



NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Chief Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Submittal Includes: (a2) Improvement Permit (a2) Construction Authorization Fee \$

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)

County: Harnett
PIN/Lot Identifier: 0519-69-7153.000
Issued To: LGI Homes NC LLC
Property Location: 92 Camp Rock Road, Lillington, NC
Subdivision (if applicable) Boone Trail Village Phase 1 Lot #: 56 Block: Section:
LSS Report Provided: Yes No
If yes, name and license number of LSS: Scott Mitchell - 1237
New Expansion System Relocation Change of Use

Facility Type: Single-Family Dwelling Unit

Number of bedrooms: 4 Number of Occupants: 8 or less Other:

Design Wastewater Strength: Domestic High Strength Industrial Process Wastewater
Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.35 Proposed LTAR (Repair): 0.35
Proposed Wastewater System Type*: llb (Initial) Pump Required: Yes No May be required
Proposed Wastewater System Type*: llb (Repair) Pump Required: Yes No May be required

*Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII
Effluent Standard: DSE HSE NSF/ANSI 40 TS-I TS-II RCW
Saprolite System (Initial): Yes No Saprolite System (Repair): Yes No
Fill System (Initial): Yes No If yes, specify: New Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Fill System (Repair): Yes No If yes, specify: New Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Usable Depth to LC (Initial)*: 34" Usable Depth to LC (Repair)*: 36" * Limiting Condition
Max. Trench Depth (Initial)*: 20 inches Max. Trench Depth (Repair)*: 22 inches * Measured on the downhill side of the trench
Artificial Drainage Required: Yes No If yes, please specify details:
Type of Water Supply: Private well Public well Shared well Municipal Supply Spring Other:
Drainfield location meets requirements of Rule .0508: Yes No Drainfield location meets requirements of Rule .0601: Yes No
Permit valid for: Five years [site plan submitted pursuant to GS 130A-332(13a)] No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:
Permit is subject to revocation if the Site Plan or Plat changes, or if the intended use changes, including bedroom count.
No cutting, grading, alterations, or utilities allowed in septic area.
Maintain all required setbacks.



Licensed Soil Scientist Print Name: Scott Mitchell
Licensed Soil Scientist Signature: Date: February 14, 2025

The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).
See attached North sketch

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date Initials

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

Incomplete (If box is checked, information in this section is required.)

The following items are missing:

Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date: _____

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. *This permit is subject to revocation if the site plan, plat, or the intended use changes.* The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of 15A NCAC 18E and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: _____

See attached site sketch

Re-submittal of Improvement Permit

LHD USE ONLY: This IP resubmittal received: _____ by _____
Date *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a3) for issuance of the Improvement Permit:

I, _____ hereby attest that the information required to be included with this re-submittal
Licensed Soil Scientist (Print Name)
 is accurate and complete to the best of my knowledge and that the proposed Improvement Permit meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

Signature of Licensed Soil Scientist _____
Date

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Improvement Permit

The review for completeness of this Improvement Permit re-submittal was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

Incomplete (If box is checked, information in this section is required.)

The following items are missing:

Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date: _____



Harnett County GIS

PID: 130519 0103 61
PIN: 0519-69-7153.000
Account Number: 1500028388
Owner: LGI HOMES NC LLC
Mailing Address: 1450 LAKE ROBBINS DR STE 430 THE WOODLANDS, TX 77380-3294
Physical Address: 92 CAMP ROCK RD LILLINGTON, NC 27546 ac
Description: LOT#56 BOONE TRAIL VILLAGE PH1 MAP#2024-600
Surveyed/Deeded Acreage: 0.63
Calculated Acreage: 0.63
Deed Date:
Deed Book/Page: 4144 - 0878
Plat(Survey) Book/Page: 2024 - 600
Last Sale: 2022 - 4
Sale Price: \$2220000
Qualified Code: A
Vacant or Improved: V
Transfer of Split: T
Actual Year Built:
Heated Area : SqFt
Building Count : 0

Building Value: \$0
Parcel Outbuilding Value: \$0
Parcel Land Value: 26900
Market Value: \$26900
Deferred Value: \$0
Total Assessed Value: \$26900
Zoning: RA-30 - 0.63 acres (100.0%)
Zoning Jurisdiction: Harnett County
Wetlands: No
FEMA Flood: Minimal Flood Risk
Within 1mi of Agriculture District: Yes
Elementary School: Boone Trail Elementary
Middle School: Western Harnett Middle
High School: Western Harnett High
Fire Department: Boone Trail
EMS Department: Medic 12, D12 EMS
Law Enforcement: Harnett County Sheriff
Voter Precinct: Boone Trail
County Commissioner : Duncan Edward Jagers
School Board Member: John Hair



Mitchell Environmental, P.A.

I hereby authorize representatives of Mitchell Environmental, P.A., to provide subsurface wastewater evaluations and septic system designs on my behalf, for the issuance of an IP and CA, for the property identified below.

For Improvement Permit (IP) issuance:

"The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)."

For Construction Authorization (CA) issuance:

"The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5), and (a6)."

The LSS evaluation attached to this application was used to produce and design a subsurface wastewater septic system for permitting to obtain an IP and CA in accordance with G.S. 130A-335(a2), (a3), (a5), and (a6).

Subject Property (Address, PIN, etc.): 41/63/85/92/70 Camp Rock Rd.
46 Camp Rock Rd. Lillington NC 27546

Property Owner Name (Print): LGI Homes

Owner Representative (Print): Keith Sears

Owner Representative (Sign): 

Date: 2/10/25

1501 Lakestone Village Lane, Suite 205
Fuquay-Varina, North Carolina 27526
919-669-0329

Mitchell Environmental, P.A.

February 14, 2025

Mr. Robert Putze
LGI Homes - NC, LLC
1450 Lake Robbins Drive, Suite 430
The Woodlands, Texas 77380

**Re: On-Site Sewage Disposal Site and Soils Evaluation Report for:
Boone Trail Village Subdivision – Lot 56
92 Camp Rock Road, Lillington, Harnett County**

Mr. Putze:

At your request, we have completed a site evaluation for use of on-site sewage disposal systems at Lot 56 of Boone Trail Village Subdivision located at 92 Camp Rock Road in Lillington, Harnett County. The site evaluation was completed using backhoe pits on October 23, 2024, under moist soil conditions, based on the criteria found in the State Subsurface Rules, 15A NCAC 18E, "Wastewater Treatment and Dispersal Systems". This report was prepared pursuant to and meets the requirements of G.S. 130A-335(a2).

Site Evaluation for Use of On-Site Sewage Disposal Systems:

The evaluation included all usable areas of the property as limited by state and local laws, rules, and regulations. The purpose of the evaluation was to determine the suitability of the site for on-site waste disposal systems per applicable laws, rules, and regulations. **"The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2)."**

A soil/site evaluation for use of on-site waste disposal systems on any site in North Carolina must include an evaluation of each of the following criteria: 1) topography and landscape position, 2) soil morphology, 3) soil wetness, 4) soil depth, 5) restrictive horizons and 6) available space. Upon field evaluation of the site, the majority of the lot was confirmed to contain sufficient suitable depth for on-site waste disposal systems.

Most septic systems in North Carolina that include a sub-surface waste disposal element require nitrification trenches to distribute effluent for final treatment. Any nitrification trench that has an associated width (*conventional, LPP, LDP, etc.*) must be designed to accommodate slope corrections (*typically 1 to 4 inches*). Slope corrections are based on trench width and cross slope to ensure the minimum separation distance between the trench bottom and an unsuitable soil condition is maintained over the entire trench width. Sloping sites are required to have greater suitable soil depth to accommodate slope correction as opposed to flat sites that require no slope correction. Please note that all proposed lots that utilize sub-surface nitrification fields must have sufficient area for the initial septic system as well as a full repair system. However, the initial and repair systems are not required to be the same type of system, nor are they required to be contiguous. For example, a lot may have a conventional, gravity system installed as the initial septic system and specify an LPP or subsurface drip system for its repair, several hundred feet away from the house or other structure being served.

The number of bedrooms or wastewater design flowrate that any lot will accommodate is entirely dependent upon the usable area of the lot and the long-term acceptance rate (*LTAR; LTAR is the*

1501 Lakestone Village Lane, Suite 205
Fuquay-Varina, North Carolina 27526
919-669-0329

effluent application rate for a septic system. For conventional systems, the LTAR indicates the number of gallons that can be applied to each square foot of the trench bottom per day. For an LPP or subsurface drip system, the LTAR indicates the number of gallons that can be applied to each square foot of the nitrification field per day. An LTAR of 0.2 gallons per day per ft² (gpd/ft²) will require a nitrification field that is twice as large as a field that has an LTAR of 0.4 gpd/ft². Assigned LTARs will affect the number of bedrooms or wastewater design flowrate lots will accommodate as illustrated above. LTARs can vary from one location to another on a property. Our observations indicate that the majority of the lot contains sufficient suitable soil depth to accommodate subsurface wastewater systems with an LTAR of 0.35 gpd/ft². Observed suitable soil depths on this site range from 34 inches to greater than 46 inches, with LTAR controlling soil textures ranging from sandy clay loam to clay loam.

Topography on this lot can be generally characterized as a gentle side slope that generally sheds to the south. Based on observed site and soil characteristics, in combination with the proposed plot plan, it is my professional opinion that adequate available space exists on this lot for properly designed septic system drainfields (*initial and repair*) sufficient for one, four-bedroom home.

This site evaluation is based upon the conditions of the site at the time of the evaluation. Any alteration of the site, including compaction, clearing, grading, timbering, etc., could negatively affect the suitability for on-site septic systems. Great care should be exercised during site preparation to protect areas that are to be utilized for septic system nitrification fields. No vehicular or construction traffic should be allowed on these areas. Additionally, no sedimentation and erosion control devices or stormwater collection, treatment, diversion, or dispersal devices should be allowed on or near these areas.

Thank you for the opportunity to provide you with this wastewater system soil suitability evaluation. Do not hesitate to call me if you have any questions or concerns about this evaluation or if you need any additional information.

Sincerely,

Scott Mitchell, PE, LSS
President



SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

(Complete all fields in full)

OWNER: LGI Homes NC LLC DATE EVALUATED: 10/23/2024
 ADDRESS: 1450 Lake Robbins Drive, Suite 430, The Woodlands, TX 77380
 PROPOSED FACILITY: Single-Family Dwelling PROPOSED DESIGN FLOW (.0400): 480 PROPERTY SIZE: 0.63 acres
 LOCATION OF SITE: Boone Trail Village - Lot 56 ; 92 Camp Rock Road, Lillington PROPERTY RECORDED: 12/05/2024
 WATER SUPPLY: Public Single Family Well Shared Well Spring Other WATER SUPPLY SETBACK:
 EVALUATION METHOD: Auger Boring Pit Cut TYPE OF WASTEWATER: Domestic High Strength IPWW

P R O F I L E #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY		OTHER PROFILE FACTORS				.0509 PROFILE CLASS & LTAR*	.0502(d) SLOPE CORRE CTION
			.0503 STRUCTURE/ TEXTURE	.0503 CONSISTENCE/ MINERALOGY	.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ		
1	L, 3%	Ap, 0-6	SL, G	VFR, NS, NP, NEXP	10YR 5/2				S, 0.40	2"
		E, 6-34	SL, SBK	VFR, NS, NP, NEXP	2.5Y 6/4					
		Bt1, 34-45	SCL, SBK	FR, SS, SP, SEXP	10YR 6/6					
		Bt2, 45-46+	SCL, SBK	FR, SS, SP, SEXP	10YR 6/6 2.5YR 4/8; 15%	46+				
2	L, 3%	Ap, 0-6	SL, G	VFR, NS, NP, NEXP	10YR 5/2				S, 0.35	2"
		E, 6-18	SL, SBK	VFR, NS, NP, NEXP	2.5Y 6/4					
		Bt1, 18-29	SCL, SBK	FR, SS, SP, SEXP	10YR 6/6					
		Bt2, 29-34	SCL, SBK	FR, SS, SP, SEXP	10YR 6/6					
		CB, 34+	SCL, SBK	FR, SS, SP, SEXP	10YR 6/6 2.5YR 4/8; 25%	34				
3										
4										

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	SITE CLASSIFICATION (.0509): <u>Suitable</u> EVALUATED BY: <u>Scott Mitchell / Adam Aycoc</u> OTHER(S) PRESENT: _____
Available Space (.0508)	Yes	Yes	
System Type(s)	llb	llb	
Site LTAR	0.35	0.35	
Maximum Trench Depth	20" on Low Side	22" on Low Side	

Comments: _____

LEGEND

LANDSCAPE POSITION	SOIL GROUP	SOIL TEXTURE	CONVENTIONAL LTAR (gpd/ft ²)	SAPROLITE LTAR (gpd/ft ²)	LPP LTAR (gpd/ft ²)	MINERALOGY/ CONSISTENCE		STRUCTURE	
						MOIST	WET		
CC (Concave slope)	I	S (Sand)	0.8 - 1.2	0.6 - 0.8	0.4 - 0.6	MOIST	WET	SG (Single grain)	
CV (Convex Slope)		LS (Loamy sand)		0.5 - 0.7		Lo (Loose)	NS (Non-sticky)	M (Massive)	
D (Drainage way)	II	SL (Sandy loam)	0.6 - 0.8	0.4 - 0.6	0.3 - 0.4	VFR (Very friable)	SS (Slightly sticky)	GR (Granular)	
FP (Flood plain)		L (Loam)		0.2 - 0.4		FR (Friable)	S (Sticky)	SBK (Subangular blocky)	
FS (Foot slope)	III	SiL (Silt loam)	0.3 - 0.6	0.1 - 0.3	0.15 - 0.3	FI (Firm)	VS (Very sticky)	ABK (Angular blocky)	
H (Head slope)		SCL (Sandy clay loam)		0.05 - 0.15**		VFI (Very firm)	NP (Non-plastic)	PR (Prismatic)	
L (Linear Slope)		CL (Clay loam)		None		0.15 - 0.3	EFI (Extremely firm)	SP (Slightly plastic)	PL (Platy)
N (Nose slope)		SiCL (Silty clay loam)					P (Plastic)	VP (Very plastic)	
R (Ridge/summit)		Si (Silt)							
S (Shoulder slope)	IV	SC (Sandy clay)	0.1 - 0.4	0.05 - 0.2	SEXP (Slightly expansive)				
T (Terrace)		SiC (Silty clay)			EXP (Expansive)				
TS (Toe Slope)		C (Clay)							
		O (Organic)	None						

* Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

**Sandy clay loam saprolite can only be used with advanced pretreatment in accordance with 15A NCAC 18E .1200.

HORIZON DEPTH In inches below natural soil surface

DEPTH OF FILL In inches from land surface

RESTRICTIVE HORIZON Thickness and depth from land surface

SAPROLITE S(suitable) or U(unsuitable); Evaluation of saprolite shall be by pits.

SOIL WETNESS CLASSIFICATION Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

S (Suitable) or U (Unsuitable)

Show profile locations and other site features (dimensions, reference or benchmark, and North).

4-Bedroom
 LTAR: 0.35 gpd/ft²
 Initial: Gravity-to-Innovative 25%
 Reduction Status Product utilizing
 lines 5-9 (350')
 Repair: Gravity-to-Innovative 25%
 Reduction Status Product utilizing
 lines 1-4 (360')

CAMP ROCK ROAD

SHEET NUMBER
 1 of 5

Boone Trail Village
 Lot 56
 Overall Septic

REVISION NO.	DATE
Original Submittal	February 4, 2025
Revision 1	---
Revision 2	---
Revision 3	---
Master Set	---

PREPARED FOR : LGI Homes
 5511 Capital Center Drive
 Suite 560
 Raleigh, NC 27612

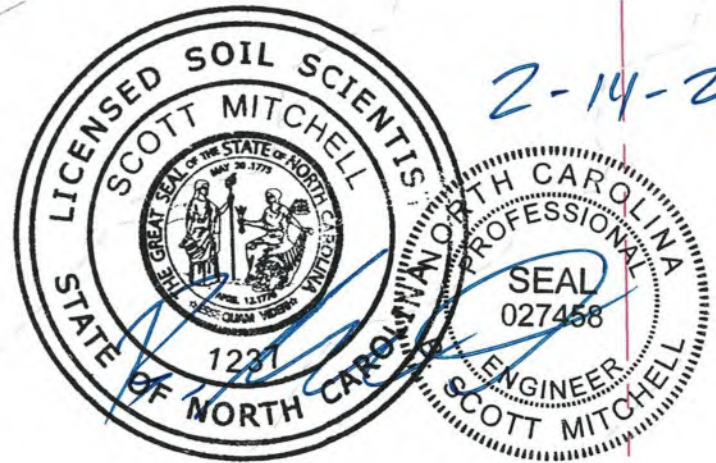
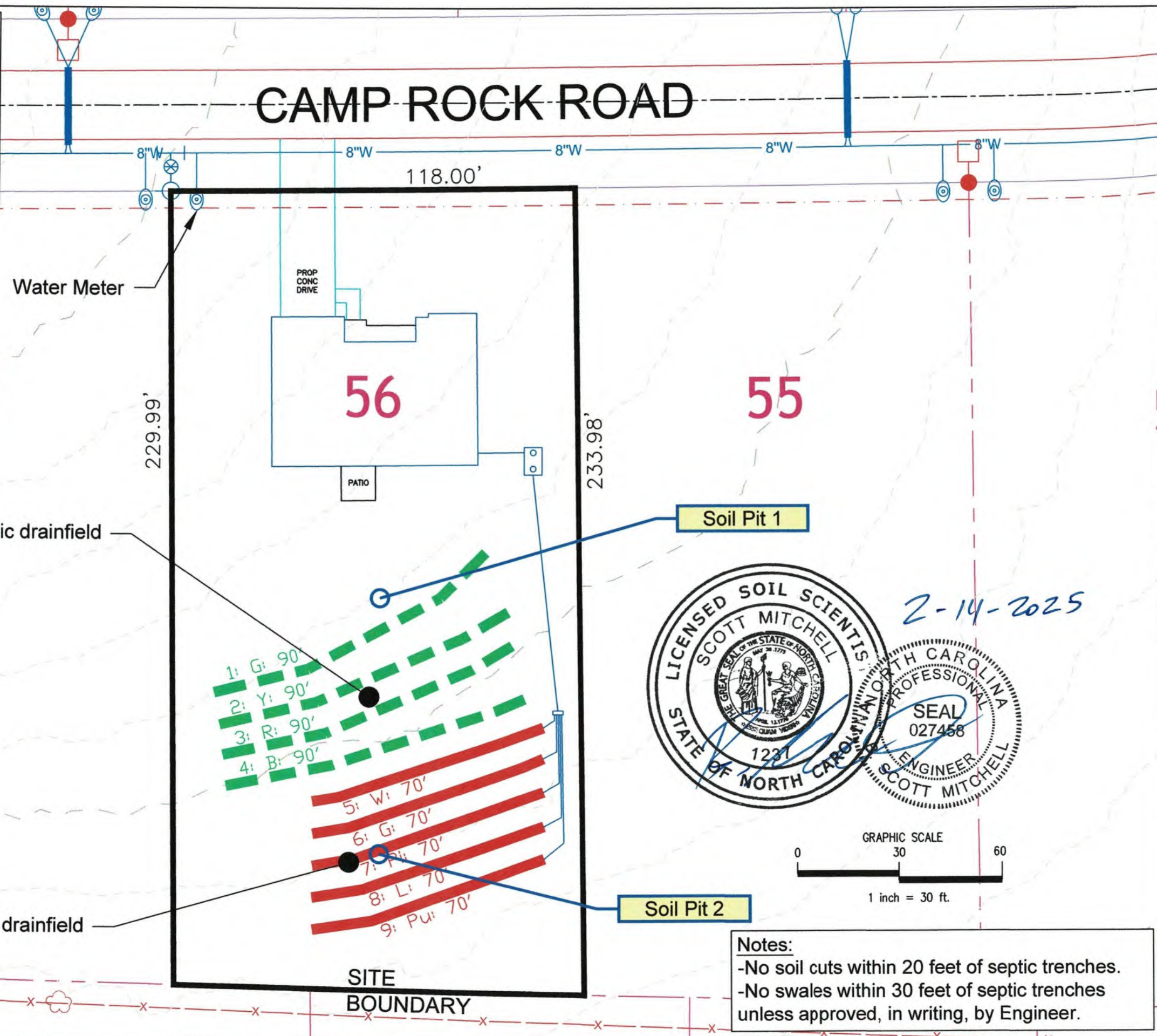
DATE : February 4, 2025

DESIGNER CONTACT:
 ADAM AYCOCK, EI

DRAWN BY:
 ADAM AYCOCK, EI

MITCHELL ENVIRONMENTAL, PA
 C-2911

1501 LAKESTONE VILLAGE LANE
 SUITE 205
 FUQUAY VARINA, NC 27526



Notes:
 -No soil cuts within 20 feet of septic trenches.
 -No swales within 30 feet of septic trenches
 unless approved, in writing, by Engineer.

