



**North Carolina Onsite Wastewater Contractor Inspector Certification Board
Authorized Onsite Wastewater Evaluator Permit Option for Non-Engineered Systems
Notice of Intent (NOI) to Construct**

New Expansion Repair Relocation Relocation of Repair Area

Owner or Legal Representative Information:
 Name: Justin Zimmerle and Bruce Steger
 Mailing address: 92 Dove Trail City: Sanford State: NC Zip: 27332
 Phone: 480-341-5296 Email: JustinZimmerle32@yahoo.com

Authorized Onsite Wastewater Evaluator Information:
 Name: Hal Owen Certification #: 10036E
 Mailing address: PO Box 400 City: Lillington State: NC Zip: 27546
 Phone: 910-893-8743 Email: hal@halowensoil.com

Site Location Information:
 Site address: Longleaf Dr, Lillington, NC 27546
 Tax parcel identification number or subdivision lot, block number of property: _____
Tract 2-A, PIN 9596-97-9526.000 County: Harnett

System Information:
 Wastewater System Type: IIIbg (Pump to Accepted Status 25% reduction)
 Daily Design Flow: 600 gpd
 Sapro-lite System: Yes No Subsurface Operator Required: Yes No
 Water Supply Type: Private Well Public Water Supply Spring Other: _____

Facility Type:
 Residential 5 # Bedrooms 10 Maximum # of Occupants
 Business Type of Business and Basis for Flow: _____
 Public Assembly Type of Public Assembly and Basis for Flow: _____

Required Attachments:
 Plat or Site Plan
 Evaluation of Soil and Site Features by Licensed Soil Scientist

Attest: On this the 28 day of May, 2024 by signature below I hereby attest that the information required to be included with this NOI to Construct is accurate and complete to the best of my knowledge. Furthermore, I hereby attest that I have adhered to the laws and rules governing onsite wastewater systems in the state of North Carolina.
 This NOI shall expire on 28 day of May, 2029.

Signature of Authorized Onsite Wastewater Evaluator: Hal Owen

Signature of Owner or Legal Representative: Justin Zimmerle

Disclosure: The owner may apply for a building permit for the project upon submitting a complete NOI to Construct and the fee required (if any) to the local health department. An onsite wastewater system authorized by an authorized onsite wastewater evaluator shall be transferable to a new owner with the consent of the authorized onsite wastewater evaluator.

Local Health Department Receipt Acknowledgement:
 Signature of Local Health Department Representative: _____ Date: _____

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/28/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER INSURANCE SERVICE CTR -LILLING LILLINGTON BRANCH OFFICE PO Box 1565 LILLINGTON, NC 27546 DANIEL L. BABB	910-893-5707	CONTACT NAME: SHARON WOODY PHONE (A/C, No, Ext): 910-893-5707 E-MAIL ADDRESS: SWOODY@ISCFAY.COM FAX (A/C, No): 910-893-2077
INSURED HAL OWEN & ASSOCIATES, INC. PO BOX 400 LILLINGTON, NC 27546		INSURER(S) AFFORDING COVERAGE
		INSURER A: STARSTONE NATIONAL INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:
		NAIC #

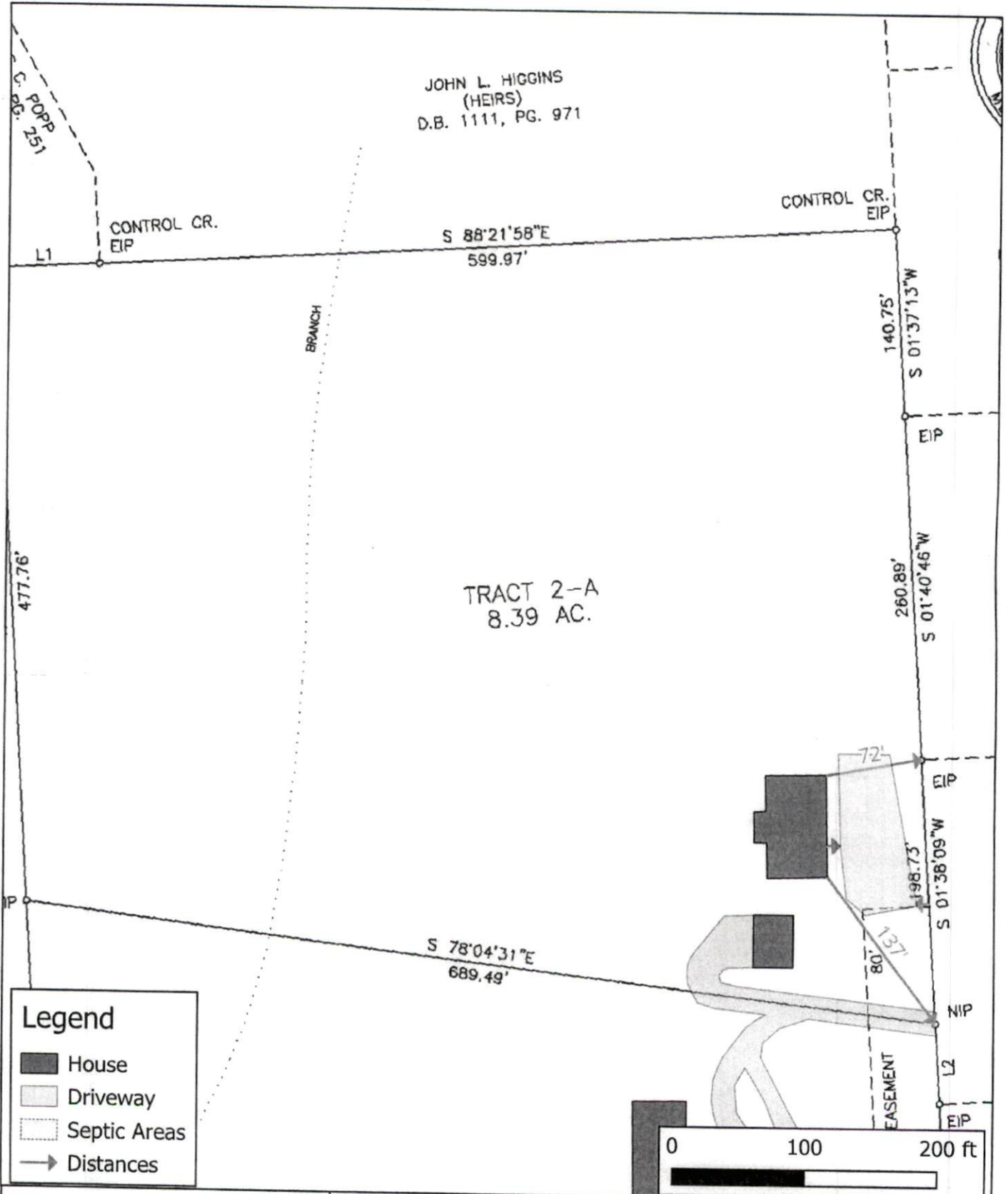
COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WYD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	PROFESSIONAL LIAB.			42ESP00143901	01/27/2024	01/27/2025	PER OCC. 1,000,000 AGGREGATE 2,000,000

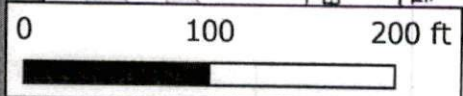
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER JUSTIN ZIMMERLE 92 DOVE TRL SANFORD, NC 27332	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Taylor Wallace</i>
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Legend

- House
- Driveway
- Septic Areas
- Distances



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 919-893-8743

Longleaf Dr (Tract 2-A)
 PIN 9596-97-9526.000
 28 May 2024

Site Plan
 For reference only. Not a survey.

AOWE EVALUATION

for Longleaf Dr

Issue date 5/31/2024

Expiration 5/31/2029

APPLICANT INFORMATION

Name	Justin Zimmerle and Bruce Steger		
Mailing Address	92 Dove Trail, Sanford NC 27332		
E-mail Address	JustinZimmerle32@yahoo.com	Telephone Number	480-341-5296

PROPERTY IDENTIFIERS

County	Harnett	PIN	0506-07-1290.000
Size (Acre)	8.39	County PID	
Site Address	Longleaf Dr		
S/D Name and Lot#	Tract 2-A		

PROJECT INFORMATION

Wastewater System	New	.0403 Eng Low Flow	No
Wastewater Strength	Domestic	Effluent Standard	DSE
Facility Type	Residential	Water Supply	Public Water
Design Wastewater Flow	600 gpd	gal/unit	120
Basis for Flow	5 seats	max occupancy	10
Basement	No	Fixtures in basement?	No
Crawl Space	Yes	Slab Foundation	No

CONSULTANT INFORMATION

Company Name	Hal Owen & Associates, Inc.		
Mailing Address	PO Box 400, Lillington, NC 27546		
E-mail Address	hal@halowensoil.com	Telephone Number	910-893-8743
Licensed Soil Scientist	Britt Wilson, LSS#1351	AOWE	Hal Owen, #10036E

A soil and site evaluation has been conducted for the referenced property for the purpose of permitting a subsurface wastewater system. This evaluation was prepared based on information provided by the applicant to include the basis for design flow, proposed structure location(s), and property boundaries. Any false, inaccurate, or incomplete information provided by the applicant, owner, or legal representatives may result in denial or revocation of applications, approvals, or permits.

This AOWE Evaluation is being submitted pursuant to and meets the requirements of G.S.130A-336.2. This evaluation includes a soil and site evaluation, specifications, plans, and reports for the site layout and construction of a proposed onsite wastewater system by an Authorized On-Site Wastewater Evaluator (AOWE). The evaluation of soil conditions and site features is provided in accordance with G.S. 130A-335(e), the Rules for "Wastewater Treatment and Dispersal Systems", 15A NCAC 18E, and local septic regulations (if any). This report represents my professional opinion as a Licensed Soil Scientist and Authorized Onsite Wastewater Evaluator.

Britt Wilson

Hal Owen



WASTEWATER SYSTEM DESIGN SPECIFICATIONS

Proposed Design Daily Flow	<u>600</u> gpd	Drainfield Meets Requirements:
Septic Tank Size (minimum)	<u>1250</u> gallons	.0508 Available Space <u>Yes</u>
Pump Tank Size (minimum)	<u>1250</u> gallons, if required	.0601 Setbacks <u>Yes</u>

Initial System

System Type	<u>Illbg - Pump to Other non-conventional systems</u>		
Pump Required	<u>Yes</u>	<u>9</u> ft TDH at	<u>25</u> GPM
Trenches:	<u>Accepted (25% reduction) System</u>		
Design LTAR	<u>0.70</u> gal/day/ft ²	Saprolite System	<u>No</u>
Total Trench/ Bed Length	<u>214</u> feet	Fill System	<u>No</u>
Trench Spacing	<u>9</u> ft on center		
Usable soil depth to LC	<u>48</u> inches		
Maximum Trench Depth	<u>24</u> inches, measured on downhill side of trench		
Minimum Soil Cover	<u>6</u> inches		
Artificial Drainage Required	<u>No</u>		

Repair System

System Type:	<u>Illbg - Pump to Other non-conventional systems</u>		
Pump Required	<u>Yes</u>		
Trenches:	<u>Accepted (25% reduction) System</u>		
Design LTAR	<u>0.70</u> gal/day/ft ²	Saprolite System	<u>No</u>
Total Trench/ Bed Length	<u>214</u> feet	Fill System	<u>No</u>
Trench Spacing	<u>9</u> ft on center		
Usable soil depth to LC	<u>48</u> inches		
Maximum Trench Depth of	<u>24</u> inches, measured on downhill side of trench		
Minimum Soil Cover	<u>6</u> inches		

Potential Drainlines flagged at site on 9-ft centers.

Initial Repair	Line #	Color	Relative Elevation (ft)	Drainline Length(ft)	Field Length(ft)
	1	W	98.30	110	125
	2	R	97.47	110	161
	3	Y	96.69	110	206
	4	B	95.61	110	219
Septic Tank:			96.69		
Pump Tank:			96.69		
Reference Elev:			100.00		

PERMIT CONDITIONS

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met.

System shall be installed in accordance with the attached Wastewater System Design Specifications. See attached SYSTEM LAYOUT for wastewater system design and location.

Any changes to the site plan or intended use must be approved by Hal Owen & Associates. Permit modification and resubmittal to the LHD may be necessary to ensure regulatory compliance.

Conformance to all regulatory setbacks shall be maintained. Local regulations (such as well or riparian buffer ordinances) may require more stringent setbacks than specified in the septic regulations.

Minimum soil cover of six inches shall be established over dispersal field. Soil cover above the original grade shall be placed at a uniform depth over the entire dispersal field and shall extend laterally five feet beyond the dispersal trench. Site shall be graded to shed water away from field and a vegetative cover established to prevent erosion.

The dispersal field and repair area shall not be subject to vehicular traffic. Vehicular traffic can damage soils, pipes, and valve boxes. Do not use septic areas for parking.

Do not allow underground utilities, water lines, or sprinkler systems to be installed in the septic areas. Damage to the septic areas could result in the septic permit being revoked.

The wastewater system shall not be covered until inspected by Hal Owen & Associates and shall not be placed into use until an Authorization to Operate is issued.

SPECIFIC REQUIREMENTS

A pre-construction conference with the septic contractor is required prior to installation.

Call Hal Owen & Associates at least five days in advance to schedule 910-893-8743

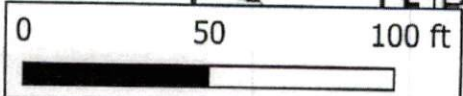
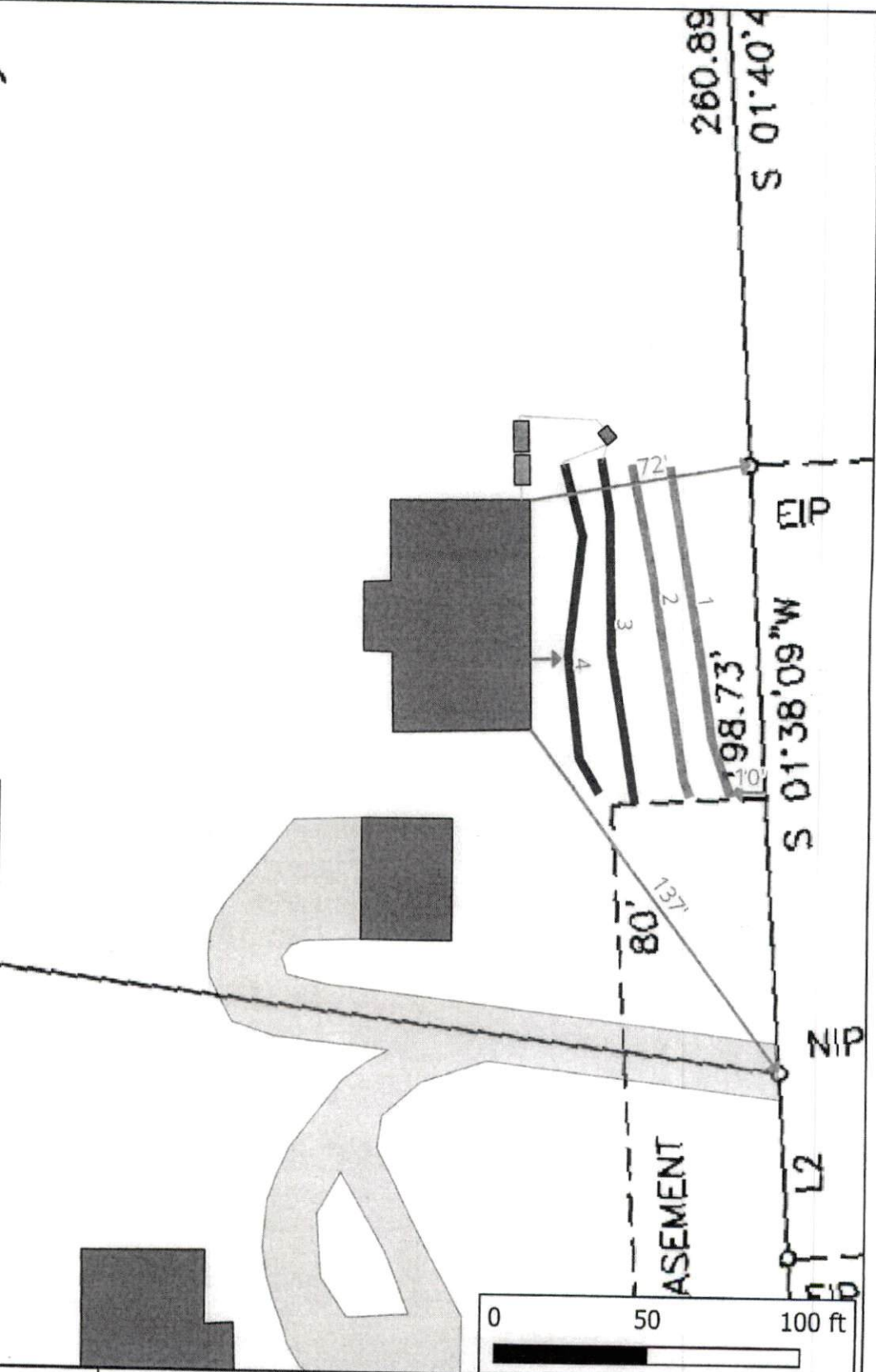
The inlet and outlet of all tanks shall be equipped with an approved pipe penetration boot.

The pump tank may be eliminated if gravity distribution can be demonstrated.

TRACT 2-A
8.39 AC.

Legend

- Distances
- House
- Driveway
- Well Setback
- Septic Components**
- Septic Tank
- Pressure Manifold
- Pump Tank
- Repair
- Drainlines**
- Initial
- Repair
- Supply Line



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Longleaf Dr Tract 2-A
PIN 9596-97-9526.000
28 May 2024

Septic Layout

For reference only. Not a survey.

INITIAL WASTEWATER SYSTEM

Pressure Manifold Design Criteria

DESIGN DAILY FLOW 600 gallons/day **SOIL LTAR:** 0.70 gpd/ft²
TANKS (min) Septic Tank: 1250 gallons Pump Tank: 1250 gallons
SUPPLY LINE Length: 25 ft Diameter: 2 " SCH 40 PVC
 Minimum flow (gpm) to maintain 2fps scour velocity: 20.9 gpm
 Supply Pipe Volume 4 gallons

TRENCHES Drainline Type: Accepted (25% reduction) System
 Maximum Trench Depth of 24 inches, measured on low side of trench
 Trench width: 3 feet Effective Trench Width: 4 ft
 Absorption Area: 643 ft² Minimum Linear Length: 214 ft

MANIFOLD Length (ft): 2.5 Diameter: 4" sch 80 pvc Elevation: 97.69
 # Taps 2 Tap Configuration: 6in. spacing, 1 side of manifold

TAP CHART

Line	Color	Relative Elevation	Length(ft)	Tap Size/ Schedule	flow/tap gpm	gpd/ft	LTAR (gpd/ft ²)
3	Y	96.69	110	3/4"sch 40	12.50	2.727	0.909
4	B	95.61	110	3/4"sch 40	12.50	2.727	0.909
Total Drainline:			220	Total Flow:	25.00		

PUMP CALCULATIONS

Target LTAR*: 0.93
 LTAR + 5%: 0.980

Dose Volume: 107.75 gallons, with Pipe Volume at 75 % *65.3gal/100ft pipe
 Dose Pump Run Time (min): 4.31 Daily Pump Run Time (min): 24.00
 Drawdown (in.): 108 gallons + 20.25 gal/ inch = 5.32 inches
 Pump Tank Elevation (ft): 96.69 Pump Elevation (ft): 91.69
 Friction Head: 1.21 *Hazen Williams Formula (use supply line length+70' for fittings in pump tank)
 Elevation Head: 6.0
 Design Head: 2.0 Total Dynamic Head (TDH): 9.21 ft

Pump to Deliver: 25.0 gpm @ 9.2 ft TDH

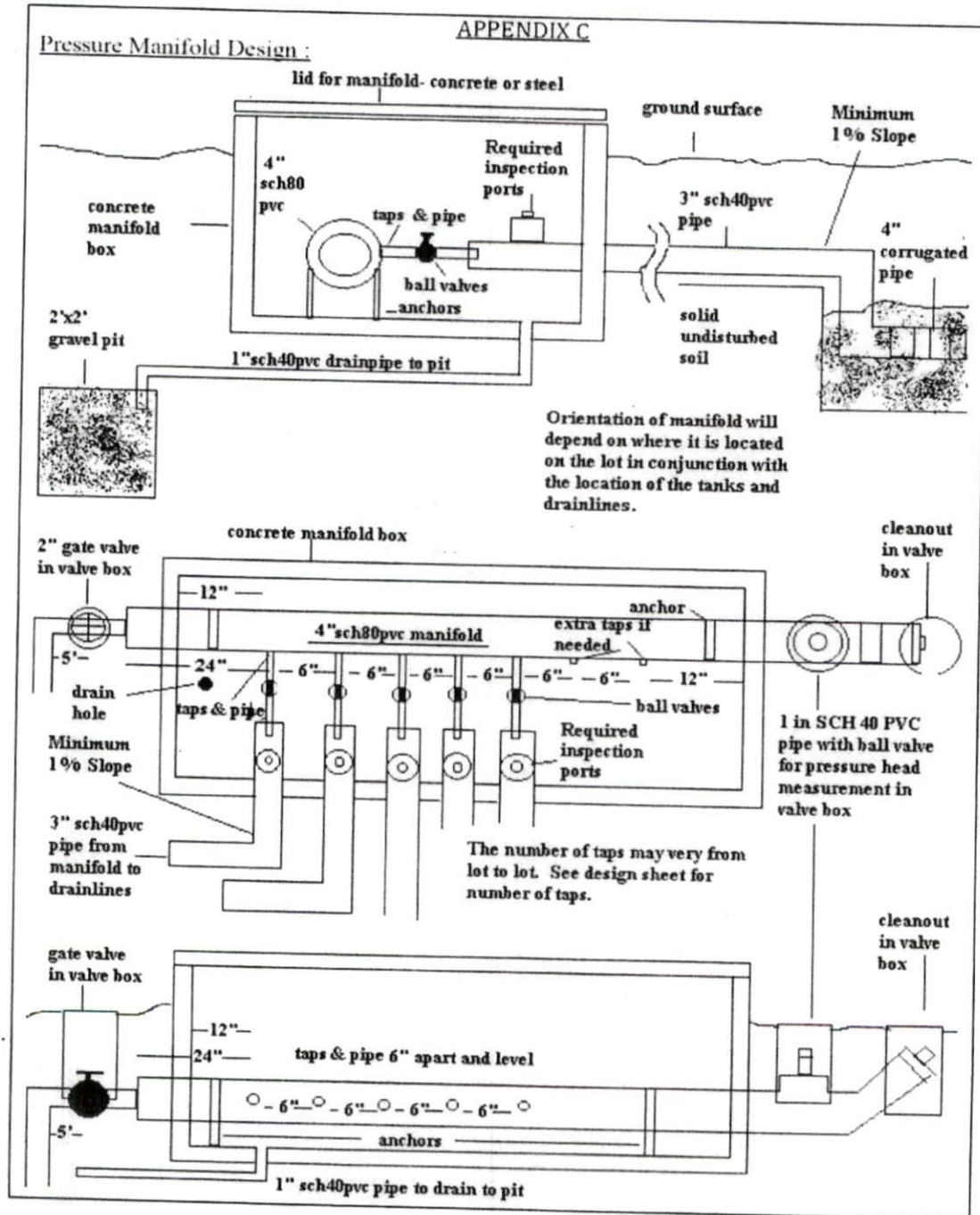
NEMA 4X Simplex Control Panel with elapsed time meter, event counter, audible and visible alarm (w/ silence button), hand-off-automatic (HOA) switch, pump run light, and pump on separate circuits is required. Control panel bottom shall be mounted a minimum of 24 in. above finished grade within 50 ft of pump tank. A septic tank filter is required. Floats to be determined by type of pump tank used.

Possible Septic Tank: Brantley 1000 STB-499 Possible Septic Filter: _____
 Possible Pump Tank: Brantley 1000 PT-237 Vol(gal): 1000 GFI: 20.25
 Possible Pump: _____ pump height (in) = 14

INITIAL WASTEWATER SYSTEM

Pressure Manifold Diagram

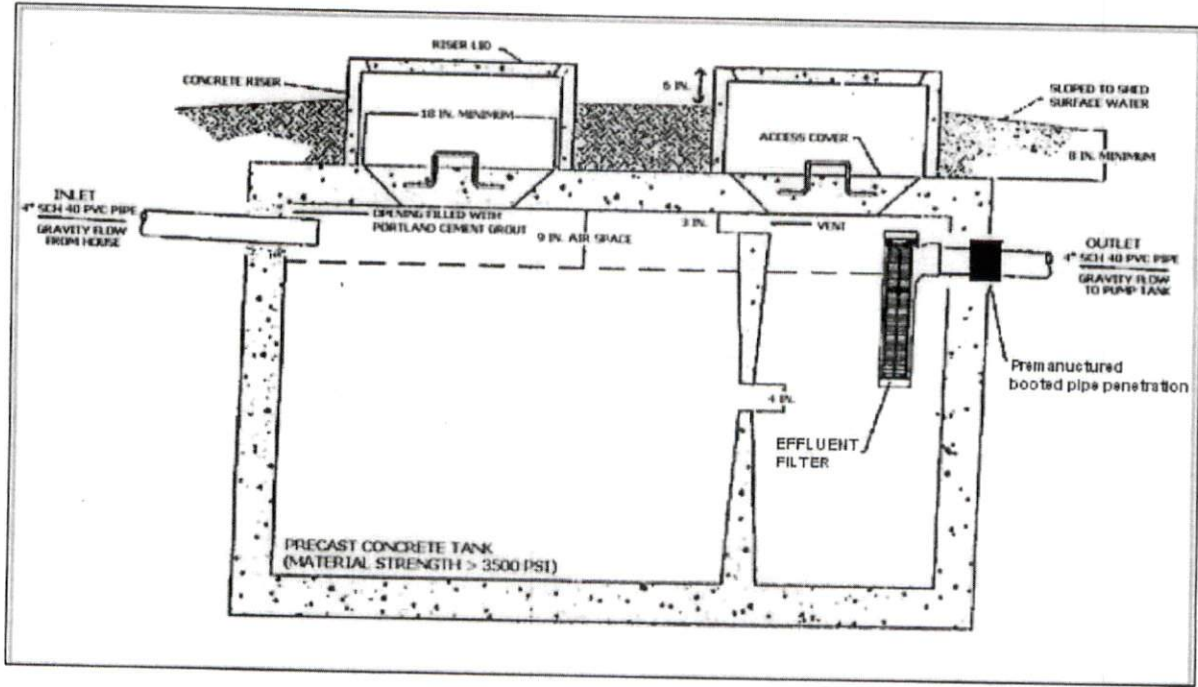
Tap#	1	2
Manifold	4" SCH 80 PVC	
tap size	3/4" sch 40	3/4" sch 40
flow (gpm)	12.50	12.50
length (ft)	110	110



INITIAL WASTEWATER SYSTEM

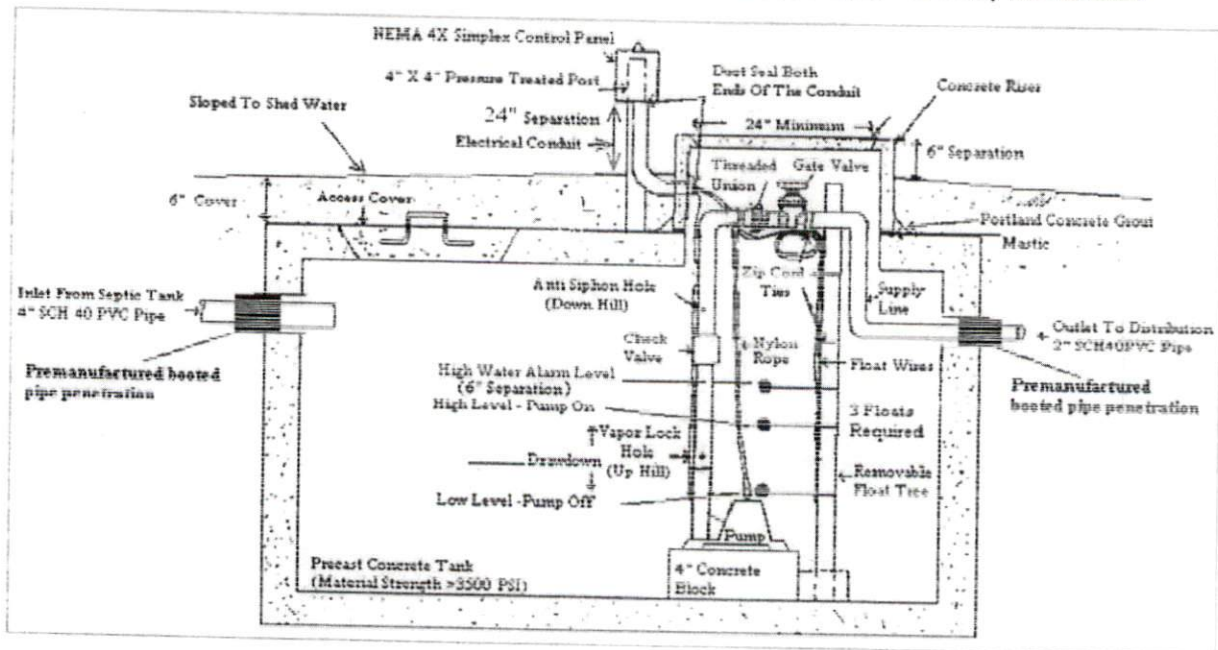
Typical Septic Tank

1250 GALLON SEPTIC TANK, minimum



Typical Pump Tank

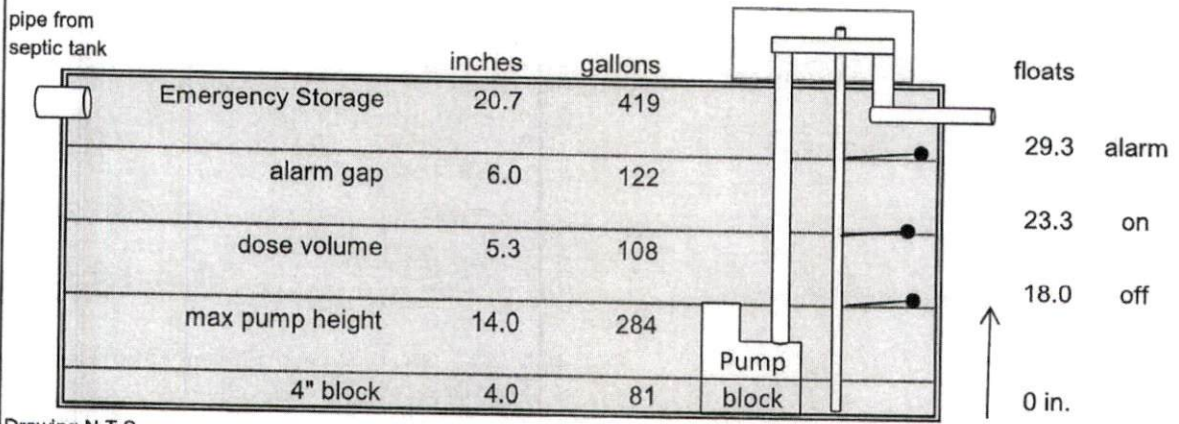
1250 GALLON PUMP TANK, minimum



INITIAL WASTEWATER SYSTEM

Pump Tank Calculations:

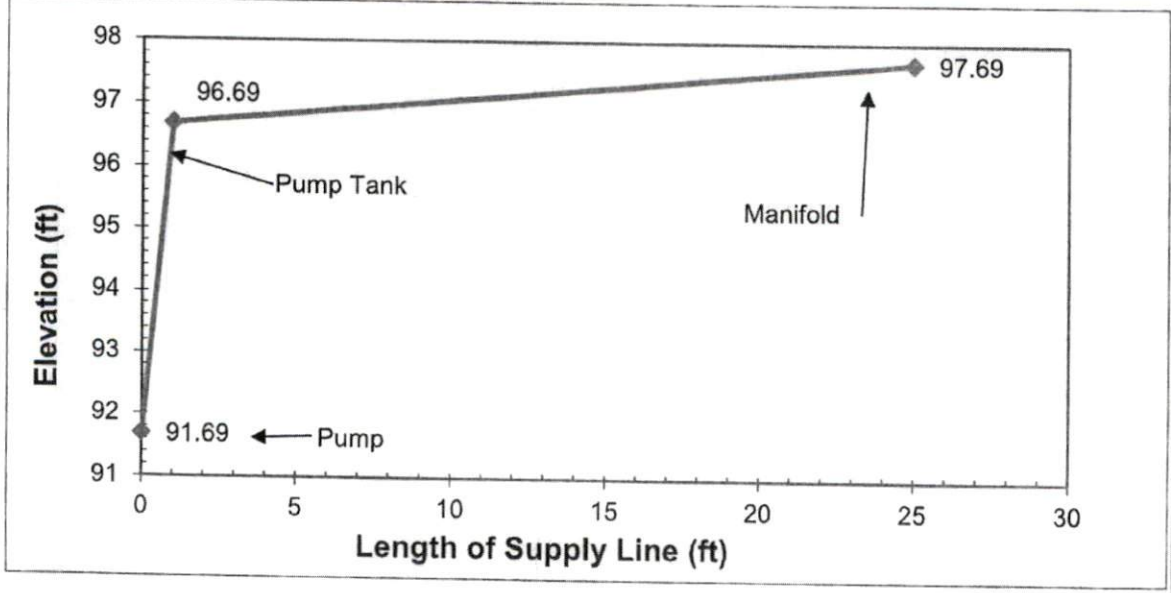
Possible pump tank: Brantley 1000_PT-237
 Possible Pump: _____
 tank GPI (gal/in): 20.25 calculated height: 14 in
 tank volume (gal): 1000 per manufacturer
 tank height (in): 50.0 per manufacturer 12-hr minimum emergency storage: 300 gal



Drawing N.T.S.

Supply Line Profile:

	Distance	Elevation
Pump	0	91.69
pump tank	1	96.69
Pressure manifold	25	97.69
4)		
5)		





04'31"E

260.8'
S 01°40'

EP

S 01°38'09"W

Z

L2

EP

Profile 1

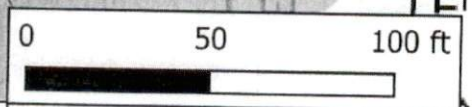
198.73'

80'

EASEMENT

Legend

- House
- Driveway
- Soil Unit**
- Suitable
- Suitable for shallow drainlines
- Unsuitable
- Soil Boring N**
- Profile 1
- Auger boring



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Longleaf Dr (Lot 2-A)
 PIN 9596-97-9526.000
 28 May 2024

Soil Map for Septic Suitability
 For reference only. Not a survey.

AOWE Evaluation - Lot 2A Longleaf Dr. (Harnett Co) **Soil Site Evaluation Form for On-Site Wastewater System**

OWNER NAME: Justin Zimmerle and Bruce Steger OWNER ADDRESS: 92 Dove Trail
 PROPOSED FACILITY Residential PROPOSED DESIGN FLOW: 600 PROPERTY SIZE: 8.39
 LOCATION OF SITE: Longleaf Dr, Lillington, NC 27546 PIN: 9596-97-9526.000
 WASTEWATER TYPE: Domestic COUNTY: Harnett
 WATER SUPPLY: Public Water WATER SUPPLY SETBACK: 10
 EVALUATION METHOD: AUGER BORING PIT CUT
 EVALUATED BY: Hal Owen, LSS 1102 and Steven Boor DATE EVALUATED: 3/25/24

	INITIAL SYSTEM	REPAIR SYSTEM
AVAILABLE SPACE	643 ft ² trench bottom	643 ft ² trench bottom
SYSTEM TYPE	Accepted (25% reduction) System	Accepted (25% reduction) System
SITE LTAR	0.70 gpd/ft ²	0.70 gpd/ft ²
MAX TRENCH DEPTH	24 inches (measured on downhill side)	24 inches (measured on downhill side)
SITE CLASSIFICATION	Suitable	OTHER FACTORS
COMMENTS		

PROFILE 1

HORIZON DEPTH	COLOR	CONSI TENCE	TEXTURE	STRUCTURE	MINERA LOGY	OTHER PROFILE FACTORS	
0-3	2.5Y 2.5/1	VFR	LS	GR	SEXP	LANDSCAPE POSITION	L
3-36	10YR 5/6	VFR	LS	GR	SEXP	SOIL WETNESS DEPTH	>48"
36-48	10YR 6/8	FR	SL	GR	SEXP	SOIL WETNESS COLOR	
						SOIL DEPTH	48"
						SAPROLITE CLASS	NA
						RESTRICTIVE HORIZON	NA
						SLOPE %	5
PROFILE CLASSIFICATION			Suitable	LTAR gpd/ft ²	0.7	SLOPE CORRECTION (IN)	1.8
COMMENT							

PROFILE 2

HORIZON DEPTH	COLOR	CONSI TENCE	TEXTURE	STRUCTURE	MINERA LOGY	OTHER PROFILE FACTORS	
						LANDSCAPE POSITION	
						SOIL WETNESS DEPTH	
						SOIL WETNESS COLOR	
						SOIL DEPTH	
						SAPROLITE CLASS	NA/S/U
						RESTRICTIVE HORIZON	(thickness and dep
						SLOPE %	
PROFILE CLASSIFICATION			Suitable/Un	LTAR gpd/ft ²		SLOPE CORRECTION (IN)	0.0
COMMENT							

TERMS AND CONDITIONS

This AOWE Evaluation is intended to file a Notice of Intent to construct a wastewater system with the Local Health Department and shall expire in five years. This evaluation is not a permit to develop. The owner and subcontractors will need to abide by all state and local rules and regulations pertaining to planning, zoning, and land use development.

Notice of Intent to Construct – Prior to commencing or assisting in the construction, siting, relocation, or repair of a wastewater system, a complete Notice of Intent (NOI) to Construct a wastewater system using an AOWE must be submitted to the Local Health Department (LHD). The owner may apply for a building permit for the project upon submitting a complete NOI and the required fee.

Plan Alterations – If there are any changes in the site plan that can impact the wastewater system, such as moving the house or driveway, site alterations, or if the applicant chooses to change the design daily flow prior to wastewater system construction, a new NOI shall be submitted to the LHD. The applicant shall request in writing that the PE or AOWE invalidate the prior NOI with a signed and sealed letter sent to the applicant and LHD.

Site Alterations – The applicant shall be responsible for preventing modifications or alterations of the site for the wastewater system and the system repair area before, during, and after any construction activities for the facility, unless approved by the AOWE.

On-Site Wastewater System Contractor – The AOWE shall assist the owner in the selection of a certified on-site wastewater system contractor who shall be under contractual obligation to the owner and have sufficient errors and omissions, liability, or other insurance for the system constructed.

Inspections, Construction Observations, and Reports – The AOWE shall make periodic visits to the site to observe the progress and quality of the construction of the wastewater system.

Authorization to Operate (ATO) – Upon determining that the wastewater system has been properly installed and is capable of being operated in accordance with the conditions of the permit, the AOWE shall provide the owner with a report that includes inspection reports, a written operation and management program, any special reports, and an Authorization to Operate. The owner shall sign confirming acceptance and receipt of the report, and then provide a copy to the LHD who will issue the certificate of occupancy for the facility.

Operation and Management – The owner shall be responsible for continued adherence to the operations and management program established by the AOWE. This permit shall in no way be taken as a guarantee or implied warranty that the septic system will function satisfactorily for any given period of time.

Change in System Ownership – An authorized wastewater system shall be transferrable to a new owner with the consent of the AOWE. The new owner and the AOWE shall enter a contract for the wastewater system.

Revocation – The AOWE permit is subject to revocation if the site plan, plat, or the intended use changes. This permit is subject to compliance with the provisions of the laws and Rules for Wastewater Treatment and Dispersal Systems and to the conditions of this permit.

Repair of Malfunctioning Systems – The owner may apply for an Improvement Permit and a Construction Authorization from the LHD or obtain a NOI from an AOWE to repair a malfunctioning wastewater system.