



NORTH LAKES
SOIL CONSULTING

North Lakes Soil Consulting, PLLC
3325 Jones Lakes Road
Fuquay-Varina, NC 27526
john@northlakessoil.com
910-539-5439

Acknowledgement of A2 Soil & Site Evaluation by North Lakes Soil Consulting, PLLC
for issuance of an Improvement Permit (IP).

Address/Subdivision Lot#: 0 JOHNSONVILLE SCHOOL RD, CAMERON, NC 28326

PIN: 9566-75-9854.000

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).”**

Owner:



Owner's representative: _____

Date:

12/9/24



NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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

Submittal Includes: [X] (a2) Improvement Permit [] (a2) Construction Authorization [] Fee \$ _____

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

County: Harnett
PIN/Lot Identifier: 9566-75-9854
Issued To: Brandon & Alicia Raines
Property Location: 0 Johnsonville School Road, Cameron, NC 28326
Subdivision (if applicable) _____ Lot #: _____ Block: _____ Section: _____
LSS Report Provided: Yes [X] No []
If yes, name and license number of LSS: John Kase, NCLSS# 1323
New [X] Expansion [] System Relocation [] Change of Use []
Facility Type: Single-Family Residence
Number of bedrooms: 3 Number of Occupants: 6 Other: _____
Design Wastewater Strength: [X] Domestic [] High Strength [] Industrial Process Wastewater
Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.400 Proposed LTAR (Repair): 0.400
Proposed Wastewater System Type*: IIB - Accepted (25% Reduction) - At-Grade w/ cover (Initial) Pump Required: [] Yes [X] No [] May be required
Proposed Wastewater System Type*: IIB - Accepted (25% Reduction) - At-Grade w/ cover (Repa Pump Required: [] Yes [] No [X] May be require
*Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII
Effluent Standard: [X] DSE [] HSE [] NSF/ANSI 40 [] TS-I [] TS-II [] RCW
Saprolite System (Initial): [] Yes [X] No Saprolite System (Repair): [X] Yes [] No
Fill System (Initial): [] Yes [X] 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 [X] No If yes, specify: [] New [] Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Usable Depth to L Initial)*: 25 Usable Depth to LC (Repa x): 25 * Limiting Condition
Max. Trench Depth (Initial)*: 12 Max. Trench Depth (Repair)*: 12 * Measured on the downhill side of the trench
Artificial Drainage Required: [] Yes [X] No If yes, please specify details: _____
Type of Water Supply: [] Private well [] Public well [X] Shared well [] Municipal Supply [] Spring [] Other: _____
Drainfield location meets requirements of Rule .0508: Yes [X] No [] Drainfield location meets requirements of Rule .0601: Yes [X] No []
Permit valid for: [X] Five years [site plan submitted pursuant to GS 130A-334(13a [] No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:
Permit is subject to suspension or revocation if the Site Plan changes or the intended use changes, which significantly impact permit.
Maintain all required setbacks pursuant to 15A NCAC 18E SECTION .0600 – LOCATION OF WASTEWATER SYSTEMS.
No grading should be completed within the areas reserved for the initial and repair septic areas.
When grading the lot, no cuts of 2' or greater should be within 15' of the areas reserved for septic. There should be no cutting or filling within the areas reserved for septic.
See additional permit conditions attached.

Licensed Soil Scientist Print Name: John Kase
Licensed Soil Scientist Signature: [Signature] Date: 12/2/2024

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



This Section for Local Health Department Use

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 Initial

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: _____



CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a)

County: Harnett

Pre-Construction Confere Required: Yes No

PIN/Lot Identifier: 9566-75-9854

Issued To: Brandon & Alicia Raines

Property Location: 0 Johnsonville School Road, Cameron, NC 28326

AOWE/PE Plans/Evaluations Provided: Yes No If yes, name and license number of AOWE/PE: Alan Clapp, 10017E

Facility Type: Single-Family Residence

Number of bedrooms: 3 Number of Occupants: 6 Other: _____

New Expansion Repair System Relocation Change o Use

Basement? Yes No Basement Fixtures? Yes No

Crawl Space? Yes No Slab Foundation? Yes No

Type of Wastewater System* IIB - Accepted (25% Reduction) - At-Grade w/ cover (Initial) IIB - Accepted (25% Reduction) - At-Grade w/ cover (Repair)

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Design Daily Flow: 360 GPD Wastewater Strength: Domestic High Strength Industrial Process WW

Session Law 2014-120 Section 53 Engineering Design Utilizing Low- Fixtures and Low-flow Technologies? Yes No
(if yes, please provide engineering documentation)

Effluent Standard: DSE HSE NSF/ANSI 40 TS-I TS-II RCW

Type of Water Supply: Private well Public well Shared well Municipal Supply Spring Other: _____

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 300 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches TAR: 0.40 gpd/ft² Usable Depth t Initial): 25 **Limiting condition*

Soil Cover: 12 inches Slope Correct Maximum Trench/Bed Depth*: 12 inches ** Measured on the downhill side of the trench*

Pump Tank Size (if applicable): 1000 gallons Requires more than 1 pump? Yes No

Pump Requirements: _____ ft. TDH vs. _____ GPM Grease Trap Size (if applicable): _____ gallons

Distribution Method: Serial D-Box or Parallel Pressure Manifold(s) LPP Other: _____

Artificial Drainage Required: Yes No If yes, please specify details: _____

Legal Agreements (If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)

Multi-party Agreement Required [.0204(g)]: Yes No Declaration of Restrictive Covenants: Yes No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: Yes No

Management Entity Required: Yes No Minimum O&M Requirements: _____

Permit conditions:
Permit is subject to suspension or revocation if the Site Plan changes or the intended use changes, which significantly impact permit.
Maintain all required setbacks pursuant to 15A NCAC 18E SECTION .0600 – LOCATION OF WASTEWATER SYSTEMS.
State approved tanks with cast in place inlet and outlet boots required for all septic and/or pump tanks.
Maintain the septic layout until the system is installed. There will be a fee to re-flag the septic system layout.
See additional permit conditions attached.

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems sh: with the attached site sketch. This Construction Authorization is subject to revocation if the site plan, plat, or th Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authori with the provisions of 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: Alan Clapp

AOWE/PE Signature: Alan Clapp

Date: 12/2/2024

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2)

See attached site sketch





This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date Initials

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, 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 Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization 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 applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This

Construction Authorization 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 AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date of Issuance: _____

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this pe

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 plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: _____

See attached site sketch

Re-submittal of Construction Authorization

LHD USE ONLY: This CA resubmittal received: _____ by _____

Date *Initial*

The following items are being resubmitted pursuant to G.S. 130A-335(a5) for issuance of the Construction Authorization:

I, _____ hereby attest that the information required to be included with this re-submittal
Authorized Onsite Wastewater Evaluator Print Name)
 is accurate and complete to the best of my knowledge and that the proposed Construction Authorization meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

Signature of Authorized On-Site Wastewater Evaluator *Date*

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

LHD Follow-up Completeness Review of Construction Authoriz

The review for completeness of this Construction Authorization re-submittal was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization 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 AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

Complete

State Authorized Agent: _____ Date: _____

ADDENDUM TO G.S. 130A-335(a2) SUBMITTAL

County: Harnett

PIN/Lot Identifier: 9566-75-9854

Issued To: Brandon & Alicia Raines

Additional Improvement Permit Conditions:

- 1.) It is recommended to construct protective fencing around the soil area to protect from grading, compaction, and construction traffic.
- 2.) Storage of materials, cuts and fill over septic area could result in revocation of the permit.
- 3.) Maintain the septic layout until the system is installed. There will be a fee to re-flag the septic system layout.
- 4.) This system is designed for domestic strength effluent only. No garbage disposals, garbage grinders, floor drains, water softener backwash, fats, oils, greases (FOG).

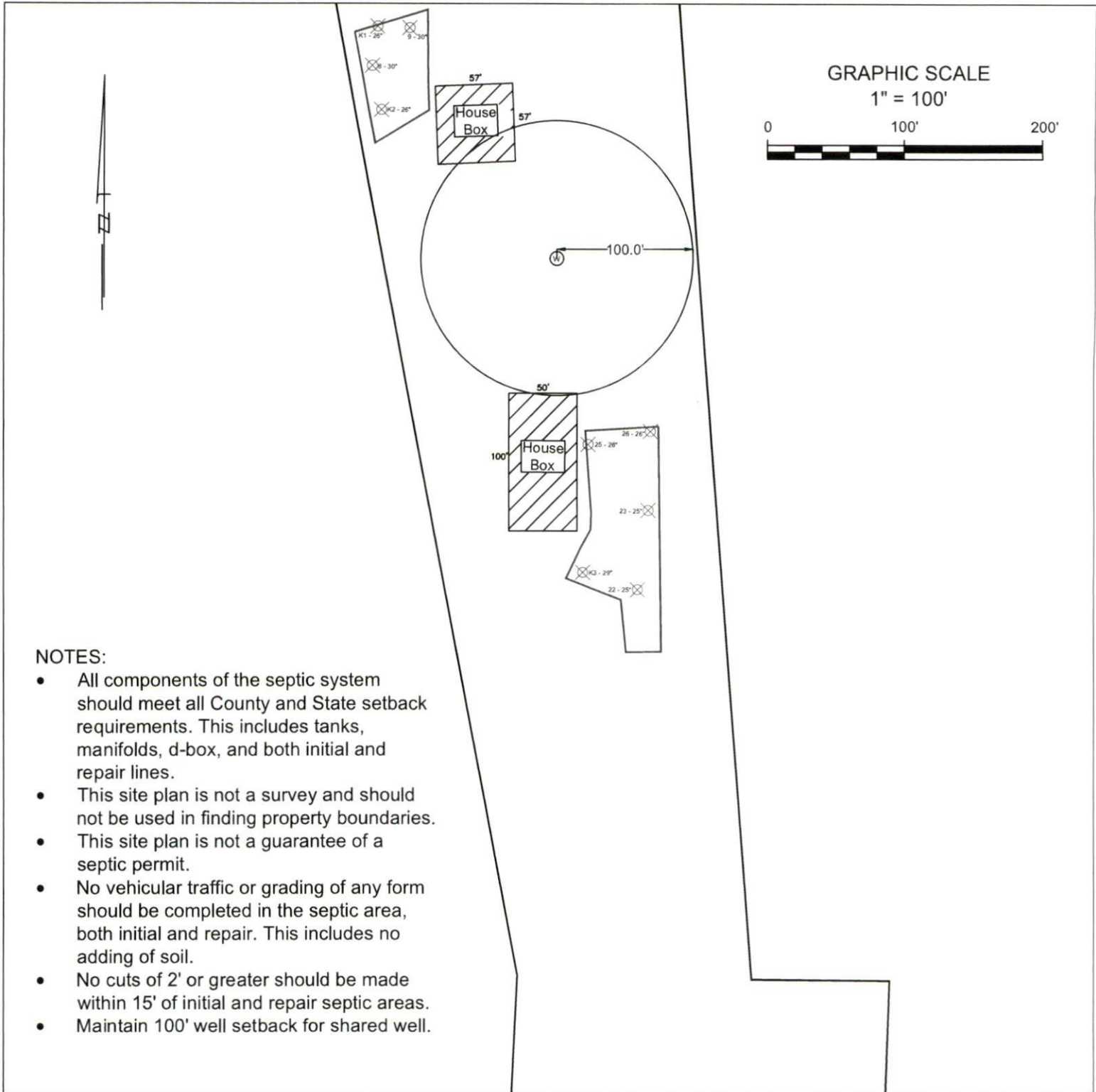
Additional Construction Authorization Conditions:

- 1.) Install system per 15A NCAC 18E .0901 (g) and .0800.
- 2.) Use septic and pump tanks as required per 15A NCAC 18E .0805.
- 3.) Maintain the septic layout until the system is installed. Make sure property lines are marked prior to installation. Contact NC 811 prior to any digging.
- 4.) For a 25% chamber system, I recommend placing #5 or #57 clean, washed gravel placed over the chamber louvers to offer structural support, decreased settling, prevent soil intrusion on trench bottom and allow venting of the chambers. Use a High Flow Splash Plate at each End Cap receiving effluent if pumping to a chamber system.
- 5.) Soil cover above the original grade shall be placed over the entire dispersal field and shall extend laterally five feet beyond the trenches.
- 6.) Final soil cover over the dispersal field shall be a minimum of six inches deep after settling. The finished grade over the tanks and dispersal field shall be sloped to shed surface water.
- 7.) On level sites, the final grade of the dispersal field shall be crowned at one-half percent grade as measured from the centerline of the dispersal field.
- 8.) Surface water runoff, including stormwater, gutter drains, or downspouts, shall be diverted away from the wastewater system. No depressions shall be allowed over the dispersal field area.
- 9.) Install system during dry conditions (when no smearing of trench walls occurs and at least 3 days after the most recent measurable rain event). Install system in area noted at the trench depth specified.
- 10.) It is recommended to regularly operate the system at 50-60% of daily design peak flow to maintain the system at optimum performance.
- 11.) It is recommended to remove all maples, sweet gums, and willow oaks in the vicinity of the drainfield due to the propensity for roots growing into the drainfield lines.
- 12.) It is recommended to straw and seed septic area after installation to establish a stable cover and prevent soil erosion.

NORTH LAKES SOIL CONSULTING, PLLC			SOIL/SITE EVALUATION SHEET				Project #:	24-035		
OWNER/APP. NAME:			Alicia Raines-Mary Hermis		SUBDIV./LOT#		Sheet #:			
LOCATION OF SITE:			Johnsonville School Road, Cameron							
COUNTY:	Hamett	PROPERTY ID #:	9566-75-9854		DATE EVALUATED:	10/23/24&11/16/24				
PROPOSED FACILITY:	SFR	PROPOSED DESIGN FLOW (.0400):	360		PROPERTY SIZE:	12.36 acres				
WATER SUPPLY:	Shared Well		WATER SUPPLY SETBACK:			100'				
TYPE OF WASTEWATER:			Domestic		EVALUATION METHOD:			Auger		
P R O F I L E #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY		OTHER PROFILE FACTORS				.0509 PROFILE CLASS & LTAR	
			.0503 STRUCTURE/ TEXTURE	.0503 CONSISTENCE/ MINERALOGY	.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ		
K-3	SS	0-20	SL - GR	VFR/NS/NP					S-0.35	
	3%	20-26	CL - SBKw	FR/SS/SP				N.O		
	.0502(d) SLOPE CORRECTION	26-29	CL - SBKw	FR/SS/P						N.O.
		29-32	CL - SBKw	FR/SS/P	2.5Y 7/2@29"					
		1.1"								
22	L	0-15	SL - GR	VFR/NS/NP					S-0.3	
	2%	15-25	CL - SBKw	FR/SS/SP						
	.0502(d) SLOPE CORRECTION	25-30	CL - SBKw	FR/SS/SP	2.5Y 7/2@25"			N.O.		
		.7"								
23	L	0-15	SL - GR	VFR/NS/NP				S-0.35		
	2%	15-25	CL - SBKw	FR/SS/SP						
	.0502(d) SLOPE CORRECTION	25-30	CL - SBKw	FR/SS/SP	2.5Y 7/2@25"				N.O.	
		.7"								
25	L	0-14	SL - GR	VFR/NS/NP				S-0.35		
	2%	14-26	CL - SBKw	FR/SS/P						
	.0502(d) SLOPE CORRECTION	26-30	CL - SBKw	FR/SS/P	2.5Y 7/2@26"				N.O.	
		.7"								
DESCRIPTION:	INITIAL SYSTEM	REPAIR SYSTEM	SITE CLASSIFICATION (.0509):		Suitable					
Available Space (.0508):	Suitable	Suitable	EVALUATED BY:		John Kase					
System Type(s):	Accepted(25%)	Accepted(25%)	OTHER(S) PRESENT:							
Site LTAR:	0.400	0.400								
Maximum Trench Depth:	12"	12"								
Saprolite System:	No	No								
Comments: Trench bottom depths measured from downslope side of trench.										
Maximum trench depth is measured on downslope side of trench.										


Standard Abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL LTAR	SAPROLITE	LPP LTAR	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	0.8 - 1.2	0.6 - 0.8	0.4 - 0.6	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)		0.5 - 0.7		EXP (Expansive)	M (Massive)
D (Drainage Way)							GR (Granular)
FP (Flood Plain)	II	SL (Sandy Loam)	0.6 - 0.8	0.4 - 0.6	0.3 - 0.4	MOIST	SBK (Subangular Blocky)
FS (Foot Slope)		L (Loam)		0.2 - 0.4			VFR (Very Friable)
H (Head Slope)						FR (Friable)	ABK (Angular Blocky)
L (Linear Slope)	III	SiL (Silt Loam)	0.3 - 0.6	0.1 - 0.3	0.15 - 0.3	FI (Firm)	PL (Platy)
N (Nose Slope)		SCL (Sandy Clay Loam)		0.05 - 0.15*		EFI (Extremely Firm)	PR (Prismatic)
R (Ridge/Summit)		CL (Clay Loam)		N/A		MA-RCF (Massive Rock Controlled Fabric)	
S (Shoulder Slope)		SiCL (Silty Clay Loam)					
T (Terrace)		Si (Silt)					WET
TS (Toe Slope)						NS (Non-Stick)	
	IV	SC (Sandy Clay)	0.1 - 0.4	N/A	0.05 - 0.2	SS (Slightly Sticky)	
		SiC (Silty Clay)				S (Sticky)	
		C (Clay)				VS (Very Sticky)	
						NP (Non-plastic)	
						SP (Slightly Plastic)	
	O (Organic)		N/A	N/A	N/A	P (Plastic)	
						VP (Very Plastic)	
NOTES:							
SAPROLITE*	*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)						
SOIL WETNESS	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						
CLASSIFICATION	S (Suitable) or U (Unsuitable)						
Long-term Acceptance Rate (LTAR): gal/day/ft2							



NOTES:

- All components of the septic system should meet all County and State setback requirements. This includes tanks, manifolds, d-box, and both initial and repair lines.
- This site plan is not a survey and should not be used in finding property boundaries.
- This site plan is not a guarantee of a septic permit.
- No vehicular traffic or grading of any form should be completed in the septic area, both initial and repair. This includes no adding of soil.
- No cuts of 2' or greater should be made within 15' of initial and repair septic areas.
- Maintain 100' well setback for shared well.

Initial System		Repair System		LEGEND		
System Type: IIB, Gravity (At-Grade w/ cover)		System Type: IIB, Gravity (At-Grade w/ cover)		Initial System ———		
Line Numbers: 1-3	Total Footage: 300'	Line Numbers: 4-5	Total Footage: 300'	Repair System ⊗		
Accepted Status System (25% Reduction)		Accepted Status System (25% Reduction)				
Soil LTAR: 0.40		Soil LTAR: 0.40		[ST] 1000 Gallon Min. Septic Tank		
12" Maximum Trench Depth		12" Maximum Trench Depth		[PT] 1000 Gallon Min. Pump Tank		
 North Lakes Soil Consulting, PLLC 3325 Jones Lake Road, Fuquay Varina, NC 27526 Phone: (910) 539-5439 Email: john@northlakessoil.com	Address:		Lot: NA	Draw Date	11/30/2024	
	Johnsonville School Road		Revision			
	Harnett County, NC		Revision			
	Septic System Layout: Initial & Repair		Drawn By	JMM		
	Bedroom Count: 3-Bedroom		Project #: 24-035			

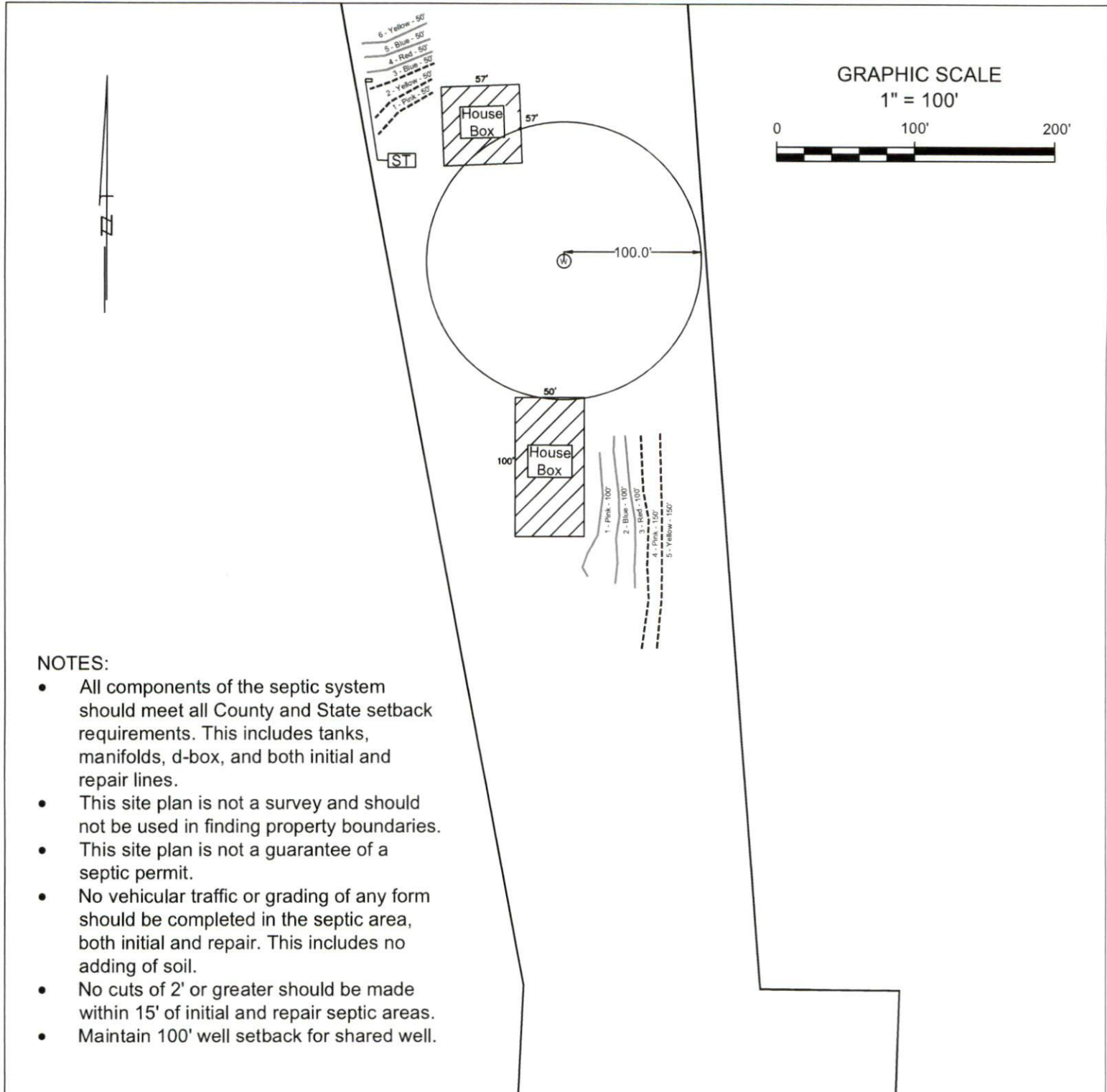
NORTH LAKES SOIL CONSULTING, PLLC
Layout Staking Sheet
Johnsonville School Road - Harnett County
 Proposed - New Single-Family Residence (3-Bedroom)

Project #: 24-035
 TBM 5.1

LINE #	FLAG COLOR	BS (ft)	FS (ft)	FLAGGED LINE LENGTH (ft)	DESIGN LINE LENGTH (ft)
1	Pink		5.3	100	100
2	Blue		5.7	109	100
3	Red		6.3	110	100
4	Pink		6.6	154	150
5	Yellow		6.7	155	150
Total:				628	600

SYSTEM AREA	DESIGN LINE LENGTH (ft)	SOIL LTAR (GPD/FT2)	SYSTEM TYPE	DESIGN LTAR* (GPD/FT2)	DRAINFIELD PRODUCT TYPE	MAXIMUM TRENCH DEPTH (Inches)	DISTRIBUTION METHOD	DESIGN FLOW (GPD)
System	300	0.400	IIB	0.300	Accepted (25% Reduction) At-Grade w/ cover	12"	Gravity - Parallel	360
Repair	300	0.400	IIB	0.300	Accepted (25% Reduction) At-Grade w/ cover	12"	Gravity - Parallel	360


- NOTES:**
- 1) TBM - House Corner
 - 2) TBM is assumed to be 100.00
 - 3) All measures in feet.
 - 4) Nitrification lines are demonstrated on contour via colored pin flags.
 - 5) Initial System Lines (1-3), Repair System Lines (4-5)
 - 6) BS, FS indicate rod readings.
 - 7) Maximum trench depth is calculated on the downhill side of the trench and accounts for slope correction.
- * Design LTAR = Design Flow / ((Design Line Length x Trench Width) / (1-%Reduction))



NOTES:

- All components of the septic system should meet all County and State setback requirements. This includes tanks, manifolds, d-box, and both initial and repair lines.
- This site plan is not a survey and should not be used in finding property boundaries.
- This site plan is not a guarantee of a septic permit.
- No vehicular traffic or grading of any form should be completed in the septic area, both initial and repair. This includes no adding of soil.
- No cuts of 2' or greater should be made within 15' of initial and repair septic areas.
- Maintain 100' well setback for shared well.

Initial System		Repair System		LEGEND	
System Type: IIB, Gravity (At-Grade w/ cover)		System Type: IIB, Gravity (At-Grade w/ cover)		Initial System —————	
Line Numbers: 1-3	Total Footage: 300'	Line Numbers: 4-5	Total Footage: 300'	Repair System - - - - -	
Accepted Status System (25% Reduction)		Accepted Status System (25% Reduction)		Not Used - - - - -	
Soil LTAR: 0.40		Soil LTAR: 0.40		[ST] 1000 Gallon Min. Septic Tank	
12" Maximum Trench Depth		12" Maximum Trench Depth		[PT] 1000 Gallon Min. Pump Tank	

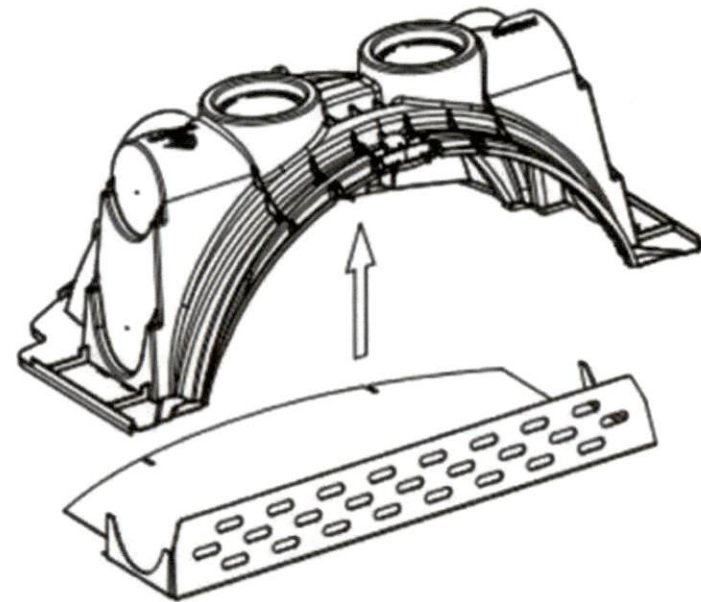
 <p>North Lakes Soil Consulting, PLLC 3325 Jones Lake Road, Fuquay Varina, NC 27526</p> <p>Phone: (910) 539-5439 Email: john@northlakessoil.com</p>	Address:		Lot: NA	Draw Date	11/30/2024	
	Johnsonville School Road			Revision		
	Harnett County, NC			Revision		
	Septic System Layout: Initial & Repair			Drawn By	JMM	
	Bedroom Count: 3-Bedroom			Project #: 24-035		

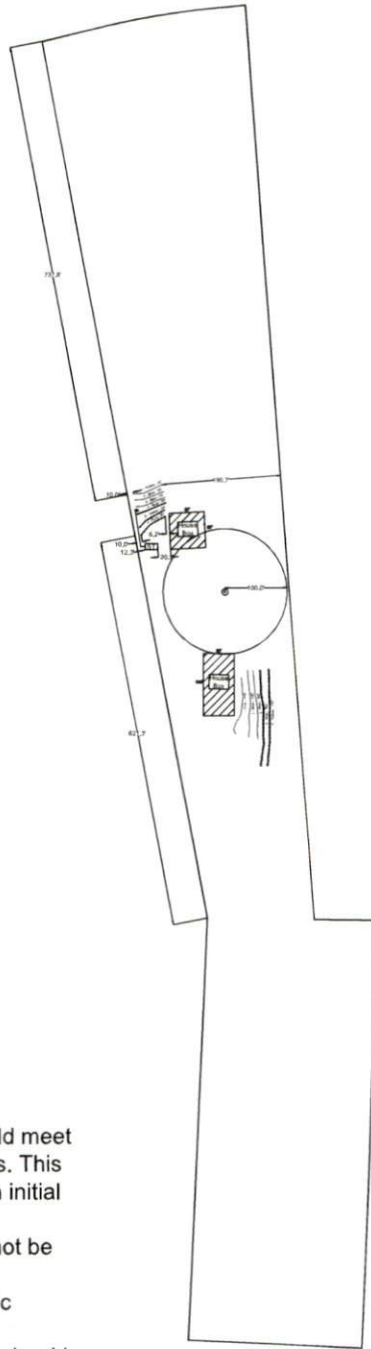
Gravel over Chamber Trench Louvers Detail:



High Flow Splash Plate and End Cap:

2





NOTES:

- All components of the septic system should meet all County and State setback requirements. This includes tanks, manifolds, d-box, and both initial and repair lines.
- This site plan is not a survey and should not be used in finding property boundaries.
- This site plan is not a guarantee of a septic permit.
- No vehicular traffic or grading of any form should be completed in the septic area, both initial and repair. This includes no adding of soil.
- No cuts of 2' or greater should be made within 15' of initial and repair septic areas.
- Maintain 100' well setback for a shared well.

GRAPHIC SCALE
1" = 200'



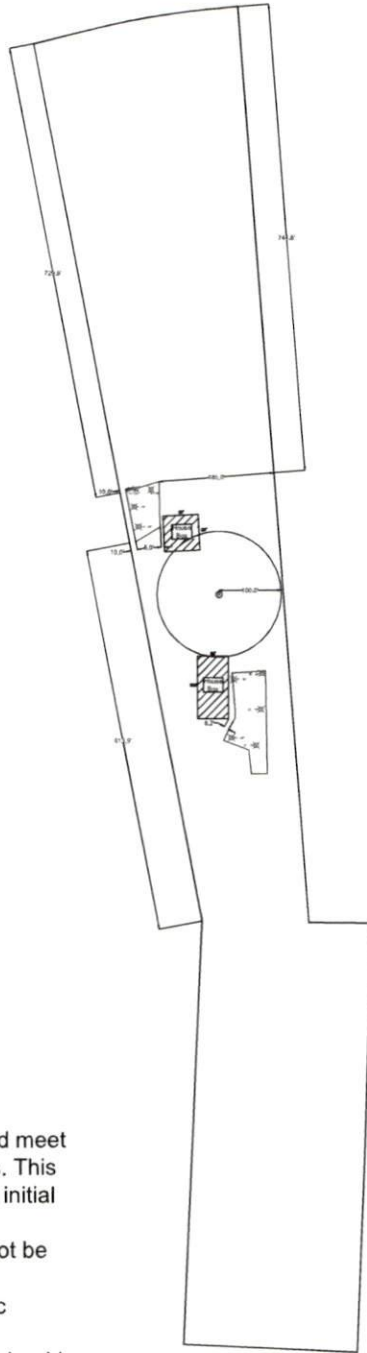
Initial System		Repair System		LEGEND
System Type: IIB, Gravity (At-Grade w/ cover)		System Type: IIB, Gravity (At-Grade w/ cover)		Initial System —————
Line Numbers: 1-3	Total Footage: 300'	Line Numbers: 4-5	Total Footage: 300'	Repair System —————
Accepted Status System (25% Reduction)		Accepted Status System (25% Reduction)		Not Used —————
Soil LTAR: 0.40		Soil LTAR: 0.40		[ST] 1000 Gallon Min. Septic Tank
12" Maximum Trench Depth		12" Maximum Trench Depth		[PT] 1000 Gallon Min. Pump Tank



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Johnsonville School Road		Revision	
Harnett County, NC		Revision	
Septic System Layout: Initial & Repair		Drawn By	JMM
Bedroom Count: 3-Bedroom		Project #:	24-035

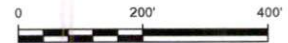


NOTES:

- All components of the septic system should meet all County and State setback requirements. This includes tanks, manifolds, d-box, and both initial and repair lines.
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GRAPHIC SCALE

1" = 200'



Initial System		Repair System		LEGEND
System Type: IIB, Gravity (At-Grade w/ cover)		System Type: IIB, Gravity (At-Grade w/ cover)		Usable Soil Area ———
Line Numbers: 1-3	Total Footage: 300'	Line Numbers: 4-5	Total Footage: 300'	Soil Boring Location *
Accepted Status System (25% Reduction)		Accepted Status System (25% Reduction)		
Soil LTAR: 0.40		Soil LTAR: 0.40		[ST] 1000 Gallon Min. Septic Tank
12" Maximum Trench Depth		12" Maximum Trench Depth		[PT] 1000 Gallon Min. Pump Tank



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Bedroom Count: 3-Bedroom		Project #:	24-035