

SOIL SCIENTING VAUGHTAN TO ACRITA CASO

Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex, NC 27502
agriwaste.com | 919.859.0669

# Soil Suitability for Domestic Sewage Treatment and Disposal Systems Birchwood Trails – Lot 75 Olive Branch Rd. Fuquay Varina, NC 27526 (Harnett County)

April 23, 2025

Soil suitability for domestic sewage treatment and disposal systems was evaluated on April 22, 2025, for the property located at Olive Branch Rd. in Fuquay Varina, NC (Harnett County). Jeff Vaughan, Heath Clapp, and Trent Bostic of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a septic system for a 4-bedroom home. This report and attached documents were prepared to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3). The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).

A drawing of the site plan, septic layout, septic system design, and soil pit/boring locations is included in Attachment 1. Profile descriptions for each soil pit/boring are included in Attachment 2.

The total property area is approximately .54 acres. The house and septic area are cleared. The proposed septic system for the property is a pressure manifold fed, Accepted Status (25% Reduction) system for initial and a gravity fed, PPBPS T&J Panel System (50% Reduction) for repair.

#### Soil Suitability for Domestic Sewage Treatment and Disposal Systems

The drawing in Attachment 1 details the property boundaries, soil pit locations, and layout of drain field trenches. Multiple soil pits and borings were advanced within the proposed septic system area on the property. The site has been evaluated and meets the soil and site evaluations criteria set forth in 15A NCAC Subchapter 18E – Wastewater Treatment and Dispersal Systems. All soil pits/borings were provisionally suitable for a conventional style trench. Soil pits/borings are within the proposed drainfield area.

The layout shown in Attachment 1 indicates there is available space for a four-bedroom Accepted Status (25% Reduction) system. The initial system can be installed with the use of an Accepted Status (25% Reduction) drainfield based on the layout in the field.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.4GPD/ft². The soils on this property are group III soils within the distribution and treatment zone as used to define the LTAR. With an LTAR of 0.4GPD/ft², 300 linear feet of trench is necessary to support a 4-bedroom home for the initial system with the use of an accepted trench product, and 200 linear feet is necessary to support the a 4-bedroom home for the repair system utilizing a PPBPS (T&J Panel System) trench product. The maximum slope corrected trench depth is 22 inches. The attached drawings substantiate that the necessary linear footage of trench can be installed on the property for the initial and repair system.

Any logging, disturbances, or grading done in the usable area or within the proposed setbacks will change the potential of using the area designated for a drainfield. Prior to moving forward with the development on the property, the Harnett County Health Department should be contacted to complete the necessary Construction Oversight and to issue an OP (Operations Permit) for the property once the septic system has been installed.

#### Conclusions

An IP (Improvement Permit) and CA (Construction Authorization) for this property can be issued with the site plan that is in Attachment 1. A CA permit will be required to secure a building permit for the property. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Additional septic layouts have been or will be performed as needed. It will be critical to not disturb any of the proposed septic area or there is a risk that the IP and CA will be revoked. The LSS/AOWE Evaluation and attached documents were prepared to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3). The LSS/AOWE evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

Jeff Vaughan, NC LSS

fell M/

Permit/File #:	



**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 Authorize	ation Fee \$	
	IMPROVEM	IENT PERMIT FOR G.S. 130	A-335(a2)	
County:				
Property Location:				
Subdivision (if applicat	ole)	Lot #:	Block:	Section:
LSS Report Provided: `	Yes No No			
If yes, name and licens	se number of LSS:			
New 🗌	Expansion	System Relocation	Change of Use	
Facility Type:				
Number of bedrooms:	Number of Occupants:	Other:		
Design Wastewater St	rength: Domestic	High Strength	Industrial Process Wastewater	
Proposed Design Daily	Flow:GPD	Proposed LTAR (Initial):	Proposed LTAR (Repair):	
Proposed Wastewater	System Type*:	(Initial) Pu	mp Required: Yes No	May be required
Proposed Wastewater	System Type*:	(Repair) Pu	mp Required: Yes No	May be required
*Please include system	n classification for proposed wastev	vater system types in accordance w	ith Rule .1301 Table XXXII	
Effluent Standard:	DSE HSE NSF/ANSI 40	TS-I TS-II RCW		
Saprolite System (Initia	al): 🗌 Yes 🔲 No Saprolit	e System (Repair): Yes No		
Fill System (Initial):	Yes No If yes, specify: Ne	ew Existing (when adding more	e than 6 inches of fill to system	area provide a fill plan)
Fill System (Repair):	Yes No If yes, specify: N	ew Existing (when adding mor	e than 6 inches of fill to system	n area provide a fill plar
Usable Depth to LC (In	itial) <sup>x</sup> :	Usable Depth to LC (Repair)x:	× Limiting Co	ndition
Max. Trench Depth (In	itial)‡: Max. Tr	ench Depth (Repair)‡:	<sup>‡</sup> Measured on the dow	nhill side of the trench
Artificial Drainage Req	uired: Yes No If yes, pleas	se specify details:		
Type of Water Supply:	Private well Public well	Shared well Municipal Su	upply Spring Othe	r:
Drainfield location me	ets requirements of Rule .0508: Ye	es 🔲 No 🔲 Drainfield location	meets requirements of Rule .0	601: Yes No No
Permit valid for: 🔲 Fiv	ve years [site plan submitted pursu	ant to GS 130A-334(13a)] 🔲 No e	xpiration [plat submitted pursu	ant to GS 130A-334(7a
Permit conditions:				

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

\*See attached site sketch\*

Licensed Soil Scientist Signature: \_\_\_

\_\_\_ Date: \_\_\_\_



Permit/File #:	
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# This Section for Local Health Department Use Only

initiai submittai received:		Dy	
	Date	Initials	
G.S. 130A-335(a3) states the following:			
When an applicant for an Improvement Permit submits to a local health depart department, the common form developed by the Department, and a soil evaluation, the common form developed by the Department, and a soil evaluation, it is to complete the service of the earlier of the application, conduct a completeness of the includes all of the required components. If the local health department shall notify the applicant of the components needed to complete the Improved department to cure the deficiencies in the Improvement Permit. The local health sist complete within five business days after the local health department receives act within any period set out in this subsection, the applicant may treat the factorism for use as the Improvement Permit.	uation pursuant to sul review of the submit determines that the ment Permit. The app Ith department shall i es the additional infor	ssection (a2) of this section, the local health depart cal. A determination of completeness means that the improvement Permit is incomplete, the local health licant may submit additional information to the local make a final determination as to whether the Impro mation from the applicant. If the local health depa	ment shall, ne Improvement department al health ovement Permit rtment fails to
The review for completeness of this Improvement Permit was Permit is determined to be:	conducted in acc	ordance with G.S. 130A-335(a3). This In	iprovement
☐ Incomplete (If box is checked, information in this section i	is required.)		
The following items are missing:			
	5		
Copies of this were sent to the LSS and the Applicant on	Date		
State Authorized Agent:		Date:	
☐ Complete			
State Authorized Agent:	-1/-05	Date:	
This Improvement Permit is issued pursuant to G.S. 130A-335 attached here. The issuance of this permit in no way guarant for checking with appropriate governing bodies in meeting the plat, or the intended use changes. The Improvement Permit permit is subject to compliance with the provisions of 15A No. The Department, the Department's authorized agents, and the liabilities, duties, and responsibilities imposed by statute evaluations, submittals, or actions from a licensed soil scient	tees the issuance heir requirement shall not be affe CAC 18E and to the local health decor in common le	of other permits. The permit holder is s. This permit is subject to revocation if cted by a change in ownership of the sit ne conditions of this permit.  Experiments shall be discharged and release from any claim arising out of or attri	responsible the site plan, e. This ased from
Improvement Permit Expiration Date:			

\*See attached site sketch\*



Permit/File #:	e #:
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# **Re-submittal of Improvement Permit**

	LHD USE ONLY: This IP resubmittal receiv	ved:	by	_
The following it	tems are being resubmitted pursuant to G.S. 13	30A-335(a3) for issuar	nce of the Improvement Perr	mit:
	J. LE	SIATE	All Control	
s accurate and	hereby att Scientist (Print Name) complete to the best of my knowledge and th laws, regulations, rules, and ordinances.		on required to be included v	
Signatur	e of Licensed Soil Scientist		Date	
HD Follow I	The section below is for Local Health Departn  up Completeness Review of Improven		of items noted as missing abo	ve.
The review for o	completeness of this Improvement Permit re-sermit is determined to be:		ted in accordance with G.S.	130A-335(a3). This
	(If box is checked, information in this section ems are missing:	is required.)		
Copies of this w	vere sent to the LSS and the Applicant on	Date		
State Authorize	d Agent:		Date:	
☐ Complete				
State Authorize	d Agent:		Date:	



Permit/File #:	
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#### CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County:			<b>Pre-Construction Conference Required:</b> Yes No
PIN/Lot Identifie	er:		
Issued To:			
Property Location	on:		
AOWE/PE Plans,	/Evaluations Provide	ed: Yes 🔲 No 🗌	If yes, name and license number of AOWE/PE:
Facility Type:			
Number of bedr	rooms: Nun	nber of Occupants: _	Other:
New	Expansion	Repair	System Relocation Change of Use
Basement?	Yes	☐ No	Basement Fixtures? Yes No
Crawl Space?	Yes	☐ No	Slab Foundation? Yes No
Type of Wastew	vater System*		(Initial)(Repa
*Please include	system classification	for proposed waste	rewater system types in accordance with Rule .1301 Table XXXII
Design Daily Flo	w:	_GPD Wa	astewater Strength: Domestic High Strength Industrial Process WW
	14-120 Section 53, Ei rovide engineering d		Jtilizing Low-flow Fixtures and Low-flow Technologies? Yes No
Effluent Standar	rd: 🗌 DSE 🔲 F	ISE NSF/ANSI	40 TS-I TS-II RCW
Type of Water S	Supply: 🗌 Private w	ell 🔲 Public well	I Shared well Municipal Supply Spring Other:
Installation Req	uirements/Condition	<u>ons</u>	
Septic Tank Size	e: gallon	is Total Trench/Be	ed Length: feet Trench/Bed Spacing: feet on center
Trench/Bed Wid	dth: inches	s LTAR:	gpd/ft <sup>2</sup> Usable Depth to LC (Initial) <sup>x</sup> : <sup>x</sup> Limiting condition
Soil Cover:	inches Slope (	Corrected Maximum	n Trench/Bed Depth <sup>‡</sup> : inches <sup>‡</sup> Measured on the downhill side of the trench
Pump Tank Size	(if applicable):	gallons	Requires more than 1 pump? Yes No
Pump Requirem	nents: ft. TDF	1 vs GPM	Grease Trap Size (if applicable): gallons
Distribution Me	thod: Serial	D-Box or Parallel	Pressure Manifold(s) LPP Other:
Artificial Draina	ge Required: Yes	No If yes, ple	ease specify details:
Legal Agreemer	nts (If the answer is '	"Yes" to any type of	flegal agreements, please attach a copy of the agreement.)
Multi-party Agre	eement Required [.0	204(g)]: Yes	☐ No Declaration of Restrictive Covenants: ☐ Yes ☐ No
Easement, Right	t-of-Way, or Encroac	hment Agreement F	Required [.0301(b)]: Yes No
Management Er	ntity Required: 🗌 Y	'es No Minimu	num O&M Requirements:
Permit condit	ions:		
with the attach Construction Au	ed site sketch. <u>This</u> uthorization shall no	Construction Authorst be affected by a c	by reference into this permit and shall be met. Systems shall be installed in accordance orization is subject to revocation if the site plan, plat, or the intended use changes. The change in ownership of the site. This Construction Authorization is subject to compliance A .1900, as applicable, and to the conditions of this permit.
AOWE/PE Print	Name:		
AOWE/PE Signa	ture:	hell/	Date:
-			

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).

\*See attached site sketch\*



Permit/File #:

# This Section for Local Health Department Use Only

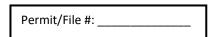
	Initial submittal received:		by
		Date	Initials
G.S. 130A-335(a5) states the follo	wing:		
mprovement Permit and Construction Aut Department, and any necessary signed and engineer or a person certified pursuant to a department shall, within five business days the Construction Authorization or Improve determines that the Construction Authoriza applicant of the components needed to con additional information to the local health of Authorization. The local health departmen department fails to act within any period s apply for the building permit for the project Authorization by the local health departmen ficensed engineer submitting the evaluatio Authorization or Improvement Permit and	horization application together, the pend sealed plans or evaluations conducted Article 5 of Chapter 90A of the General is of receiving the application, conduct a ment Permit and Construction Authorization or Improvement Permit and Construction Fundament to cure the deficiencies in the shall make a final determination as to ess days after the local health department to ut in this subsection, the applicant at upon the decision of completeness of ent or if the local health department fair newsuant to this subsection may requive Construction Authorization for cause. Ususpend or revoke the Construction All	rmit fee charged by the of by a person licensed pure Statutes as an Authoriza a completeness review of ation includes all of the truction Authorization is or Improvement Permit and the Construction Authorization to whether the Construction and treat the failure to the Construction Authorials to act within five business that the local health Upon written request of uthorization or Improver	ration together, submits a Construction Authorization, or an allocal health department, the common form developed by the arsuant to Chapter 89C of the General Statutes as a licensed and On-Site Wastewater Evaluator, the local health of the submittal. A determination of completeness means that required components. If the local health department incomplete, the local health department shall notify the and Construction Authorization. The applicant may submit reation or Improvement Permit and Construction on Authorization or Improvement Permit and Construction and information from the applicant. If the local health act as a determination of completeness. The applicant may rization or Improvement Permit and Construction and Says. The Authorized On-Site Wastewater Evaluator or department revoke or suspend the Construction the Authorized On-Site Wastewater Evaluator or licensed ment Permit and Construction Authorization pursuant to G.S.
The review for completeness of th	is Construction Authorization v	was conducted in a	ccordance with G.S. 130A-335(a5). This
Construction Authorization is dete	ermined to be:		
☐ Incomplete (If box is checked,	, information in this section is r	equired.)	
The following items are missing: _		1	
1/1 CZ			
Copies of this were sent to the AC	WF/PF and the Applicant on	11/2	
30p.00 0. u u		Date	
State Authorized Agent:		1.484/10	Date:
7//	My Children		
Complete			
State Authorized Agent:	M XV	. 12.17	Date of Issuance:
attached here. This Construction Construction Authorization shall to compliance with the provision The Department any liabilities, duties, and responolans, evaluations, preconstructions.	Authorization is subject to rev not be affected by a change in s of the Laws and Rules for Sev t's authorized agents, and the sibilities imposed by statute of on conference findings, submit	ocation if the site p ownership of the s wage Treatment an local health depart r in common law fr stals, or actions from	sing the signed and sealed plans or evaluations plan, plat, or the intended use changes. The lite. This Construction Authorization is subject d Disposal and to the conditions of this permit.  ments shall be discharged and released from om any claim arising out of or attributed to ma person licensed pursuant to Chapter 89C of e 5 of Chapter 90A of the General Statutes as an
Authorized On-Site Wastewater E	Evaluator in GS 130A-335(a2), ( rtments shall be responsible a	(a5), and (a7). The l nd bear liability for	Department, the Department's authorized their actions and evaluations and other
Construction Authorization Expira	ation Date:		



Permit/File #:
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# **Re-submittal of Construction Authorization**

	LHD USE ONLY: Th	nis CA resubmittal received:	Date	by Initials	-
The following i	tems are being resubm	itted pursuant to G.S. 130A-3	335(a5) for issuance of	of the Construction Author	ization:
			AT	<i>3</i> -	
1		herehy attest ti	hat the information r	equired to be included wit	h this re-suhmittal
is accurate and		(Print Name) of my knowledge and that thoons, rules, and ordinances.			
Signatui	re of Authorized On-Site Was	tewater Evaluator	4	Date	
		ร for Local Health Department เ		ems noted as missing above.	
LHD Follow-	up Completeness R	Review of Construction	Authorization		
	completeness of this C on Authorization is det	onstruction Authorization re ermined to be:	-submittal was condu	ucted in accordance with G	i.S. 130A-335(a5).
☐ Incomplete	(If box is checked, info	rmation in this section is req	uired.)		
The following it	ems are missing:				
		JUNE ON	M AIDER	J.	
Copies of this w	vere sent to the AOWE	/PE and the Applicant on	Date	-	
State Authorize	ed Agent:			Date:	
☐ Complete					
State Authorize	ed Agent:			Date:	





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

County:	
PIN/Lot Identifier:	
Issued To:	
Additional Improvement Permit Conditions:	
E STATE	
6 N N 1 30 1 - 5 N N	
Net - Y S/M Elizable 2 / Vene O M	
Additional Construction Authorization Conditions:	
10RH 12 1776	
White Tell I	
QUAM VI	

7

# SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

(Complete all fields in full)

ADD PROI LOCA WAT	NT: RESS: _221 Prov POSED FACILIT ATION OF SITE ER SUPPLY: [	vidence Rd. C TY: Single Fa : Olive Brar Private	hapel Hill, amily Resid ach Rd. Fud Dublic	NC 27: lence luay Va	514 I PROPOSEI arina, NC 275 ell □ Sprin	D DESI0 226 ng □	GN FLOW (.04  Other	: <u>04/23/20</u> 00): <u>4</u>	0 <u>25</u> 80GPD PROPERT	Y RECORDED	SIZE: <u>0.54 ac</u> : <u>No</u>
P R O F I L E	.0502 LANDSCAPE POSITION/ SLOPE %	.0502	SOIL MORPHOLOGY (.0503)			TYPE OF WASTEWATER: ☐ Sewage ☐ Industria  OTHER PROFILE FACTORS					
#		DEPTH (IN.)	.0503 STRUCT / TEXTUE		.0503 CONSISTE / MINERAL		.0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ	.0509 PROFILE CLASS & LTAR
1,		A 0-6"	LS; Gr		NS; NP; VFr		10YR 3/3				Provisionally Suitable
2		E 6-20"	LS; Gr		NS; NP; VFr		10YR 7/6	36"			
3 4		Bt1 12-36"	SCL; SBK		SS; SP; Fi-Fr	,	2.5YR 5/8				0.4GPD/ft2
7											
											<u>.</u>
			1		<u>'</u>		ı				
	DESCRIPTION	INITIAI	SYSTEM	REPA	AIR SYSTEM		R FACTORS :		:4abla		
Ava	ilable Space	Suitabl	le	Suita	able		CLASSIFICAT UATED BY:			ostic, Heath Cla	<u>прр</u>
Syst	em Type(s)	Accepted	d		S T&J Pane Reduction						
	LTAR MENTS	0.4GPI	D/Ft <sup>2</sup>	0.4G	PD/Ft <sup>2</sup>						

#### **LEGEND**

use the following standard abbreviations

	use the following standard dooreviations							
LANDSCAPE POSITION	GROUP	SOIL <u>TEXTURE</u>	CONVENTIONAL .0509 LTAR*	LPP .0509 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE		
CC (Concave Slope) CV (Convex Slope) D (Drainage Way)	I	S (Sand) LS (Loamy Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive) EXP (Expansive)	G (Single Grain) M (Massive) CR (Crumb)		

DS (Debris Slump) FP (Flood Plain) FS (Foot Slope)	П	SL (Sandy Loam) L (Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular) SBK (Subangular Blocky) ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			MOIST	WET
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic) SP (Slightly Plastic)
	**** *********					

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

P (Plastic) VP (Very Plastic)

 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

S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

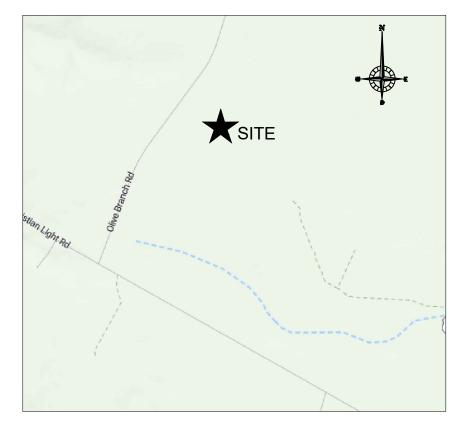
CLASSIFICATION S (S Evaluation of saprolite shall be by pits.

**NOTES** 

Long-term Acceptance Rate (LTAR): gal/day/ft<sup>2</sup>

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

<b>BIRCHWOOD T</b>	RAILS - LOT 75
Project Location	Olive Branch Rd
	Fuquay Varina, NC 27526
	Harnett County
	PIN:
Project Owner	Ballentine Associates, PA
	221 Providence Rd
	Chapel Hill, NC 27514
	919-929-0481
	dillons@ballentineassociates
Project Consultant	Jeff Vaughan, L.S.S
	(919) 367-6313
	Trent Bostic
	(919) 367-6322
	Agri-Waste Technology, Inc.
	501 N. Salem Street, Suite 203
	Apex, NC 27502
	(919) 859-0669
	(919) 233-1970 Fax
System Overview	Single Family Residence
	Four (4) Bedroom, 480 gpd
	Pressure Manifold Distribution
	Accepted/Innovative Trench Product



VICINITY MAP

# **Sheet Index**

Sheet 1	Cover Sheet
Sheet 2	<b>Property Layout</b>
Sheet 3	Primary Drain Field
Sheet 4	Repair Drain Field
Sheet 5	Detail Sheet 1
Sheet 6	Detail Sheet 2



Agri-Waste Technology, Inc. 501 N. Salem Street, Suite 203 Apex, North Carolina 27502 919-859-0669 www.agriwaste.com

919-859-0669 www.agriwaste.com

Ballentine Associates, PA
Birchwood Trails - Lot 75

Project Location:
Olive Branch Rd
Fuquay Varina, NC 27526
Harnett County
PIN: ----

Project Owner:
Ballentine Associates, PA
221 Providence Rd
Chapel Hill, NC 27514
919-929-0481
dillons@ballentineassociate

NC ONSITE WASTEWATER EVALUATOR SEAL



rey. Issued date description

SHEET TITLE

Cover Sheet

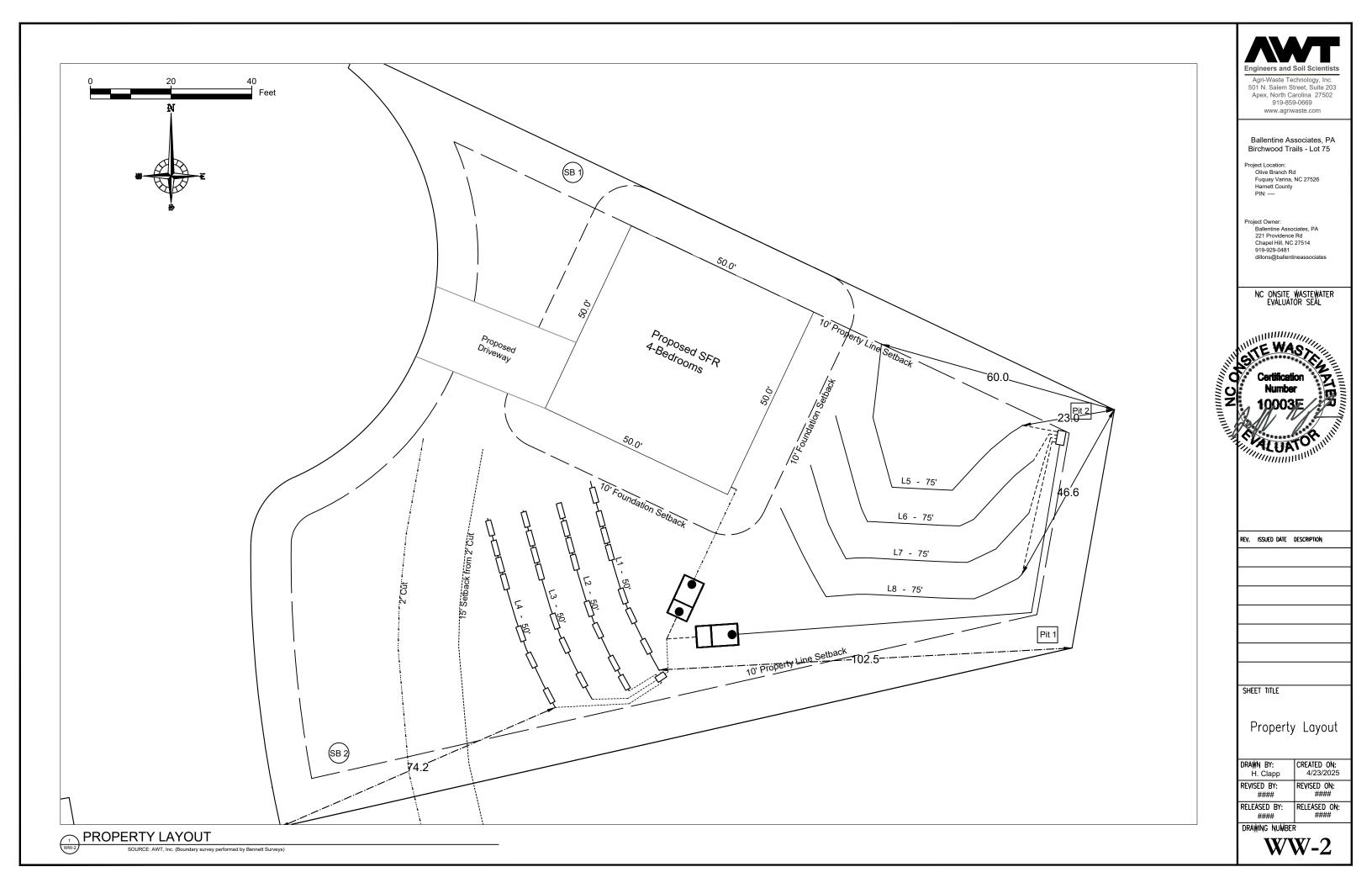
DRAWN BY:
H. Clapp
H. Clapp
REVISED BY:
####

RELEASED BY:
####

RELEASED BY:
####

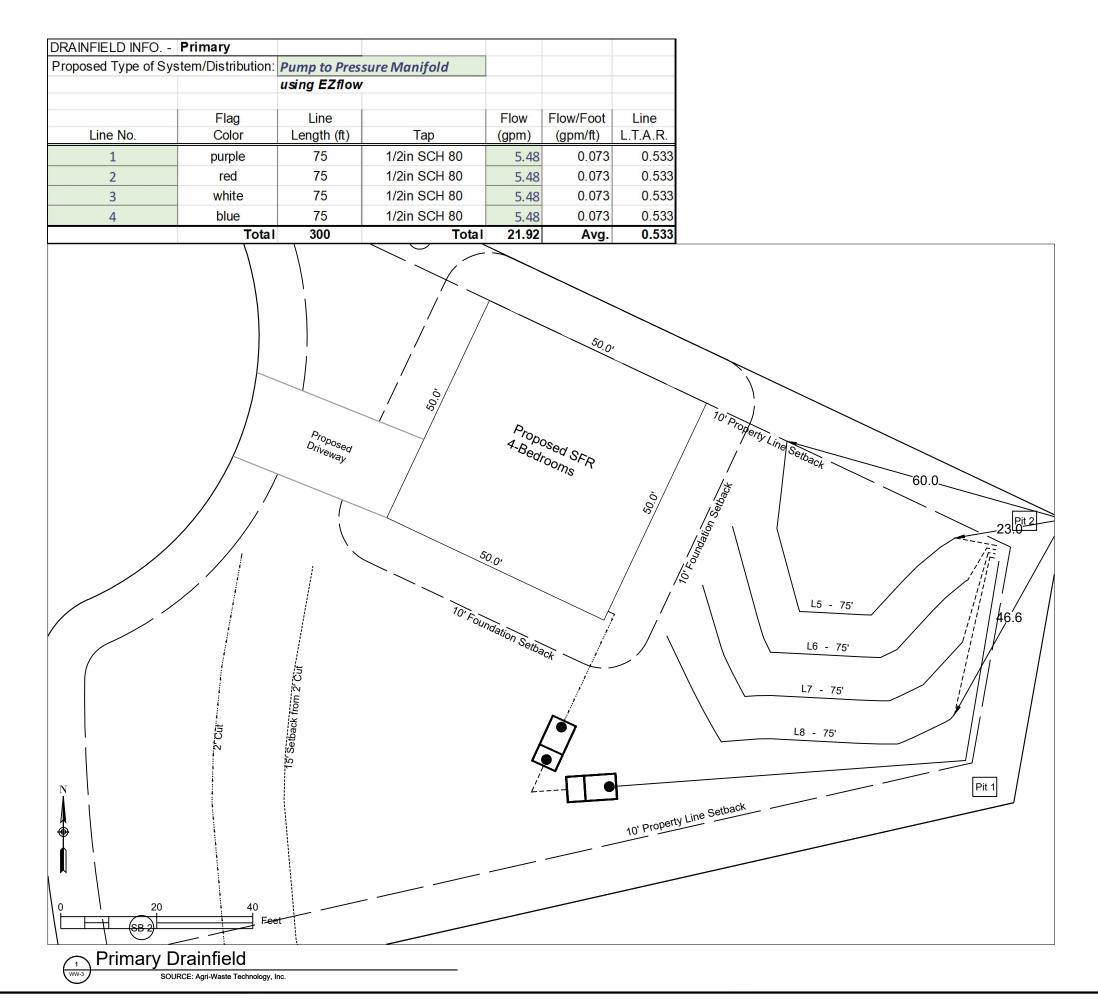
DRAWING NUMBER





#### **General Drainfield Notes:**

- Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
- 2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
- 3. Drainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
- 4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
- 5. Supply lines shall be installed with a minimum of 18" cover.
- 6. The trenches shall be backfilled appropriately so that no low areas are present.
- 7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.





Agri-Waste Technology, Inc. 501 N. Salem Street, Suite 203 Apex, North Carolina 27502 919-859-0669 www.agriwaste.com

Ballentine Associates, PA Birchwood Trails - Lot 75

Project Location:
Olive Branch Rd
Fuquay Varina, NC 27526
Harnett County
PIN: ----

Project Owner:
Ballentine Associates, PA
221 Providence Rd
Chapel Hill, NC 27514
919-929-0481
dillons@ballentineassociat



EV, ISSUED DÂTE DESCRIPTION

SHEET TITLE

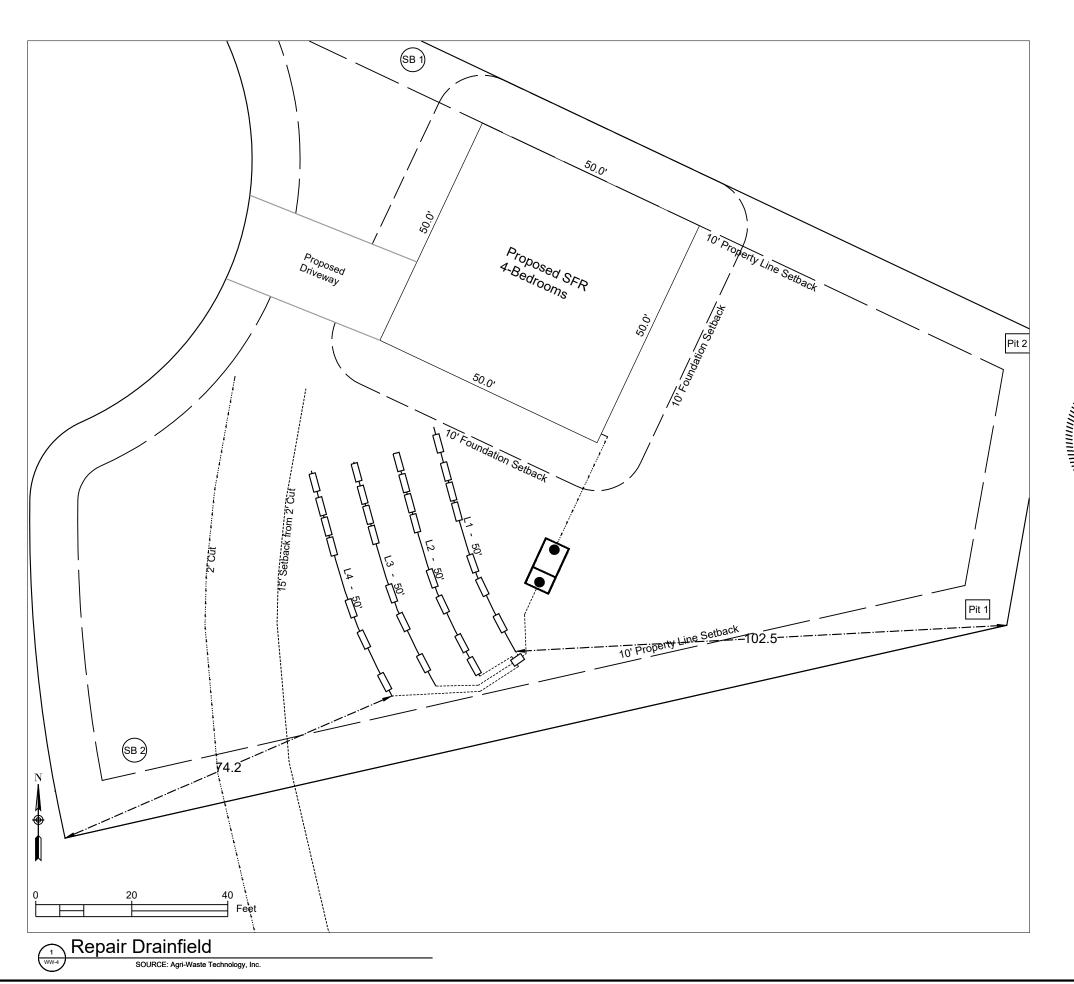
Primary Drainfield

DRAWN BY:
H. Clapp
H. Clapp
REVISED BY:
####
RELEASED BY:
RELEASED BY:
RELEASED ON:

DRAWING NUMBER

#### General Drainfield Notes:

- Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
- 2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
- Jrainfield area shall be cleared of all leaves, pine straw, debris, etc. The accumulated material shall be removed from the drainfield.
- 4. In clayey soils, sides of trenches shall be raked and limed per manufacturer's instructions.
- 5. Supply lines shall be installed with a minimum of 18" cover.
- 6. The trenches shall be backfilled appropriately so that no low areas are present.
- 7. Apply lime over the drainfield area as needed. Seed fine fescue over the drainfield at the rate recommended by the seed manufacturer. Hand rake the seed into the soil surface. Straw the seeded area at the rate of 1.5-2 bales per 1000 sq. ft.





Agri-Waste Technology, Inc. 501 N. Salem Street, Suite 20 Apex, North Carolina 27502 919-859-0669 www.agriwaste.com

Ballentine Associates, PA Birchwood Trails - Lot 75

Project Location: Olive Branch Rd Fuquay Varina, NC 27526 Harnett County

Project Owner:
Ballentine Associates, PA
221 Providence Rd
Chapel Hill, NC 27514
919-929-0481
dillons@ballentineassociates

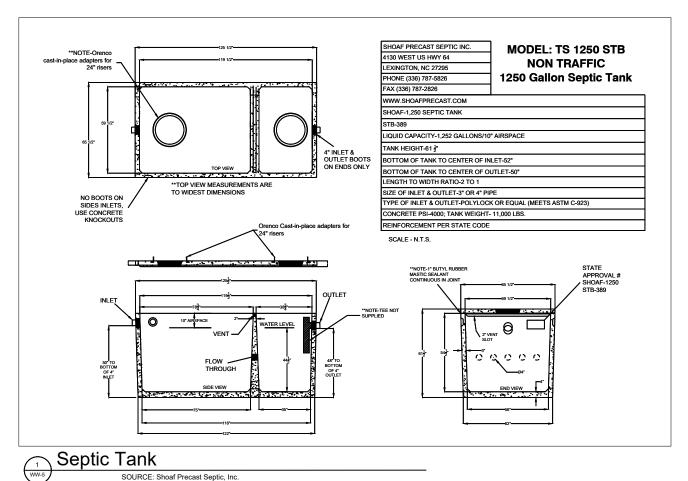


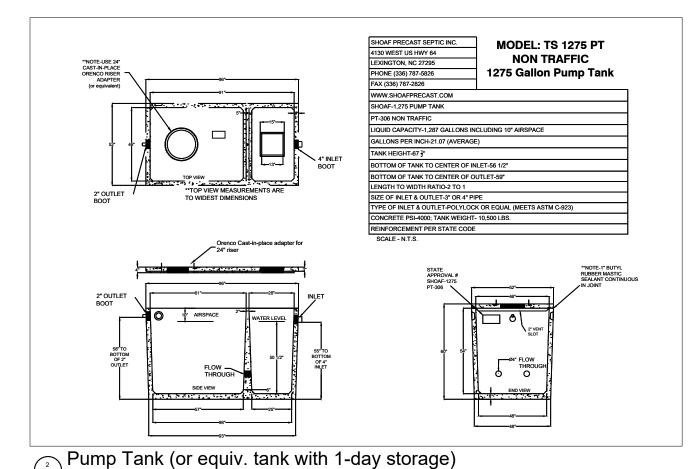
REY, ISSUED DATE DESCRIPTION

SHEET TITLE

Repair Drainfield

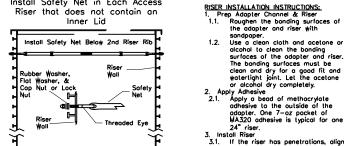
DRAWING NUMBER





SOURCE: Shoaf Precast Septic, Inc.

Install Safety Net in Each Access Riser that does not contain an



odopter. One /-oz packet of MA320 adhesive is typical for one 24" riser.

3. Instoll Riser

3.1. If the riser has penetrations, align the riser correctly.

3.2. Firmly press the riser onto the adopter until the bottom of the riser is resting on the concrete (cost-in-adopters) or the adopter flange (botted-down adopters). Twist the riser back and forth slightly to fully seat it an to create a good band.

3.3. Apply a bead of methacrylate adhesive to the inside of the access riser-adopter joint.

3.4. Use a tangue depressor, putty knife, or clean cloth to make a continuous fillet on the inside of the access riser-adopter joint.

3.5. Apply hydroulic cement to bond 3.5. Apply hydraulic cement to bond outer riser wall and top of tank.

4. Ensure safety net and inner lid are

FOR RISER WALL P	ENETRATIONS
Grommet Size, Inches (Nominal IPS Pipe Size)	Hole Saw Size, Inches
1/2	1
3/4	1 1/4
1	1 9/16
1 1/4	1 3/4
1 1/2	2 1/8
2	2 3/4
3	3 7/8
4	5

- **NOTES**
- 1. Installation to follow all NC DHHS and Harnett County applicable rules and regulations.
- 2. Harnett County to perform construction inspections and final system certification.
- 3. Septic Tank to have approved effluent filter.
- 4. Contractor to abide by all safety regulations during system installation.
- 5. Contractor shall backfill around all access areas such that storm water is shed away from potential entry points.
- 6. Invert elevations of all components to be verified in field by contractor to insure proper operation.
- 7. All system piping to be SCH40 PVC (except where noted).
- 8. All gravity elbows to be long radius or long sweeping type elbows.
- 9. Actual installation and placement of treatment system to be overseen by Contractor.
- 10. Tanks to be set on 6" minimum gravel base. Use #5 or #57 stone for base.

- 11. Contractor to seed and/or mulch disturbed areas to coincide with existing landscape. Area shall not be left with uncovered
- 12. Mount Control Panel a minimum of 24" above grade.
- 13. Power to panel to be installed by licensed electrician per code. One 15-amp circuit and one 20-amp circuit with individual neutrals to be run from house to control panel.
- 14. All risers to have cast-in-place tank adapters and be single-piece riser. Risers to extend 6" above soil surface and be designed to prevent surface water inflow.
- 15. Backfill around tank(s) shall be gravel or tank hole shall be over-excavated a minimum of 2' in all directions to allow for mechanical tamping of backfill.
- 16. All penetrations to be sealed.
- 17. Spigot to be located on outside of building within 50' of
- 18. All pressure lines to maintain 18" min. cover.
- 19. Contractor to adjust tank placement to meet site constraints.

501 N. Salem Street, Suite 203 919-859-0669 www.agriwaste.com

Ballentine Associates, PA Birchwood Trails - Lot 75

Olive Branch Rd Fuquay Varina, NC 27526 Harnett County

Project Owner Ballentine Associates, PA 221 Providence Rd Chapel Hill, NC 27514 919-929-0481 dillons@ballenti



rev. Issued date description

Detail Sheet '

SHEET TITLE

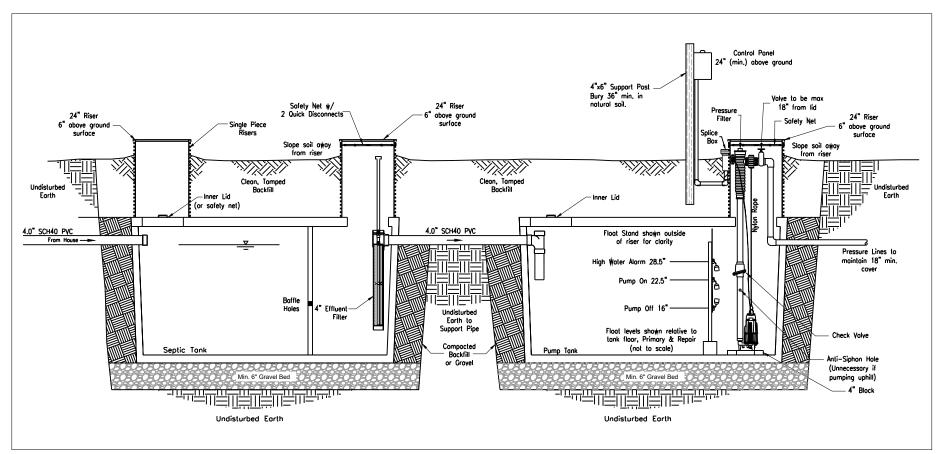
CREATED ON: DRAWN BY: H. Clapp REVISED BY: REVISED ON: RELEASED BY: RELEASED ON:

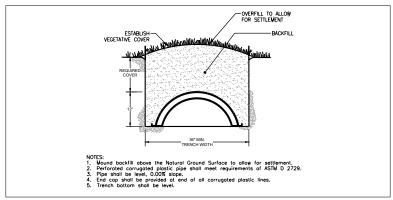
DRAWING NUMBER

WW-5



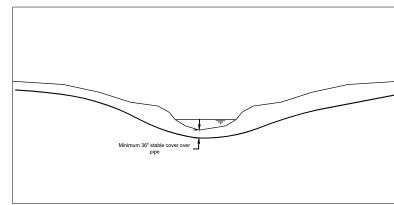
NOTE: Install 4 Ring Clamps i 8" (or larger) Filter is Used



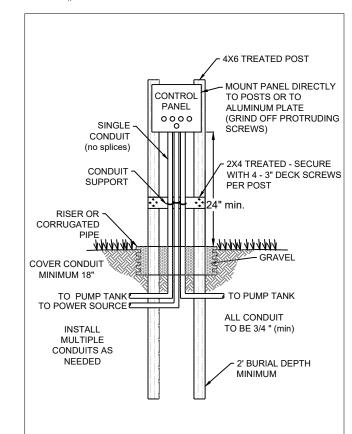


# TRENCH X-SECTION (Typical)

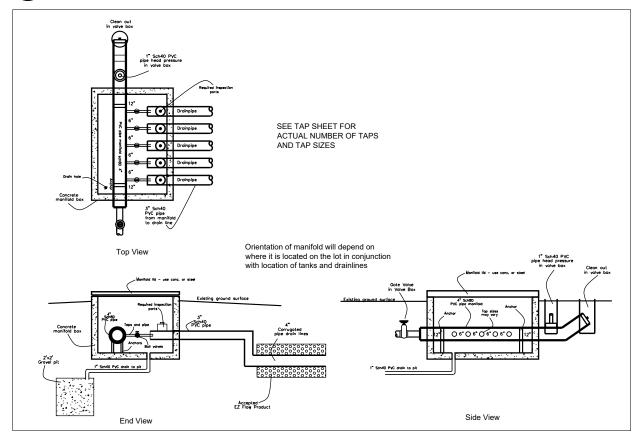
WW-6 N.T.S. Source: AWT



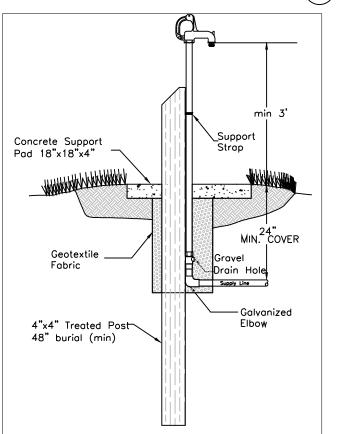
# STREAM CROSSING MIN. DEPTH WW-6 N.T.S. Source: AWT



# SYSTEM PROFILE VIEW N.T.S.



PRESSURE MANIFOLD INSTALLATION (Typical) - For Illustration Only WW-6 N.T.S. SOURCE: AWT



YARD HYDRANT (if required)

N.T.S. SOURCE: AWT

6 CONTROL PANEL SUPPORT WW-6 N.T.S. SOURCE: AWT

501 N. Salem Street, Suite 203 Apex, North Carolina 27502

919-859-0669 www.agriwaste.com

Ballentine Associates, PA Birchwood Trails - Lot 75

Project Location: Olive Branch Rd Fuquay Varina, NC 27526 Harnett County PIN: ----

Project Owner Ballentine Associates, PA 221 Providence Rd Chapel Hill, NC 27514 919-929-0481 dillons@ballentine



rev. Issued date description

SHEET TITLE

Detail Sheet 2

CREATED ON: DRAWN BY: H. Clapp 4/23/2025 REVISED ON: REVISED BY: #### RELEASED BY: RELEASED ON:

DRAWING NUMBER

#### **Septic System Design - Summary Page**

Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex. NC 27502

501 N Salem Street, Suite 203, Apex, NC 2750 agriwaste.com | 919.859.0669

Project Manager:
Jeff Vaughan, PhD, LSS
jvaughan@agriwaste.com

919-859-0669

Engineer:

Heath Clapp

hclapp@agriwaste.com

Project: Birchwood Trails, Lot 75 Date: 4/23/2025

Property: Olive Branch Road,

Fuquay Varina, NC 27526

Subdiv.: Birchwood Grove II

Lot #: 75 Permit #:

Owner: Ballentine Associates, PA

Address: 221 Providence Road, Type of System: III b

Chapel Hill, NC 27514

Phone: 919-929-0481

EHS:

Email: dillons@ballentineassociates.com

PIN:

County:

0

Harnett

#### Soil Parameters

**Soil Evaluation By:** 

LTAR:

0.400 gpd/ft<sup>2</sup>

**Special Conditions/Notes:** 

**Exterior** 

125.5

65.5

62.0

Interior

119.5

59.5

54.5

in.

in.

in.

ft O.C.

### **Design Parameters**

Type of Establishment: Residence, 5 or fewer bedrooms

Unit: Bedroom # of Units: 4

## **Septic Tank Specifications**

Min. Tank Capacity: 1,000 gal

Actual Tank Volume: 1,250 gal

Tank Manufacturer: Shoaf Width:

Tank Model: TS 1250 STB

Depth:

**Primary Drainfield Specifications** 

 $ft^2$ Type of Distribution: Parallel Pressure Manifold **Trench Bottom Area:** 1200 Trench Media: Chambers **Minimum Drain Line:** 300 ft **Trench Width:** 3 ft **Actual Drain Line:** 300 ft **Trench Depth:** 22 in. **Number of Lines:** 4

(or as specified on permit) Minimum Line Spacing: 9

## **Wastewater Treatment System Design Calculations**

**Project:** Birchwood Trails, Lot 75 **Location:** Olive Branch Road,

Fuquay Varina, NC 27526

**County:** Harnett

#### **Septic Tank Sizing**

**Daily Flow Estimate:** 

Unit	# of Units	Flow/Unit	Flow/Day	
Bedroom	4	120	480	
		Q=	480	gp

**Septic Tank Minimum Capacity:** 

Per NCAC T15A:18A .1952(b)(1):

For individual residences with 4 bedrooms,

Minimum Liquid Capacity (V)= 1,000 gal

Septic Tank Specs: Manufacturer:

acturer: Shoaf

Model: TS 1250 STB

Volume: 1,250 gal Weight: 11,000 lbs

Exterior Interior
Length: 125.5 119.5 in.
Width: 65.5 59.5 in.
Depth: 62.0 54.5 in.

Shape of Risers: Circular

Diameter: 2.00 ft

#### **Pump Tank Storage & Float Settings**

**Project:** Birchwood Trails, Lot 75 **Location:** Olive Branch Road,

Fuguay Varina, NC 27526

**County:** Harnett

Tank Manufacturer Sh

Shoaf

Tank Model

TS 1275 PT

Interior Height (in.) 60.5 in. Avg. Storage 21.07 gal/in.

#### Primary System

#### <u>Elevations</u>, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block) 14.1 in. (Pump height = 10 1/16")

Pump Off 16.0 in.

Pump On 22.5 in. (set for dose volume)
Alarm On 28.5 in. (6 in. above On Float)

**Emergency Storage Available** 

Pump Tank 674 gal
Days of Storage 1.40 days
(determined from "interior top of tank" - "High Water Alarm")

#### Repair System

#### Elevations, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block)

16.1 in. (Pump height = 12 1/16")

Pump Off 18.0 in.

Pump On 24.5 in. (set for dose volume)
Alarm On 30.5 in. (6 in. above On Float)

**Emergency Storage Available** 

Pump Tank 632 gal
Days of Storage 1.32 days
(determined from "interior top of tank" - "High Water Alarm")

#### **ELEVATIONS**

**Project:** Birchwood Trails, Lot 75 Location: Olive Branch Road, Fuquay Varina, NC 27526

County:	Harnett	
Benchmark BM Elev	0 0 ft	
Septic Tank Ground Surface Depth of Soil Cover	1,250 gal 16 in.	302.50 ft 1.33 ft
Overall Ht of Tank Elev, Base of Tank Ht to 4" Inlet Invert	61.5 in. 50 in.	5.13 ft 296.04 ft 4.17 ft
Elev, 4" Inlet Invert Ht to 4" Outlet Invert Elev, 4" Outlet Invert	48 in.	300.21 ft 4.00 ft 300.04 ft
Gravel Base Elev, Bot of Excavation	6 in.	0.50 ft 295.54 ft
Pump Tank Ground Surface	1275 gal	302.50 ft
Depth of Soil Cover Overall Ht of Tank Elev, Base of Tank	18 in. 67.5 in.	1.50 ft 5.63 ft 295.38 ft
Ht to 4" Inlet Invert Elev, 4" Inlet Invert Ht to 2" Outlet Invert	54.5 in. 58 in.	4.54 ft 299.92 ft 4.83 ft
Elev, 2" Outlet Invert Gravel Base Elev, Bot of Excavation		300.21 ft 0.50 ft 294.88 ft
ST Inlet Pipe Grade @ Stub-out Depth of Stub-out, top Elev, Stub-out Invert Elev @ ST Inlet Invert Length Slope		302.5 ft 1.5 ft 300.65 ft 300.21 ft 10 ft 4.4 %
Pipe, ST to PT  ID  OD  Elev, ST Outlet Invert  Elev, PT Inlet Invert  Length  Slope  Cover over inlet pipe	4 in. 4.5 in.	0.33 ft 0.38 ft 300.04 ft 299.92 ft 4 ft 3.1 % 1.94 ft
Pump Reqmt. Floor Thickness Elev, Pump Tank Floor Pump Block Ht. Elev, Pump Intake	4 in.	0.33 ft 295.71 ft 0.33 ft 296.04 ft
Grade @ Primary Manifold Grade @ Repair Manifold Min. Cover Max Elev, Repair	18 in.	301.50 ft 304.00 ft 1.50 ft 302.50 ft
El D:# D :		C 45 5

Elev Diff, Repair

6.46 ft

#### **Drainfield Design**

Project Birchwood Trails, Lot 75 Location Olive Branch Road,

Fuquay Varina, NC 27526

**County** Harnett

#### **Drainfield Sizing**

Primary		_	
LTAR	0.4 gpd/ft <sup>2</sup>		
<b>Daily Design Flow</b>	480 gpd	Type of Drainfield Media	Chambers
Req. Drainfield Area	1,200 ft <sup>2</sup>	Required Drainline	
Trench Width, Eff.	3 ft	After 25% Reduction	300 ft
Required Drainline	400 ft	Minimum Line Spacing	9 ft (O.C.)
Repair			
LTAR	0.4 gpd/ft <sup>2</sup>		
<b>Daily Design Flow</b>	480 gpd	Type of Drainfield Media	EZflow
Req. Drainfield Area	1,200 ft <sup>2</sup>	Required Drainline	
Trench Width, Eff.	3 ft	After 25% Reduction	300 ft
Required Drainline	400 ft	Minimum Line Spacing	9 ft (O.C.)

#### **Drainfield Layout**

			Elevation	Line Length	Used as	Used as
Line	Use	Flag Color	(ft)	(ft)	Primary (ft)	Repair (ft)
1	Layout Line	pink		60		50.0
2	Layout Line	yellow		60		50.0
3	Layout Line	purple		60		50.0
4	Layout Line	red		60		50.0
5	Layout Line	blue		60	75.0	
6	Layout Line	pink		75	75.0	
7	Layout Line	orange		75	75.0	
8	Layout Line	yellow		75	75.0	
	· · · · · · · · · · · · · · · · · · ·		Total	75	300	200
			Count	8	4	4

Note: Line length totals are shown to the nearest foot.

For Chambers or Low-profile Chambers:

Effective trench lengths are shown. Add 1' for total installation length.

#### PRESSURE MANIFOLD DESIGN (Primary)

#### Site Information

Birchwood Trails, Lot 75 Project: Location: Oliva Branch Road,

Fuquay Varina, NC 27526

County: Harnett

#### Design Information

Estimated Daily Flow 480 gal/day 0.4 gal/day/ft<sup>2</sup> L.T.A.R. 0.420 gal/day/ft<sup>2</sup> L.T.A.R. + 5% Trench Width 3 ft. 400 ft. Line Length Required 300 ft Length after 25% Reduction

0.533 gal/day/ft<sup>2</sup> L.T.A.R. Reduced 0.560 gal/day/ft<sup>2</sup> L.T.A.R. Reduced + 5%

#### DRAINFIELD INFO. - Primary

Proposed Type of System/Distribution: Pump to Pressure Manifold

#### using Chambers

	Flag	Line	_ '	Flow	Flow/Foot	Line
Line No.	Color	Length (ft)	Тар	(gpm)	(gpm/ft)	L.T.A.R.
5	blue	75	1/2in SCH 80	5.48	0.073	0.533
6	pink	75	1/2in SCH 80	5.48	0.073	0.533
7	orange	75	1/2in SCH 80	5.48	0.073	0.533
8	red	75	1/2in SCH 80	5.48	0.073	0.533
	Total	300	Total	21.92	Avg.	0.533

Note: Line lengths are calculated in 5' increments to reflect use of EZflow product.

Total Run Time 21.90 min. **Drainfield Capacity** 195.9 gal % of Drainfield Cap 69.9%

(Req. Range 66-75%)

Dose Volume 136.9 gal/dose

Run Time/Dose 6.2 minutes 21.07 gal/in. Volume/depth Estimated Drawdown 6.50 in.

Range 5-7 minutes unless uphill, checked (Per tank manufacturer's specifications)

0 Split(s)

Manifold Box

4 Number of Taps Manifold Length 3.5 ft. with (approximate)

#### **PUMP DESIGN**

System (initial/repair): **Primary** 

**Project:** Birchwood Trails, Lot 75 **Location:** Olive Branch Road,

Fuquay Varina, NC 27526

County: Harnett

#### **Friction Losses**

Suction Head	0 ft	(submersible 0)
Elev. Difference (highest point from pump)	6.46 ft	
Design Pressure At Outlet	2 ft	
Supply Line - 1.5" Schedule 40 PVC  Pipe Diameter, Nominal 1.5 in.  Pipe Diameter (ID) 1.59 in.  Pipe Length 115 ft  Pipe Length 11.5 ft  Equivalent Length 126.5 ft  Estimated Friction Loss in Supply Line  Friction Loss - Taps/Special Fittings	3.95 ft	21.92 gpm 3.54 ft/sec eets requirement that 2 ft/s < v < 5 ft/s.
Friction Loss - Taps/Special Fittings	5.5	
TOTAL	15.91 ft.	

Flow for Anti-Siphon Hole

Hole Diameter 3/16 in.
Hole Flowrate 1.65 gpm

Pump Efficiency 0.7 (assumed, typical)
Motor Efficiency 0.9 (assumed for electric pumps)

Flow 23.57 gpm

Required Horsepower 0.15 hp

TDH 15.91 ft

#### **Pump Selection**

Manufacturer:	Zoeller
Model:	N98
Horsepower:	0.5

#### **Septic Tank Buoyancy Calculation**

Project: Birchwood Trails, Lot 75
Location: Olive Branch Road,

Fuquay Varina, NC 27526

County: Harnett

Tank Size (nominal) 1250 gal

#### Properties/Assumptions:

Min. liquid level to be maintain	ed in tank at all ti	mes after initial installation.
Min. depth to water table  Effluent Density	12.0 in. 62.4 lb/ft <sup>3</sup> 142.6 lb/ft <sup>3</sup>	from ground surface (Specific Weight of Water)
Concrete Density Soil App. Sp. Grav.	1.3	(typical value)
Soil Cover Over Tank	12 in.	(minimum)
Additional Cover	4 in.	for pipe grade
Unsubmerged wt of soil	81.1 lb/ft <sup>3</sup>	
Submerged wt of soil	49.9 lb/ft <sup>3</sup>	50% Porosity Assumed

#### Tank Dimensions (from supplier):

Tank Dimensions	(monn ouppi	101).			
		<u>Exte</u>	<u>rior</u>	<u>Inter</u>	<u>ior</u>
		Top	Bottom	Тор	Bottom
Tank	Length	125.5	122.0	119.5	116.0 in.
	Width	65.5	62.0	59.5	56.0 in.
	Height	58.5	(w/o lid)	54.5	in.
Lid	Length	125.5	in.		
	Width	65.5	in.		
	Height	3.0	in.		
A	rea of Riser	Openings	6.28 ft <sup>2</sup>		
Permanent	Liquid Dept	th in Tank	0.0 in		0.00 ft
		_			
	Tar	nk Weight	11,000 lb	(	per manufacturer)

#### Buoyancy Force Calculation:

Buoyancy Force Specific Weight of Water x Displaced Volume

Displaced Volume 283.5 ft<sup>3</sup> \*

Buoyancy Force 17,689 lb.

#### Weight Calculation:

Tank Weight	11000 lb		
Water Weight in Tank	0 lb	Volume	0.0 ft <sup>3</sup> *
Soil Weight Over Tank	4966 lb		
Soil Friction Force	4037 lb		
Total Weight	20,004 lb		

#### Factor of Safety = 1.13

Note: Total weight must be greater than buoyancy force so that tank will not float during high water table conditions.

<sup>\*</sup> Volume calculated by the prismoidal formula.

#### **Pump Tank Buoyancy Calculation**

**Project:** Birchwood Trails, Lot 75 **Location:** Olive Branch Road,

Fuquay Varina, NC 27526

County: Harnett

Tank Size (nominal) 1275 gal

#### Properties/Assumptions:

Min. liquid level to be maintained in tank at all times after initial installation.						
Min. depth to water table Effluent Density	12 in. 62.4 lb/ft <sup>3</sup>	from ground surface (Specific Weight of Water)				
Concrete Density Soil App. Sp. Grav.	142.6 lb/ft <sup>3</sup> 1.3	(typical value)				
Soil Cover Over Tank	12 in.	(minimum)				
Additional Cover	6 in.	for pipe grade				
Unsubmerged wt of soil	81.1 lb/ft <sup>3</sup>					
Submerged wt of soil	49.9 lb/ft <sup>3</sup>	50% porosity assumed				

#### Tank Dimensions (from supplier):

Talik Di	IIIIerisioris	(пош ѕирр	iliei).				
	·		Exte	<u>erior</u>	<u>Int</u>	<u>'erior</u>	
			Тор	Bottom	Тор	Bottom	
	Tank	Length	108.0	104.	0 102.0	98.0	in.
		Width	58.0	54.	52.0	48.0	in.
		Height	64.5	(w/o lid)	60.5	5	in.
	Lid	Length	108.0	in.			
		Width	58.0	in.			
		Height	3.0	in.			
	Are	ea of Riser	Openings	3.1	4 ft <sup>2</sup>		
					_		
P	ermanent l	Liquid Dep	th in Tank	0.	o in.	0.00	ft
					_		
		Ta	nk Weight	1050	0 lb	(per manuf	acturer)

#### Buoyancy Force Calculation:

Buoyancy Force	14,606 lb
Displaced Volume	234.1 ft <sup>3</sup> *
Buoyancy Force Specific Wei	ght of Water x Displaced Volume
buoyancy r orce calculation.	

#### Weight Calculation:

Tank Weight	10500 lb		
Water Weight in Tank	0 lb	Volume	0.0 ft <sup>3</sup> *
Soil Weight Over Tank	4281 lb		
Soil Friction Force	4227 lb		
Total Weight	19,008 lb		

#### Factor of Safety = 1.30

Note: Total weight must be greater than buoyancy force so that tank will not float during high water table conditions.

<sup>\*</sup> Volume calculated by the prismoidal formula.



#### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/20/2025

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).

	9	men en aer een aer (e).			
PRODUCER Hartsfield & Nash Agency, Inc.		CONTACT NAME: Connie Garkalns			
10405 Ligon Mill Rd., Ste H Wake Forest NC 27587		PHONE (A/C, No, Ext): 984-235-4273 FAX (A/C, No): 919-55	6-8758		
		E-MAIL ADDRESS: connie@hartsfield-nash.com			
		INSURER(S) AFFORDING COVERAGE	NAIC#		
	License#: 1000009111	INSURER A: Selective Insurance Company of	39926		
INSURED	AGRITEC-01	INSURER B: Accident Fund	10166		
Agri-Waste Technology Inc 501 N. Salem St Ste 203 Apex NC 27502		INSURER C : Evanston Insurance Company	35378		
		INSURER D:			
		INSURER E :			
		INSURER F:			
COVERAGES	CERTIFICATE NUMBER: 130/498969/	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.

NSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	s
Α	X COMMERCIAL GENERAL LIABILITY			S 2253659	1/18/2025	1/18/2026	EACH OCCURRENCE DAMAGE TO RENTED	\$2,000,000
	CLAIMS-MADE X OCCUR						PREMISES (Ea occurrence)  MED EXP (Any one person)	\$ 300,000 \$ 10,000
							PERSONAL & ADV INJURY	\$2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$4,000,000
	POLICY X PRO- JECT LOC						PRODUCTS - COMP/OP AGG	\$4,000,000
	OTHER:							\$
A	AUTOMOBILE LIABILITY			S 2253659	1/18/2025	1/18/2026	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	\$
	OWNED SCHEDULED AUTOS AUTOS						BODILY INJURY (Per accident)	\$
	X HIRED X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$
								\$
A	X UMBRELLA LIAB X OCCUR			S 2253659	1/18/2025	1/18/2026	EACH OCCURRENCE	\$2,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	\$2,000,000
	DED RETENTION\$							\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			100003072	1/18/2025	1/18/2026	X PER OTH- STATUTE ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE T/N	N/A					E.L. EACH ACCIDENT	\$1,000,000
	(Mandatory in NH)	,					E.L. DISEASE - EA EMPLOYEE	\$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$1,000,000
C A	Prof & Pollution Liability Leased & Rented			MKLV3ENV104794 S 2253659	8/22/2024 1/18/2025	8/22/2025 1/18/2026	Each Claim Equipment	5,000,000 25,000

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

CERTIFICATE HOLDER	CANCELLATION
Artisan Custom Homes 21016 Catawba Avenue	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
Cornelius NC 28031 USA	COMMI GALLAN
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