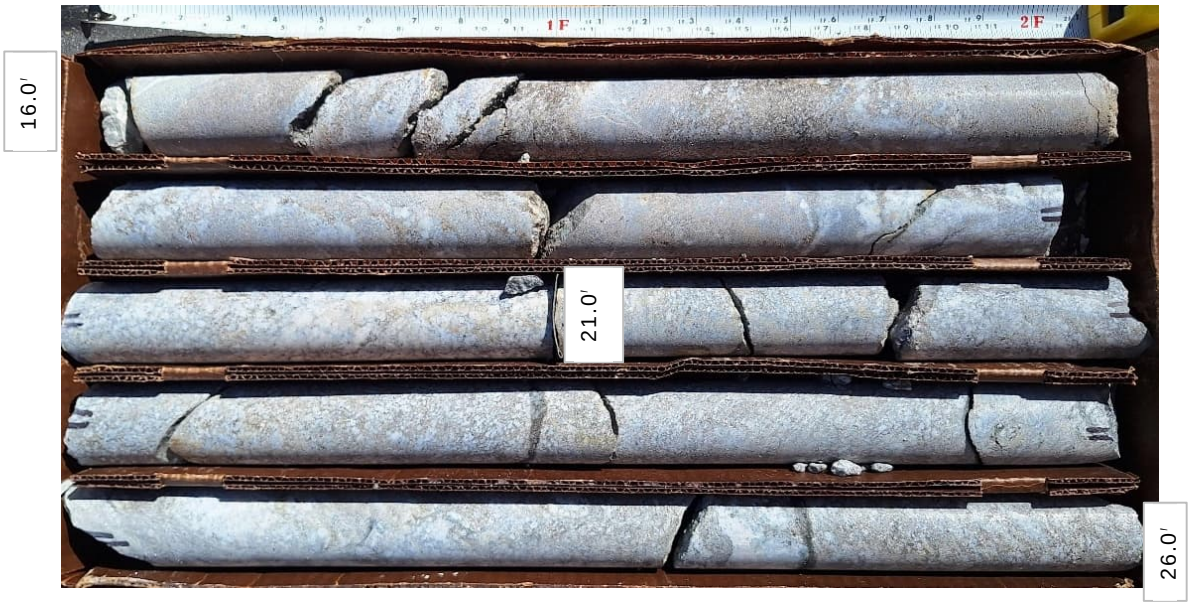
GEOTECHNICAL BORING REPORT
CORE LOG

WBS 044-01-EA41A	**TIP** N/A	**COUNTY** HAYWOOD	**GEOLOGIST** Posadas, A.	
SITE DESCRIPTION Replace Bridge on Scott Drive over Hominy Creek				**GROUND WTR (ft)**
BORING NO. B-1	**STATION** 10+24	**OFFSET** 9 ft LT	**ALIGNMENT** -L-	**0 HR.** 13.0
COLLAR ELEV. 2,337.2 ft	**TOTAL DEPTH** 26.0 ft	**NORTHING** 671,719	**EASTING** 872,320	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE TER4106 Geoprobe 3126GT 98% 01/24/2025		**DRILL METHOD** Casing Advancer W/SPT	**HAMMER TYPE** Automatic	
DRILLER Burnette, B.	**START DATE** 10/15/25	**COMP. DATE** 10/15/25	**SURFACE WATER DEPTH** N/A	
CORE SIZE NQ2	**TOTAL RUN** 10.0 ft			

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
2321.2											Begin Coring @ 16.0 ft
2320	2,321.2	16.0	5.0	3:00/1.0 2:30/1.0 2:30/1.0 3:00/1.0 3:00/1.0	(4.8) 96%	(4.3) 86%		(9.8) 98%	(9.0) 90%		2,321.2 **CRYSTALLINE ROCK** 16.0 GRANITIC MUSCOVITE-BIOTITE GNEISS, GRAY, WHITE, FRESH, HARD, CLOSE FRACTURE SPACING (GSI 90-100)
	2,316.2	21.0									
2315			5.0	2:00/1.0 1:45/1.0 2:00/1.0 1:50/1.0 2:05/1.0	(5.0) 100%	(4.7) 94%					
	2,311.2	26.0									2,311.2 26.0 Boring Terminated at Elevation 2,311.2 ft in CRYSTALLINE ROCK, GRANITIC MUSCOVITE-BIOTITE GNEISS

Site Description: 044-01-EA41A	*County*: Haywood	*Boring Location:* B-1
Driller: B. Burnette	*Core Size*: NQ2	*Drill Machine:* Geoprobe 3126GT
Geologist / Engineer: A. Posadas	*Total Core Length:* 10.0 feet	*Date:* 10/15/2025

Run 1: 16.0' to 21.0', Run 2: 21.0' to 26.0'



Notes:
1) Used NQ2 wireline core barrel

Abandonment Method:
1) Boring backfilled with gravel and hole plug.