

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: Caviness and Cates
Mailing address: 639 Executive Place Ste. 400 City: Fayetteville State: NC Zip: 28305
Phone: 910-709-9801 Email: pam@cavinessandcates.com
Authorized Onsite Wastewater Evaluator Information:
Name: Mike Eaker Certification #: 10013E
Mailing address: PO Box 9321 City: Fayetteville State: NC Zip: 28311
Phone: 910-709-9801 Email: pam@cavinessandcates.com Authorized Onsite Wastewater Evaluator Information: Name: Mike Eaker Certification #: 10013E Mailing address: PO Box 9321 City: Fayetteville State: NC Zip: 28311 Phone: 910-822-4540 Email: Mike@southeasternsoil.com
Site Location Information:
Site address: _356 Hookbill Lane, Lillington, NC 27546
Tax parcel identification number or subdivision lot, block number of property: Ducks Landing Lot 107
0527-51-1911.000 County: <u>Harnett</u>
Daily Design Flow: 480 gpd Saprolite System: Yes No Subsurface Operator Required: Yes No Water Supply Type: Private Well Public Water Supply Spring Other: Facility Type: Residential 4 # Bedrooms 8 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 9 day of May , 2025 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 9 day of May , 2030 . Signature of Authorized Onsite Wastewater Evaluator:
Signature of Owner or Legal Representative: Pamela M Geddie
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:

Southeastern Soil & Environmental Associates, Inc.

P.O. Box 9321 Fayetteville, NC 28311 Phone/Fax (910) 822-4540 Email mike@southeasternsoil.com

May 9, 2025

Ms. Pamela Geddie Caviness & Cates 639 Executive Place, Suite 400 Fayetteville, NC 28305

Re: Soil/site evaluation for subsurface waste disposal (GS 130A-336.2) AOWE, Ducks Landing, Lot 107, PIN 0527-51-1911.000, 356 Hookbill Lane, Lillington, Harnett County, North Carolina

Dear Ms. Geddie.

A soil/site evaluation has been conducted on the aforementioned property at your request. The purpose of the investigation was to determine if soils were suitable or provisionally suitable for a subsurface waste disposal system (conventional, accepted and innovative) to serve a proposed single-family residence (4-bedroom home). All ratings and determinations were made in accordance with "Onsite Wastewater Rules, 15A NCAC 18E". This LSS evaluation is being submitted to meet the requirements of GS 130A-336.2 (AOWE).

The soil evaluation was completed on March 13, 2025. Hand auger borings were advanced under moist soil conditions. The site essentially lies on a linear slope landscape (2-4% slope). Soil borings conducted in most of this area consisted of 6 or more inches of loamy sand underlain by sandy loam and/or sandy clay loam to 48 or more inches below the soil surface. Soil wetness and/or parent material (greater than 50%) was not observed shallower than 36 inches below the soil surface (initial system) and 37 inches (repair system). All other soil characteristics were suitable to at least 48 inches.

Based on soil borings and site conditions, the site would be designated suitable for a pump to a shallow accepted subsurface waste disposal drainfield (0.30 gal/day/ft2 LTAR; initial system). There is enough suitable soil area to allow for a pump to a porous panel block subsurface septic system repair (0.40 gal/day/ft2). A map showing the approximate location of the site and proposed septic layout accompanies this report.

[Note: No grading, rutting or other soil disturbance can occur in or near the proposed septic area. Any grading can alter the findings of this report and render the site unusable. As such, we recommend the builder protect the proposed septic areas with rope, flagging, fencing, etc.]

Design Summary

- Pump to Accepted product with **pressure manifold** (435', see septic layout)
- 480 gal/day flow rate (4BR)
- 22" maximum trench depth
- 0.30 gpd/ft2 LTAR (initial) and 0.4 gpd/ft2 (repair)
- 1000-gallon septic and pump tank (certified watertight)
- Pump to produce 42.89 gal/min @ 17.48 feet TDH
- Pump dose 198 gallons (9.9-inch drawdown)
- No grading, rutting or filling in septic areas
- No vertical cuts (greater than 2') within 15' of septic lines/areas
- Keep tanks and drainlines 10' from property lines
- Keep supply line 5 or more feet from property lines
- Install in dry soil conditions
- Maintain natural contours when clearing the lots
- Direct gutter water away from septic system
- AOWE must preapprove Licensed installer
- Preconstruction conference required 2 weeks prior to installation of septic
- Contractor to provide 2 week's notice prior to installation

During site construction, it is important not to impact and suitable or provisionally suitable soil areas with activities such as excavation or filling. Only the vegetation should be removed in the areas of the proposed septic drainfields to prevent any disturbance of naturally occurring soil. We recommend all lot clearing activity be delayed until the local health department issues a permit.

To the extent possible, we have identified the soil types that will impact the flow of wastewater on this site and have provided a professional opinion as to the best septic system layout. This report does not guarantee that the proposed septic system will properly function for any specific length of time.

Sincerely,

Mike Eaker

NC Licensed Soil Scientist # 1030

NC Authorized Wastewater Evaluator 10013E

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOC., INC.

PROPOSED SUBSURFACE WASTE DISPOSAL SYSTEM DETAIL SHEET

	SUBDI	VISION: Du	icks Landing		LOT 107				
	INITIA	SYSTEM: A	ccepted 25% Reduction		REPAIR: PPBPS-Horizontal				
	DISTRI	BUTION: Pro	essure Manifold		DISTRIBUTION Pressure Manifold				
	BENCH	MARK:	100.0		LOCATION RC 106/107				
	NO. BE	DROOMS:	4		LTAR 0.30 gpd/ft2 initial PUMP TANK SIZE 1000 Gallons				
	SEPTIC	TANK SIZE	1000 Gallons						
	LINE FLAG		G COLOR	ELEVATION	LENGTH				
	1	В		99.20	60				
	2	L		98.80	90				
Initial	_ 3	Р		98.60	110				
	_ 4	V		98.30	90				
	5	L		97.90	85				
	-				435 TOTAL				
Repair	6	Y		101.40	80				
rtepan	7	R		101.40	80				
	8	0		101.20	30				
	_ 9				25				
					215 TOTAL				
	BY Mi	ke Eaker			DATE 3/13/25				
	TYPICA	L PROFILE			THERE SHALL BE NO GRADING,				
	0-12	LS/SL	VFr/Fr/Gr		CUTTING, LOGGING OR OTHER SOIL				
Initial	20-48	SCL	Fi/SBk		DISTURBANCE IN SEPTIC AREA				
	CR2	36"			HEALTH DEPARTMENT USE ONLY.				
	0.40	1.0/01	Tibras in		DESIGNS DO NOT GURANTEE FUNCTIONALITY				
	0-16	LS/SL	VFr/Fr/Gr		MINIMUM.				
Repair	16-48	SL/SCL	Fi/SBk		Certification Rumber				
	CR2	37"			Certification Rumber Ru				

Notes: - This plat is for location purposes only. Builder should verify foundation information with plans before UPPER LETTLE This plat is for location purposes only. Builder should verify foundation information with plans before construction begins.

There is no USCE or NCGS monument within 2000' of this site.

The subject property is not within a special flood hazard area as determined by the Department of Housing and Urban Development.

The easement information shown hereon was obtained from the recorded plat. No updated title search was performed by the supposer. performed by the surveyor.

All distances are measured in feet.

This map reflects the information contained on the Record Plat and does not represent compliance with the Restrictive Covenants. LEGEND - EXISTING IRON PIPE - CURVE PT / PC SURVEYED LINE EASEMENT LINE SCALED IN FEET 1" = 50' - ADJOINER -SURVEYED BY OTHERS MAP NOT DRAWN IN ACCORDANCE WITH GS 47-30 **NOT FOR CONVEYANCES OR SALES** DUCKS LANDING TIE-LINE 4S86° 54' 08"W N86° 54' 08"E 1/2 inch 90.00 80.00' diameter rebar 30,002 pressure MANIFOU (106) S03° 05' 52"E 250.03' **DUCKS LANDING** PB ____, PG _ COVERED 22 INCH MAX TRENUT **DUCKS LANDING** PB ____, PG _ BOTTOM DEPTH 20.0' 1000 GAL SEPTIC & PUMP TANKS DRIVE 5' PERM. UTIL. ESM'T. 5' PERM. UTIL. ESM'T. 80.00' N86° 54' 48"W EIP EIP HOOKBILL LANE 60' PUBLIC R/W 1 =50 PRELIMINARY ZONED RA-20R: LOT NOT FRONT SIDE (EXT) 35' MIN RECORDED ON WIN

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES RESIDENTIAL PRESSURE MANIFOLD DESIGN

Permit # Ducks Landing Lot 107

of BDR: 4 Daily Flow: 480 gal/day L.T.A.R.: 0.3500 gal/day/sq.ft

Septic Tank: 1200 gals Pump Tank: 1200 gals Sq. Foot: 1305 System Type: Accepted

Number of Taps: 5 Length of Trenches: 435 ft(See Tap Chart for Details)

Depth of Trenches: <u>22</u> in Manifold Length: <u>48</u> in

Manifold Diameter: 4in sch 80pvc Tap Configuration: 6 in spacing 1 side(s) of manifold

Supply Line: length: 100 ft Diameter: 2 in sch 40pvc

Friction Loss + Fitting Loss: 6.88 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft Elevation Head: 8.60 ft

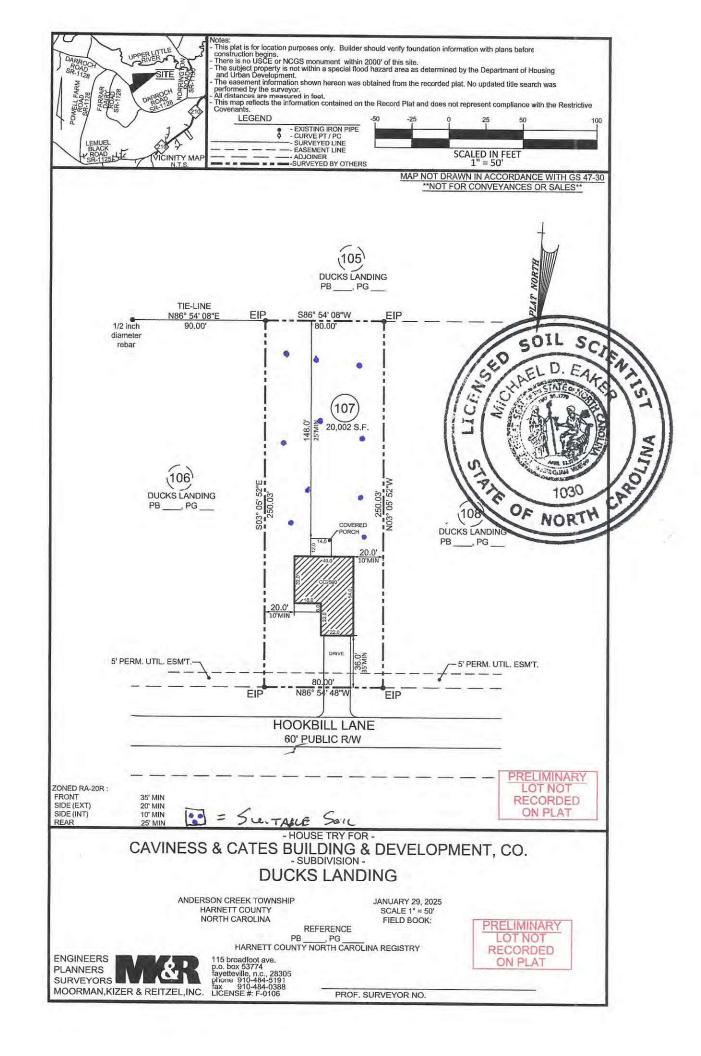
Total Head: 17.48 ft Pump to Deliver: 42.89 gals/min at 17.48 ft head

Dosing Volume: 198 gals,

Drawdown: 198 gals divided by 20 gals/in = 9.9 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

				TAP CHAP	RT						
Benchmark	5.3	is = 100.00	rc 106/107				Design Head:	2			
Pump tank elev.		8.7	96.60	Pump elev.	91.60		Manifold elev.	100.20			
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	Spacing of Panels (in)
1	В	6.10	99.20	60	1/2in SCH 80	5.48	61.33	180	0.3407		and the warry
2	L	6.50	98.80	90	1/2in SCH 40	7.11	79.57	270	0.2947		
3	P	6.70	98,60	110	3/4in SCH 80	10.1	113.03	330	0.3425		
4	W	7.00	98.30	90	3/4in SCH 80	10.1	113.03	270	0.4186		
5	17	7.40	97.90	85	3/4in SCH 80	10.1	113.03	255	0.4433		
			105.30			0	0.00	0	#DIV/0!		
			105.30			0	0.00	0	#DIV/0!		
			105.30			0	0.00	0	#DIV/0!		
			105.30			0	0.00	0	#DIV/0!		
			105.30			0	0.00	0	#DIV/0!		
			Total Feet =	435	gal/min =	42.89		LTAR =	0.3500		
			Feet Required =	343	Velocity =	4.10		(ltar + 5%)	0.3675		
Total # of Panels (F	PPBPS)			Des. Flow	480			(Itar w/25% red)	0.4667		
% of Dose Vol.		70		Pump Run=	11.19			(ltar + 5%)	0.4900		
Dose Volume		198		Tank Gal/IN	20						
Dose Pump Time		4.61		Elev. Head	8.60						
Drawdown in Inche	s	9.9									
Comments:											



Sheet 1 of 2 ID #:____

COUNTY: Harnett

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

(Complete all fields in full)

OWNER: Caviness & Cates

ADDRESS: 639 Executive Place, Suite 400, Fayetteville, NC 28305

PROPOSED FACILITY: SFD

PROPOSED DESIGN

LOCATION OF SITE:

PROPOSED DESIGN FLOW (.1949): 480 GPD (4BR)

Hookbill Lane, Lillington, NC (Lot 107) Ducks Landing

APPLICATION DATE
DATE EVALUATED:03/13/25
PROPERTY SIZE: 0.459 Ac
PROPERTY RECORDED

WATER SUPPLY: ☐ Private X Public Well ☐ Spring EVALUATION METHOD: X Auger Boring Pit Cut TYPE OF WASTEWATER: X Sewage □ Industrial Process □ Mixed R **SOIL MORPHOLOGY** OTHER 0 (.1941)F PROFILE FACTORS .1940 T. HORIZON LANDSCAPE E POSITION/ DEPTH PROFILE .1942 SLOPE % (IN.) CLASS .1943 .1941 .1941 SOIL .1956 .1944 STRUCTURE/ CONSISTENCE/ SOIL WETNESS/ SAPR RESTR & LTAR TEXTURE DEPTH MINERALOGY COLOR 0 HORIZ CLASS 0-8 LS/Gr VFr/Nexp 36" NA NA NA Suitable LS 2-4% 10YR 7/3 0.30 8-17 LS/Gr VFr/NExp 1 17-36 SL/wf sbk 10YR 6/8 Fr/SExp 36-48 SCL/wf sbk Fi, SExp 10YR 6/8 10YR 7/1 mot 0-3 LS/Gr 41" VFr/Nexp NA NA NA Suitable LS 2-4% LS/Gr 10YR 6/4 0.40 3-22 VFr/Nexp 22-41 SL/SCL/wf sbk 10YR 6/6 Fr/Fi/SExp SCL/wf sbk 41-48 Fi/SExp 10YR 6/8 10YR 7/1 mot LS 2-4% 0-9 LS/Gr VFr/Nexp 37" NA NA NA Suitable LS/Gr 10YR 6/4 0.40 9-16 VFr/NExp 3 SCL/mm sbk 10YR 6/8 16-37 Fi/SExp 37-48 SCL/wfsbk Fi, SExp 10YR 6/8 10YR 7/1 mot LS 2-4% 0-4 LS/Gr 41" Fr/Nexp NA NA Suitable NA 10YR 6/4 0.35 4-28 LS/Gr VFr/Nexp 4 10YR 6/8 28-41 SCL/mm sbk Fi/SExp 41-48 SCL/wf sbk Fi/SExp 10YR 6/8 10YR 7/1 mot

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	OTHER FACTORS (.1946):
Available Space (.1945)	Yes	Yes	SITE CLASSIFICATION (.1948): Suitable
System Type(s)	Pump to Accepted	Pump to Panel Block	EVALUATED BY: M. Eaker OTHER(S) PRESENT: D. Eaker
Site LTAR	0.30	0.40	

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF PUBLIC HEALTH ENVIRONMENTAL HEALTH SECTION ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: Ducks Landing Lot 107 DATE OF EVALUATION: 03/13/25

COUNTY: Harnett

	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZ ON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE				
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILI CLASS & LTAR
	LS 2-4%	0-6	LS/Gr	VFr/NExp	46" 2.5Y 6/4 7.5YR 5/8	NA	NA	NA	Suitable 0.35
		6-12	SL/wf sbk	Fr/SExp					
5		12-20	SCL/mm sbk	Fi/SExp					
		20-46	SCL/wf sbk	Fi/SExp	10YR 5/8				
		46-48	SCL/mass	Fr/SExp	10YR 7/1m				
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Updated February 2014

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DESIGN PROFESSIONALS LIABILITY COVERAGE DECLARATIONS

POLICY NO. 108040737

Travelers Casualty and Surety Company of America Hartford, Connecticut

(A Stock Insurance Company, herein called the Company)

Important note: This is a claims-made policy. To be covered, a claim must be first made against an insured during the policy period or any applicable extended reporting period.

This policy is composed of the Declarations, the Professional Liability Coverage, the Professional Liability Terms and Conditions, and any endorsements attached thereto.

ITEM 1	NAMED INSURED:						
	SOUTHEASTERN SOIL AND ENVIRONMENTAL ASSOCIATES DBA:						
	Principal Address: PO BOX 9321 FAYETTEVILLE, NC 28311-9084						
ITEM 2	POLICY PERIOD: Inception Date: May 1, 2025 Expiration Date: May 1, 2026						
	12:01 A.M. standard time both dates at the Principal Address stated in ITEM 1.						
ITEM 3	ALL NOTICES PURSUANT TO THE POLICY MUST BE SENT TO THE COMPANY BY EMAIL, FACSIMILE, OR MAIL AS SET FORTH BELOW: Email: BSIclaims@travelers.com						
	Fax: 1-888-460-6622						
	Mail: Travelers Bond & Specialty Insurance Claim P.O. Box 2989 Hartford, CT 06104-2989						
	Overnight Mail: Travelers Bond & Specialty Insurance Claim One Tower Square, MN06 Hartford, CT 06183						
	For questions related to claim reporting or handling, please call 1-800-842-8496.						