



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: RiverWILD Homes

Mailing address: 114 W Main St City: Clayton State: NC Zip: 27520

Phone: 919-373-6048 Email: kelley@staywild.com

Authorized Onsite Wastewater Evaluator Information:

Name: Trent Bostic Certification #: 10056E

Mailing address: 1225 Crescent Drive, Ste 250 City: Cary State: NC Zip: 27518

Phone: 919-367-6322 Email: tbostic@agriwaste.com

Site Location Information:

Site address: 141 Beebalm Run, Dunn, NC 28334

Tax parcel identification number or subdivision lot, block number of property: 1509-12-3233

Alton Fields, Lot - 8 County: Harnett

System Information:

Wastewater System Type: IIIb

Daily Design Flow: 480

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 31 day of OCT, 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 31 day of OCT, 2028.

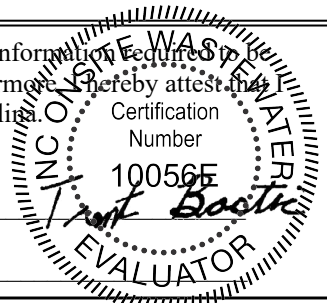
Signature of Authorized Onsite Wastewater Evaluator: Trent Bostic

Signature of Owner or Legal Representative: \_\_\_\_\_

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.

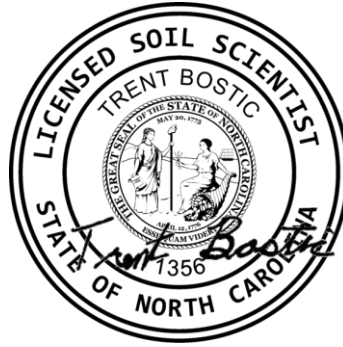
Local Health Department Receipt Acknowledgment:

Signature of Local Health Department Representative: \_\_\_\_\_ Date: \_\_\_\_\_





Agri-Waste Technology, Inc.  
1225 Crescent Green, Suite 250, Cary NC 27518  
agriwaste.com | 919.859.0669



**Soil Suitability for Domestic Sewage Treatment and Disposal Systems  
141 Beebalm Run, Dunn, NC 28334  
(PIN: 1509-12-3233; Harnett County)**

PREPARED FOR: RiverWILD Homes, c/o Kelley Judd

PREPARED BY: Trent Bostic, Senior Soil Scientist

DATE: October 31, 2025

Soil suitability for domestic sewage treatment and disposal systems was evaluated on May 1, 2025, for the property located at the Alton Fields subdivision. Trent Bostic of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a septic system. This report and attached documents were prepared to meet the requirements for an Authorized On-Site Wastewater Evaluator to meet G.S. 130A-336.2

A drawing of the site plan, septic layout, and boring locations is included in Attachment 1. Profile descriptions for each boring are included in Attachment 2. Additional documentation about the property is included in Attachment 3.

Site Conditions

The total property area is approximately 0.58 acres. The property is wooded. The drawing in Attachment 1 details the property boundaries, house location, boring locations, and layout of drain field trenches (Completed by AWT).

Soil Suitability for Domestic Sewage Treatment and Disposal Systems

Multiple soil borings/pits were assessed on the property. Soil borings/pits were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A NCAC 18E: Wastewater Treatment and Dispersal Systems. These borings/pits were advanced with a hand auger and excavator. All soil borings/pits shown are provisionally suitable for a conventional style trench. The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.375 GPD/ft<sup>2</sup>. The soils on this property are group III soils within the distribution and treatment zone as used to define the LTAR. The maximum trench bottom should not exceed 24".

#### Field Layout & System Design

A septic layout was performed to demonstrate available space (.0508). The layout in Attachment 1 indicates there is available space for a four-bedroom primary and repair system utilizing a 25% reduction product. With an LTAR of 0.375 GPD/ft<sup>2</sup>, 320 linear feet of trench is necessary to support a four-bedroom home initial and 320 linear feet of trench is required for the repair system. The attached drawing proves that 640+ linear feet of trench can be installed with the proposed home location on the property.

**Any disturbances or grading done in the usable soils area may change the potential of using the area designated for a drain field and can result in a revoked permit.**

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

Sincerely,

Trent Bostic, AOWE

A handwritten signature in black ink that reads "Trent Bostic". The signature is written in a cursive, slightly slanted style.

## SOIL & SITE EVALUATION for ON-SITE WASTEWATER SYSTEMS

Evaluation Date	5/1/2025	Site Location	141 Beebalm Run	County	Harnett
PIN/Parcel	1509-12-3233	Property Size (acres)	0.58	Property Recorded	Yes
Proposed Facility	SFR	Bedrooms	4	Wastewater Strength	Domestic
Water Supply	Municipal	Design Flow (.0400)	480	Evaluation Method	Auger

Profile #	.0502 Landscape Position Slope %	Horizon Depth (in)	Soil Morphology		Other Factors					
			.0503 Struct ure Textur e	.0503 Consistence Mineralogy	.0504 Soil Wetness Color	.0505 Soil Depth (in)	.0506 Saprolite	.0507 Restrictive Horizon	.0509 Profile Class LTAR	.0502(d) Slope Corrected Depth
1	2%	Ap 0-9	LS	NS, NP, Vfr	10YR 5/2	36	Suitable	Suitable	0.375	36
		E 9-15	LS	NS, NP, Vfr	10YR 6/4					
		Bt	SCL	SS, SP, Fi	10YR 5/6					
		System Type						Conventional		
2	2%	Ap 0-9	LS	NS, NP, Vfr	10YR 5/2	36	Suitable	Suitable	0.375	36
		E 9-15	LS	NS, NP, Vfr	10YR 6/4					
		Bt	SCL	SS, SP, Fi	10YR 5/6					
		System Type						Conventional		
3	2%	Ap 0-9	LS	NS, NP, Vfr	10YR 5/2	36	Suitable	Suitable	0.375	36
		E 9-15	LS	NS, NP, Vfr	10YR 6/4					
		Bt	SCL	SS, SP, Fi	10YR 5/6					
		System Type						Conventional		
4	2%	Ap 0-9	LS	NS, NP, Vfr	10YR 5/2	36	Suitable	Suitable	0.375	36
		E 9-15	LS	NS, NP, Vfr	10YR 6/4					
		Bt	SCL	SS, SP, Fi	10YR 5/6					
		System Type						Conventional		

Evaluated by:	TB
---------------	----

Site Classification	Suitable	
Primary LTAR	0.375	Repair LTAR 0.375
Primary Trench Depth	24	Repair Trench Depth 24

# SOIL & SITE EVALUATION for ON-SITE WASTEWATER SYSTEMS

## LEGEND

Soil Group	Soil Texture	Conventional LTAR	Anaerobic Dip LTAR	Aerobic Drip LTAR (TS-II)	Mineralogy & Consistence		Structure
					Moist	Wet	
I	S (Sand)	0.8-1.2	0.4-0.6	0.8-1.5			SG (Single grain)
	LS (Loamy Sand)				Lo (Loose)	NS (Non Sticky)	M (Massive)
	SL (Sandy Loam)				VFR (Very Friable)	SS (Slightly Sticky)	GR (Granular)
II	L (Loam)	0.6-0.8	0.3-0.4	0.6-0.8			
					FR (Friable)	S (Sticky)	SBK (Subangular Blocky)
	SiL (Silt Loam)				FI (Firm)	VS (Very Sticky)	ABK (Angular Blocky)
III	SCL (Sandy Clay Loam)	0.3-0.6	0.15-0.3	0.2-0.6			
					VFI (Very Firm)	NP (Non Plastic)	PR (Prismatic)
	CL (Clay Loam)				EFI (Extremely Firm)	SP (Slightly Plastic)	
IV	SiCL (Silty Clay Loam)	0.1-0.4	0.05-1.5	0.05-0.2		P (Plastic)	PL (Platy)
	SC (Sandy Clay)					VP (Very Plastic)	
	SiC (Silty Clay)				SEXP (Slightly Expansive)		
	C (Clay)				EXP (Expansive)		



# 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).

<b>PRODUCER</b> Hartsfield & Nash Agency, Inc. 10405 Ligon Mill Rd., Ste H Wake Forest NC 27587	<b>CONTACT NAME:</b> Connie Garkalns <b>PHONE (A/C, No, Ext):</b> 984-235-4273 <b>E-MAIL ADDRESS:</b> connie@hartsfield-nash.com	<b>FAX (A/C, No):</b> 919-556-8758
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A:</b> Selective Insurance Company of		39926
<b>INSURER B:</b> Accident Fund		10166
<b>INSURER C:</b> Evanston Insurance Company		35378
<b>INSURER D:</b>		
<b>INSURER E:</b>		
<b>INSURER F:</b>		

License#: 100009111  
AGRITC-01**COVERAGES****CERTIFICATE NUMBER:** 1304989694**REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			S 2253659	1/18/2025	1/18/2026	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
A	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			S 2253659	1/18/2025	1/18/2026	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			S 2253659	1/18/2025	1/18/2026	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000 \$
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	100003072	1/18/2025	1/18/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Prof & Pollution Liability Leased & Rented			MKLV3ENV104794 S 2253659	8/22/2024 1/18/2025	8/22/2025 1/18/2026	Each Claim 5,000,000 Equipment 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  
Cornelius NC 28031  
USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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NORTH CAROLINA HARNETT COUNTY  
[Mickey R.Bennett.PLS do certify that this plat was drawn under  
my supervision(deed description recorded in Book(see ref),Page  
Page(ref),and that boundaries not surveyed are clear  
indicated as drawn from information found in Book(see ref),Page  
(see ref),that the ratio of precision as calculated is 1:10000.  
Witness my original signature,registration number and seal this  
23rd day of April,2025 A.D.

Mickey R.Bennett PLS

MICKEY R.BENNETT  
L - 1514



I MICKEY R. BENNETT PLS CERTIFY  
That this survey is of and existing parcel  
or parcels of land or one or more existing  
subdivisions and does not create a new street  
or change an existing street.

9

7

8

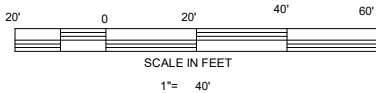
0.58 AC.  
25,147.2 SF

PROPOSED  
HOUSE  
LOCATION  
ELS

PROPOSED DRIVE

BEEBALM RUN  
50' PUBLIC R/W

NORTH REF: NC GRID NAD 83/2011



PROPOSED IMPREVIOUS AREA = 2900 SF+-

VERBENA POINT  
50'PUBLIC R/W

CURVE	RADIUS	LENGTH	CHORD	CH.BEARING
C14	50.00'	42.37'	41.11'	S 00°45'57"E
C15	25.00'	18.43'	18.02'	S 03°55'04"E
C16	258.00'	29.99'	29.97'	S 13°52'28"W
C17	25.00'	35.08'	32.27'	S 50°45'02"W

MINIMUM BUILDING SETBACKS

RA-30

FRONT --- 35'FROM R/W

REAR --- 25'

SIDE --- 10'

CORNER LOT SIDE - 20'

MAXIMUM HEIGHT - 35'

MAXIMUM IMPREVIOUS AREA PER LOT - 5000 SF

DEED REFERENCE DEED BOOK 4231,PAGE 1889  
MAP REFERENCE PLAT BOOK 2025,PAGE 176

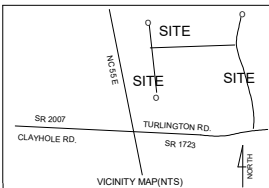
DISCLAIMER

ALL INFORMATION SHOWN ON THIS MAP WAS TAKEN FROM  
RECORDED DEEDS,PLATS AND OTHER PUBLIC INFORMATION.  
BENNETT SURVEYS HAS NOT PERFORMED ANY SURVEY IN  
PREPARING THIS PLAT AS OF DATE SHOWN.

OWNER: GREGORY INC.  
62 E MCIVERY STREET  
ANGIER, NC  
27501-5891

NO FIELD SURVEY WAS PERFORMED IN .  
PREPARING THIS PLAT  
PROPOSED PLOT PLAN  
BEEBALM RUN, DUNN,NC 28334

FEMA FLOOD HAZARD STATEMENT  
ALL PROPERTY SHOWN ON THIS PLAT  
IS LOCATED WITHIN THE FEMA (ZONE X)  
MINIMAL FLOOD RISK AS SHOWN ON  
FIRM NUMBER 3720150900J  
EFFECTIVE DATE 10/3/2006.



ALTON FIELDS SUBDIVISION.

LOT - 8

GROVE TOWNSHIP		HARNETT COUNTY	
STATE: NORTH CAROLINA		DATE: APRIL 23,2025	
ZONE RA-30	PIN 1509-12-3233.000	PID 071509 0037 18	

BENNETT SURVEYS F-1304

1662 CLARK ROAD LILLINGTON, NC 27546 910-893-5252

SCALE: 1"= 40'	DRAWN BY: MRB	DRAWING NO. 25146
CHECKED BY:		

AOWE - AF8

Project Location	141 Beebalm Run Dunn, NC 27334 Harnett County PIN: 1509-12-3233
Project Owner	RiverWILD Homes 114 W Main St Clayton, NC 27520 919-373-6048 kelley@staywild.com
Project Consultant	Trent Bostic, AOWE (919) 367-6322 tbostic@agriwaste.com
	Agri-Waste Technology, Inc. 1225 Crescent Green, Suite 250 Cary, NC 27518 (919) 859-0669 (919) 233-1970 Fax
System Overview	Single Family Residence Four (4) Bedrooms, 480GPD Pressure Manifold Accepted/Innovative Trench Product



VICINITY MAP

Sheet Index

Sheet 1	Cover Sheet
Sheet 2	Property Layout
Sheet 3	Primary Drainfield
Sheet 4	Repair Drainfield
Sheet 5	Detail Sheet
Sheet 6	Detail Sheet

**AWT**  
Engineers and Soil Scientists  
Agri-Waste Technology, Inc.  
1225 Crescent Green, Suite 250  
Cary, North Carolina 27518  
919-859-0669  
www.agriwaste.com

RiverWILD Homes  
AOWE - AF8  
  
Project Location:  
141 Beebalm Run  
Dunn, NC 27334  
Harnett County  
PIN: 1509-12-3233  
  
Project Owner:  
RiverWILD Homes  
114 W Main St  
Clayton, NC 27520  
919-373-6048  
kelley@staywild.com

NC ONSITE WASTEWATER  
EVALUATOR SEAL  
  
  
Certification Number 100568  
Trent Bostic  
EVALUATOR

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE  
Cover Sheet

DRAWN BY:  
T. Bostic

CREATED ON:  
10/27/2025

REVISED BY:  
####

REVISED ON:  
####

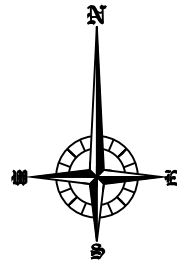
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RELEASED ON:  
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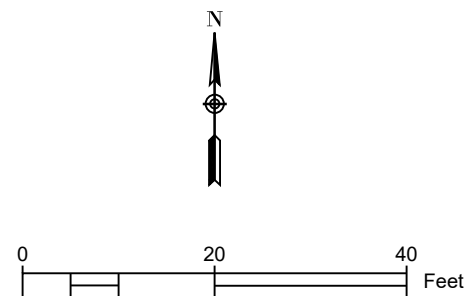
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WW-1





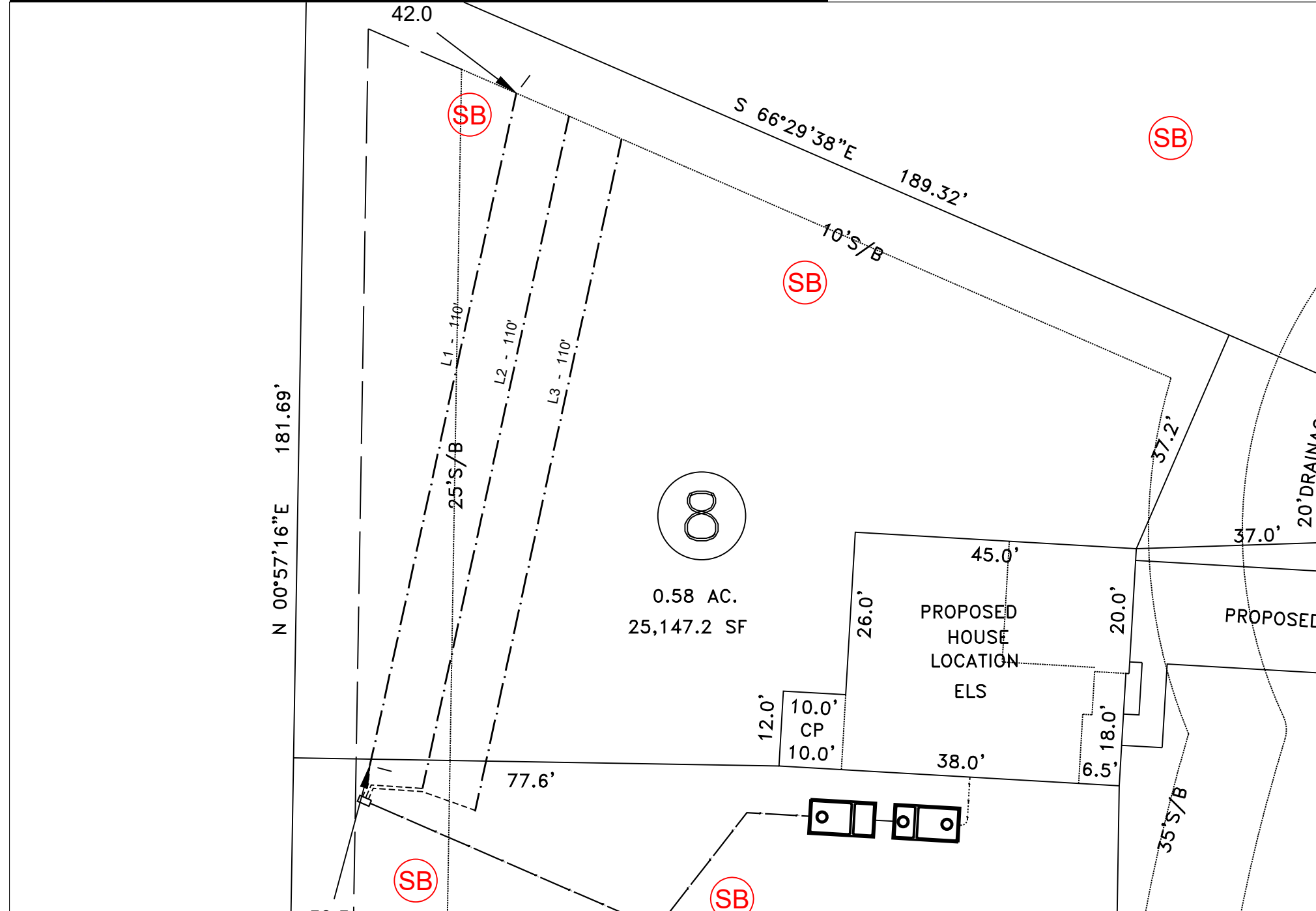


1. Clear all trees less than 8" in diameter (measured at a height 3' from soil surface) from the drainfield.
2. Vegetation that will re-grow from a cut stump shall be stumped or pulled from the ground. Stumps shall not be pushed over.
3. Drainfield area shall be cleared of all leaves, pine straw, debris, 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.



DRAINFIELD INFO. - <b>Primary</b>						
Proposed Type of System/Distribution:		<i><b>Pump to Pressure Manifold using EZflow</b></i>				
Line No.	Flag Color	Line Length (ft)	Tap	Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	red	110	1/2in SCH 80	5.48	0.050	0.485
2	white	110	1/2in SCH 80	5.48	0.050	0.485
3	blue	110	1/2in SCH 80	5.48	0.050	0.485
	<b>Total</b>	<b>330</b>	<b>Total</b>	<b>16.44</b>	<b>Avg.</b>	<b>0.48</b>
<i>Note: Line lengths are calculated in 5' increments to reflect use of EZflow product.</i>						

Note:  
Primary distribution is pressure manifold  
utilizing accepted trench product.



**Primary Drainfield**  
SOURCE: Agri-Waste Technology, Inc.

**RiverWILD Homes**  
**AOWE - AF8**

**Project Location:**  
141 Beebalm Run  
Dunn, NC 27334  
Harnett County  
PIN: 1509-12-3233

Project Owner:  
RiverWILD Homes  
114 W Main St  
Clayton, NC 27520  
919-373-6048  
kelley@staywild.com

NC ONSITE WASTEWATER  
EVALUATOR SEAL

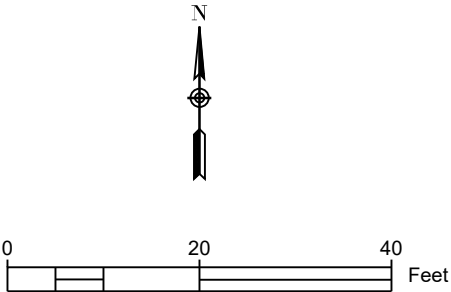


REV.	ISSUED DATE	DESCRIPTION
SHEET TITLE		
Primary Drainfield		
DRAWN BY: T. Bostic		CREATED ON: 10/27/2025
REVISED BY: ####		REVISED ON: ####
RELEASED BY: ####		RELEASED ON: ####

DRAWING NUMBER  
**WW-3**

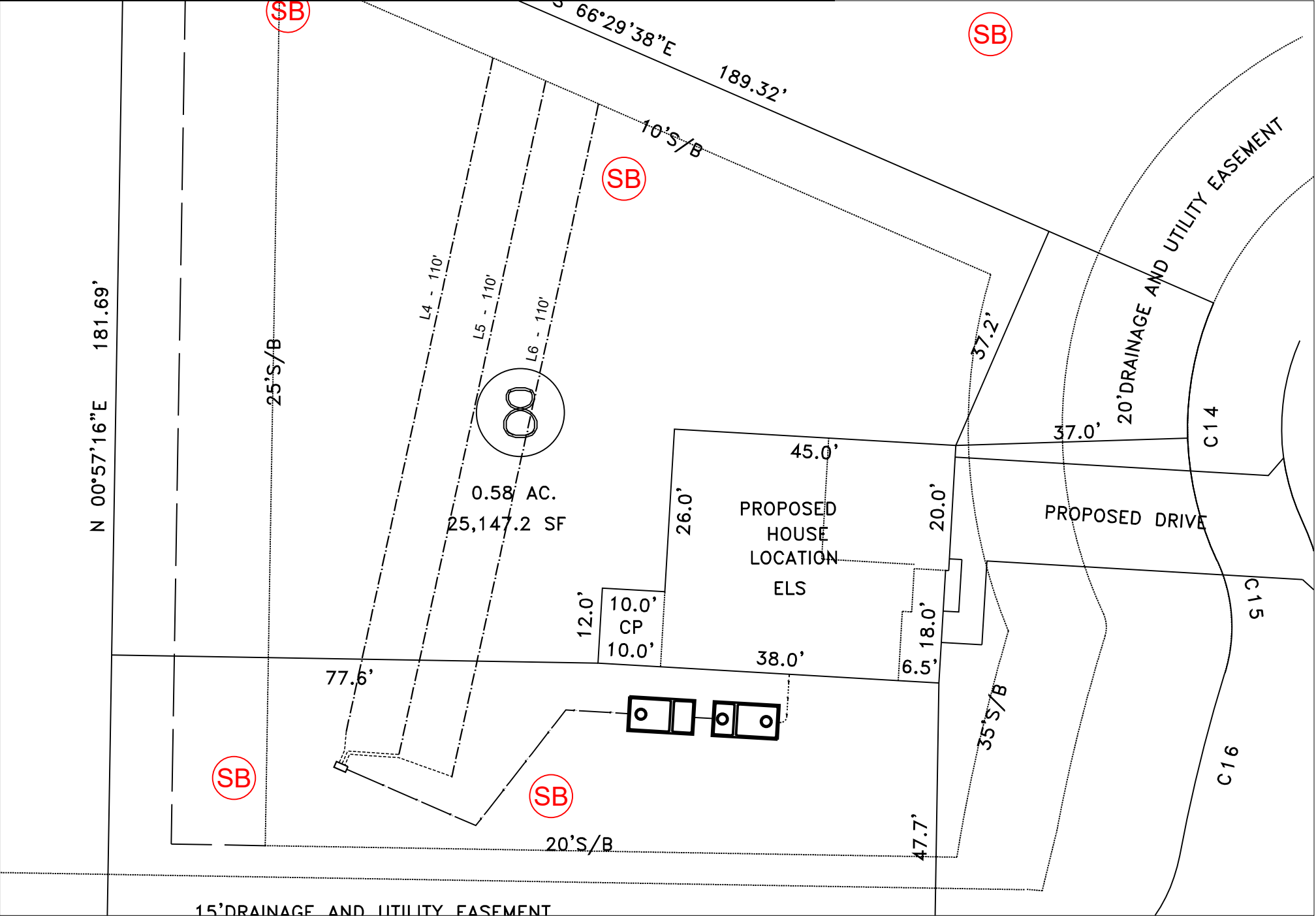
General Drainfield Notes:

1. 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.



DRAINFIELD INFO. - Repair						
Proposed Type of System/Distribution: <b>Pump to Pressure Manifold using EZflow</b>						
Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
4	yellow	110	1/2in SCH 80	5.48	0.050	0.485
5	purple	110	1/2in SCH 80	5.48	0.050	0.485
6	red	110	1/2in SCH 80	5.48	0.050	0.485
Total		330		Total 16.44	Avg.	0.48
Note: Line lengths are calculated in 5' increments to reflect use of EZflow product.						

Note:  
Repair distribution is pressure manifold utilizing an accepted trench product.



1 Repair Drainfield  
SOURCE: Agri-Waste Technology, Inc.

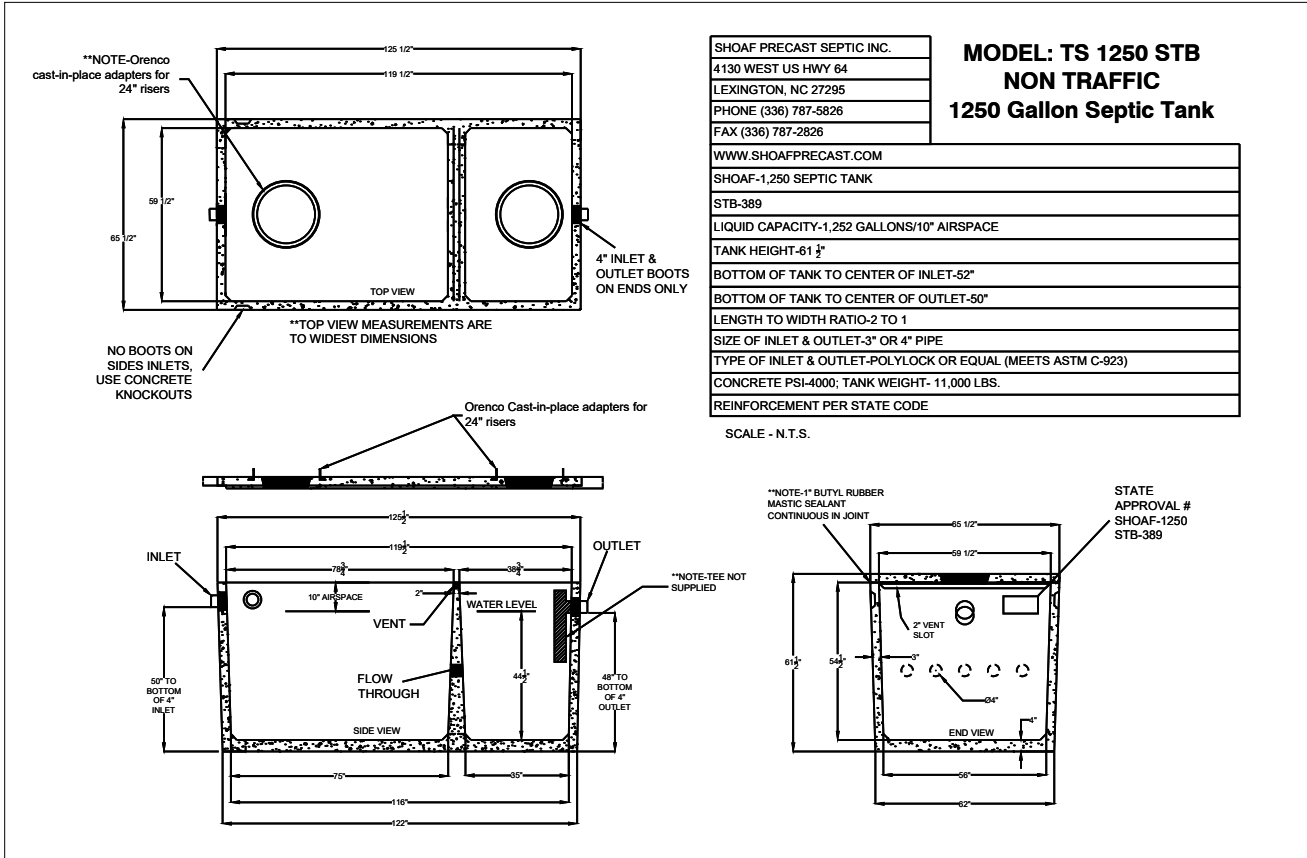


REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE  
Repair Drainfield

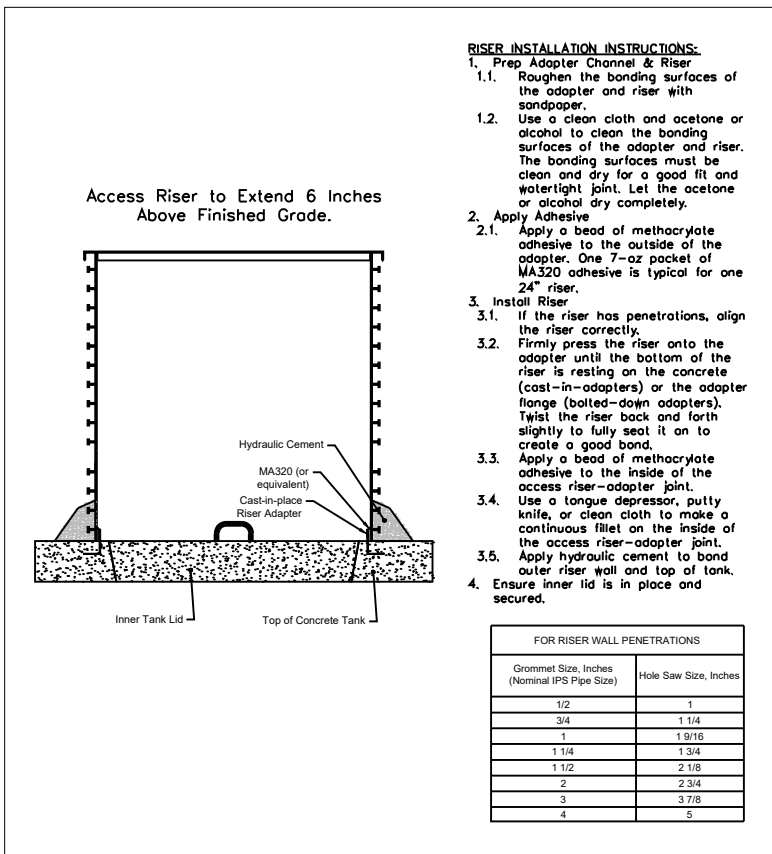
DRAWN BY: T. Bostic	CREATED ON: 10/27/2025
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER  
**WW-4**

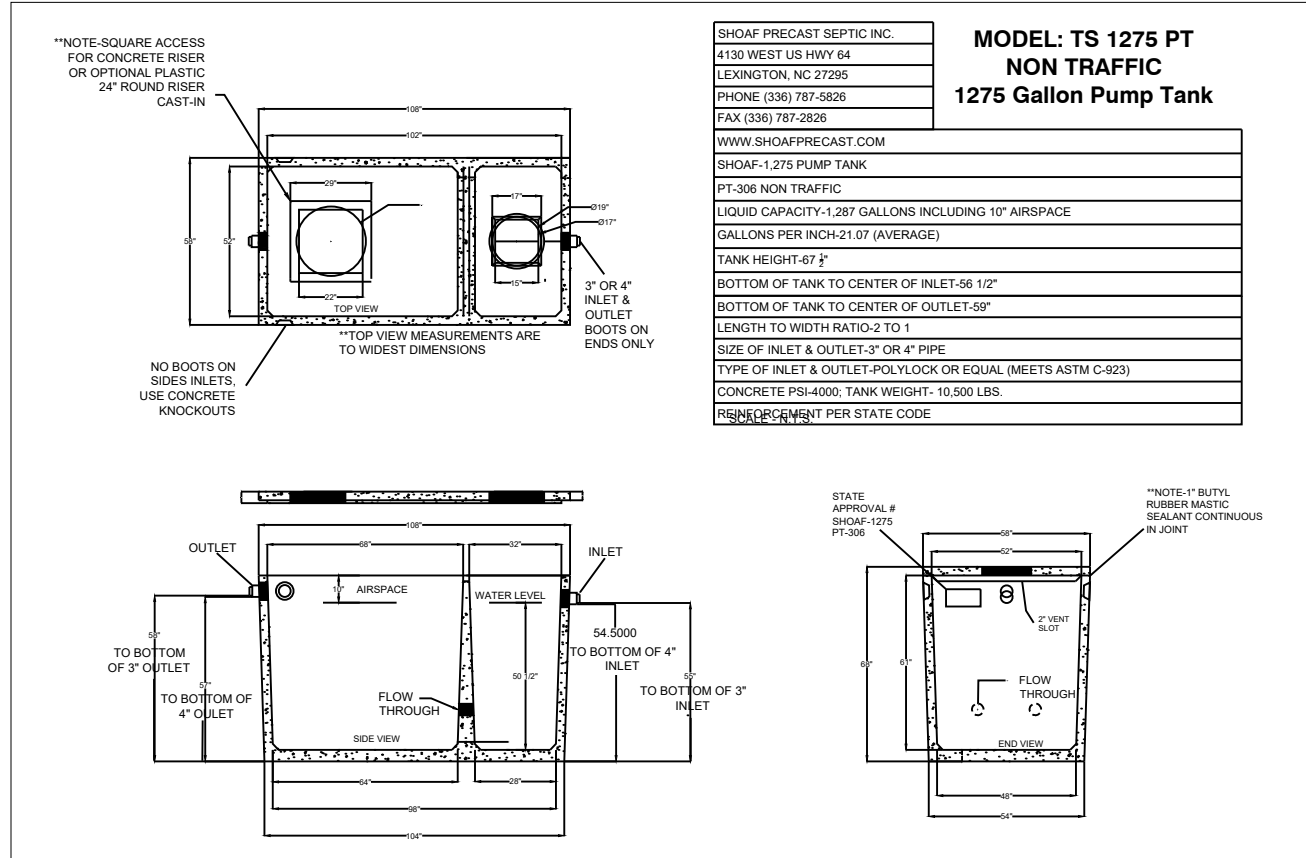


## 1 Septic Tank

SOURCE: Shoaf Precast Septic, Inc.



## 3 Riser Installation



## 2 Pump Tank (or equiv. tank with 1-day storage)

SOURCE: Shoaf Precast Septic, Inc.

### NOTES

1. Installation to follow all NC DHHS and Harnett County applicable rules and regulations.
2. AWT 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 soil.
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. All pressure lines to maintain 18" min. cover.
18. Contractor to adjust tank placement to meet site constraints.

### RiverWILD Homes AOWE - AF8

Project Location:  
141 Beebalm Run  
Dunn, NC 27334  
Harnett County  
PIN: 1509-12-3233

Project Owner:  
RiverWILD Homes  
114 W Main St  
Clayton, NC 27520  
919-373-6048  
kelley@staywild.com

### NC ONSITE WASTEWATER EVALUATOR SEAL



REV. ISSUED DATE DESCRIPTION

SHEET TITLE

Detail Sheet 1

DRAWN BY: T. Bostic	CREATED ON: 10/27/2025
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER

**WW-5**





Project Location:  
141 Beebalm Run  
Dunn, NC 27334  
Harnett County  
PIN: 1509-12-3233

Project Owner:  
RiverWILD Homes  
114 W Main St  
Clayton, NC 27520  
919-373-6048  
kelley@staywild.com

ONC ONSITE WASTEWATER  
EVALUATOR SEAL




DRAWN BY: T. Bostic	CREATED ON: 10/27/2025
REVISED BY: ####	REVISED ON: ####
RELEASED BY: ####	RELEASED ON: ####

DRAWING NUMBER  
**WW-6**

## Septic System Design - Summary Page



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

### Project Manager:

Trent Bostic, AOWE  
tbostic@agriwaste.com  
919-367-6322

### Designer:

Trent Bostic, AOWE  
tbostic@agriwaste.com

**Project:** Alton Fields  
**Property:** 141 Beebalm Run  
Dunn, NC 27334

**Subdiv.:** Alton Fields  
**Lot #:** 8

**Owner:** RiverWILD Homes  
**Address:** 114 W Main St  
Clayton, NC 27520

**Phone:** 919-766-8782

**Email:** kelley@staywild.com

**EHS:**

**Date:** 9/25/2025

**County:** Harnett

**Permit #:**

**Type of System:** III b

**PIN:** 1509-12-3233

## Soil Parameters

**Soil Evaluation By:**

**Special Conditions/Notes:**

**LTAR:** 0.375 gpd/ft<sup>2</sup>

## 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  
**Tank Model:** TS 1250 STB

	Exterior	Interior
<b>Length:</b>	125.5	119.5 in.
<b>Width:</b>	65.5	59.5 in.
<b>Depth:</b>	62.0	54.5 in.

## Primary Drainfield Specifications

**Type of Distribution:** Parallel Pressure Manifold  
**Trench Media:** EZflow  
**Trench Width:** 3 ft  
**Trench Depth:** 24 in.  
(or as specified on permit)

<b>Trench Bottom Area:</b>	1280	ft <sup>2</sup>
<b>Minimum Drain Line:</b>	320	ft
<b>Actual Drain Line:</b>	330	ft
<b>Number of Lines:</b>	3	
<b>Minimum Line Spacing:</b>	9	ft O.C.

## Wastewater Treatment System Design Calculations

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
Dunn, NC 27334  
**County:** Harnett

### Septic Tank Sizing

Daily Flow Estimate:

Unit	# of Units	Flow/Unit	Flow/Day
Bedroom	4	120	480

Q= 480 gpd

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: 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:** Alton Fields  
**Location:** 141 Beebalm Run  
Dunn, NC 27334  
**County:** Harnett

Tank Manufacturer	Shoaf
Tank Model	TS 1275 PT

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

### **Primary 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	25.0 in.	(set for dose volume)
Alarm On	31.0 in.	(6 in. above On Float)

Emergency Storage Available

Pump Tank	622 gal
-----------	---------

Days of Storage	1.29 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	25.0 in.	(set for dose volume)
Alarm On	31.0 in.	(6 in. above On Float)

Emergency Storage Available

Pump Tank	622 gal
-----------	---------

Days of Storage	1.29 days
-----------------	-----------

(determined from "interior top of tank" - "High Water Alarm")



## ELEVATIONS

**Project:** Alton Fields

**Location:** 141 Beebalm Run  
Dunn, NC 27334

**County:** Harnett

**Benchmark** 0  
**BM Elev** 0 ft

**Septic Tank** 1,250 gal

Ground Surface		226.00 ft
Depth of Soil Cover	14 in.	1.17 ft
Overall Ht of Tank	61.5 in.	5.13 ft
Elev, Base of Tank		219.71 ft
Ht to 4" Inlet Invert	50 in.	4.17 ft
Elev, 4" Inlet Invert		223.88 ft
Ht to 4" Outlet Invert	48 in.	4.00 ft
Elev, 4" Outlet Invert		223.71 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		219.21 ft

**Pump Tank** 1275 gal

Ground Surface		226.00 ft
Depth of Soil Cover	16 in.	1.33 ft
Overall Ht of Tank	67.5 in.	5.63 ft
Elev, Base of Tank		219.04 ft
Ht to 4" Inlet Invert	55 in.	4.58 ft
Elev, 4" Inlet Invert		223.63 ft
Ht to 2" Outlet Invert	57 in.	4.75 ft
Elev, 2" Outlet Invert		223.79 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		218.54 ft

**ST Inlet Pipe**

Grade @ Stub-out		226 ft
Depth of Stub-out, top		1.5 ft
Elev, Stub-out Invert		224.15 ft
Elev @ ST Inlet Invert		223.88 ft
Length		10 ft
Slope		2.7 %

**Pipe, ST to PT**

ID	4 in.	0.33 ft
OD	4.5 in.	0.38 ft
Elev, ST Outlet Invert		223.71 ft
Elev, PT Inlet Invert		223.63 ft
Length		5 ft
Slope		1.7 %
Cover over inlet pipe		1.77 ft

**Pump Reqmt.**

Floor Thickness	4 in.	0.33 ft
Elev, Pump Tank Floor		219.38 ft
Pump Block Ht.	4 in.	0.33 ft
Elev, Pump Intake		219.71 ft

Grade @ Primary Manifold		229.00 ft
Grade @ Repair Manifold		229.00 ft
Min. Cover	18 in.	1.50 ft
Max Elev, Primary		227.50 ft
Max Elev, Repair		227.50 ft
Elev Diff, Primary		7.79 ft
Elev Diff, Repair		7.79 ft

Drainfield Design

Project Alton Fields  
Location 141 Beebalm Run  
Dunn, NC 27334  
County Harnett

Drainfield Sizing

Primary			
LTAR	0.375 gpd/ft <sup>2</sup>		
Daily Design Flow	480 gpd	Type of Drainfield Media	EZflow
Req. Drainfield Area	1,280 ft <sup>2</sup>	Required Drainline	
Trench Width, Eff.	3 ft	After 25% Reduction	320 ft
Required Drainline	427 ft	Minimum Line Spacing	9 ft (O.C.)

Repair			
LTAR	0.375 gpd/ft <sup>2</sup>		
Daily Design Flow	480 gpd	Type of Drainfield Media	EZflow
Req. Drainfield Area	1,280 ft <sup>2</sup>	Required Drainline	
Trench Width, Eff.	3 ft	After 25% Reduction	320 ft
Required Drainline	427 ft	Minimum Line Spacing	9 ft (O.C.)

Drainfield Layout

Line	Use	Flag Color	Elevation (ft)	Line Length (ft)	Used as Primary (ft)	Used as Repair (ft)
1	Layout Line	red		110	110.0	
2	Layout Line	white		110	110.0	
3	Layout Line	blue		110	110.0	
4	Layout Line	yellow		110		110.0
5	Layout Line	purple		110		110.0
6	Layout Line	red		110		110.0
7	Layout Line					
8	Layout Line					
9	Layout Line					
10	Layout Line					
11	Layout Line					
12	Layout Line					
13	Layout Line					
14	Layout Line					
15	Layout Line					
16	Layout Line					
17	Layout Line					
18	Layout Line					
19	Layout Line					
20	Layout Line					
Total				660	330	330
Count				6	3	3

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

## PRESSURE MANIFOLD DESIGN (Primary)

### Site Information

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
Dunn, NC 27334  
**County:** Harnett

### Design Information

Estimated Daily Flow	480 gal/day
L.T.A.R. (from Harnett Co.)	0.375 gal/day/ft <sup>2</sup>
L.T.A.R. + 5%	0.394 gal/day/ft <sup>2</sup>
Trench Width	3 ft.
Line Length Required	427 ft.
Length after 25% Reduction	320 ft
L.T.A.R. Reduced	0.500 gal/day/ft <sup>2</sup>
L.T.A.R. Reduced + 5%	0.525 gal/day/ft <sup>2</sup>

<b>DRAINFIELD INFO. - Primary</b>						
Proposed Type of System/Distribution: <b>Pump to Pressure Manifold using EZflow</b>						
Line No.	Flag Color	Line Length (ft)	Tap	Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
1	red	110	1/2in SCH 80	5.48	0.050	0.485
2	white	110	1/2in SCH 80	5.48	0.050	0.485
3	blue	110	1/2in SCH 80	5.48	0.050	0.485
<b>Total</b>		<b>330</b>	<b>Total</b>	<b>16.44</b>	<b>Avg.</b>	<b>0.48</b>
<i>Note: Line lengths are calculated in 5' increments to reflect use of EZflow product.</i>						
Total Run Time	29.20 min.					
Drainfield Capacity	215.5 gal					
% of Drainfield Cap	68.4% (Req. Range 66-75%)					
Dose Volume	147.4 gal/dose					
<b>Run Time/Dose</b>	<b>9.0 minutes</b> Range 5-7 minutes unless uphill, checked					
Volume/depth	21.07 gal/in. (Per tank manufacturer's specifications)					
Estimated Drawdown	7.00 in.					
<b>Manifold Box</b>						
Number of Taps	3	with	0	Split(s)		
Manifold Length	3.0	ft.	(approximate)			

## PRESSURE MANIFOLD SYSTEM DESIGN (Repair)

### Site Information

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
 Dunn, NC 27334  
**County:** Harnett

### Design Information

Estimated Daily Flow	480 gal/day
L.T.A.R. (from Harnett Co.)	0.375 gal/day/ft <sup>2</sup>
L.T.A.R. + 5%	0.394 gal/day/ft <sup>2</sup>
Trench Width	3 ft.
Line Length Required	427 ft.
Length after 25% Reduction	320 ft
L.T.A.R. Reduced	0.500 gal/day/ft <sup>2</sup>
L.T.A.R. Reduced + 5%	0.525 gal/day/ft <sup>2</sup>

<b>DRAINFIELD INFO. - Repair</b>						
Proposed Type of System/Distribution: <b>Pump to Pressure Manifold using EZflow</b>						
Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
4	yellow	110	1/2in SCH 80	5.48	0.050	0.485
5	purple	110	1/2in SCH 80	5.48	0.050	0.485
6	red	110	1/2in SCH 80	5.48	0.050	0.485
<b>Total</b>		<b>330</b>	<b>Total</b>	<b>16.44</b>	<b>Avg.</b>	<b>0.48</b>
<i>Note: Line lengths are calculated in 5' increments to reflect use of EZflow product.</i>						
Total Run Time	29.20 min.					
Drainfield Capacity	215.5 gal					
% of Drainfield Cap	68.4% (Req. Range 66-75%)					
Dose Volume	147.4 gal/dose					
<b>Run Time/Dose</b>	<b>9.0 minutes</b> Range 5-7 minutes unless uphill, checked					
Volume/depth	21.07 gal/in. (Per tank manufacturer's specifications)					
Estimated Drawdown	7.00 in.					
<b>Manifold Box</b>						
Number of Taps	3	with	0	Split(s)		
Manifold Length	3.0	ft.	(approximate)			

## PUMP DESIGN

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

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
Dunn, NC 27334  
**County:** Harnett

### Friction Losses

Suction Head	0 ft	(submersible 0)
Elev. Difference (highest point from pump)	7.79 ft	
Design Pressure At Outlet	2 ft	
<b>Supply Line - 1.5" Schedule 40 PVC</b>		
Pipe Diameter, Nominal	1.5 in.	
Pipe Diameter (ID)	1.59 in.	
Pipe Length	75 ft	
Pipe Length for Fittings	7.5 ft	
Equivalent Length	82.5 ft	
Estimated Friction Loss in Supply Line	1.51 ft	
Friction Loss - Taps/Special Fittings	3.5 ft	
<b>TOTAL 14.80 ft.</b>		

Flow for Anti-Siphon Hole

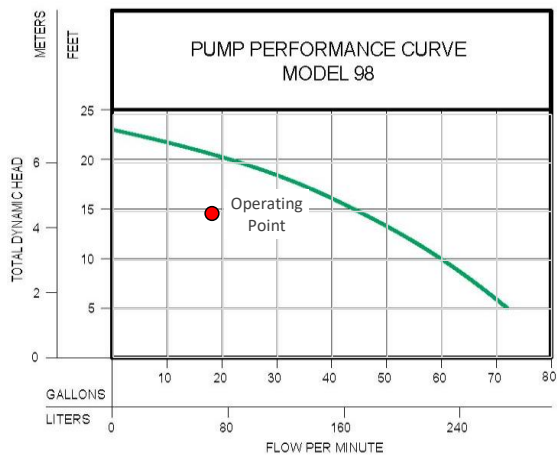
Hole Diameter 3/16 in.  
Hole Flowrate 1.59 gpm

Pump Efficiency 0.7 (assumed, typical)  
Motor Efficiency 0.9 (assumed for electric pumps)  
**Flow 18.03 gpm**

Required Horsepower 0.11 hp  
**TDH 14.80 ft**

### Pump Selection

Manufacturer:	Zoeller
Model:	N98
Horsepower:	0.5



## PUMP DESIGN

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

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
Dunn, NC 27334  
**County:** Harnett

### Friction Losses

Suction Head	<input type="text" value="0"/>	ft	(submersible 0)
Elev. Difference (highest point from pump)	<input type="text" value="7.79"/>	ft	
Design Pressure At Outlet	<input type="text" value="2"/>	ft	
<b>Supply Line - 1.5" Schedule 40 PVC</b>			
Pipe Diameter, Nominal	<input type="text" value="1.5"/>	in.	
Pipe Diameter (ID)	<input type="text" value="1.59"/>	in.	
Pipe Length	<input type="text" value="80"/>	ft	
Pipe Length for Fittings	<input type="text" value="8"/>	ft	
Equivalent Length	<input type="text" value="88"/>	ft	
Estimated Friction Loss in Supply Line	<input type="text" value="1.61"/>	ft	
Flow	<input type="text" value="16.44"/>	gpm	
Velocity	<input type="text" value="2.66"/>	ft/s	
Meets requirement that 2 ft/s < v < 5 ft/s.			
Friction Loss - Taps/Special Fittings	<input type="text" value="3.5"/>	ft	
<b>TOTAL 14.91 ft.</b>			

Flow for Anti-Siphon Hole

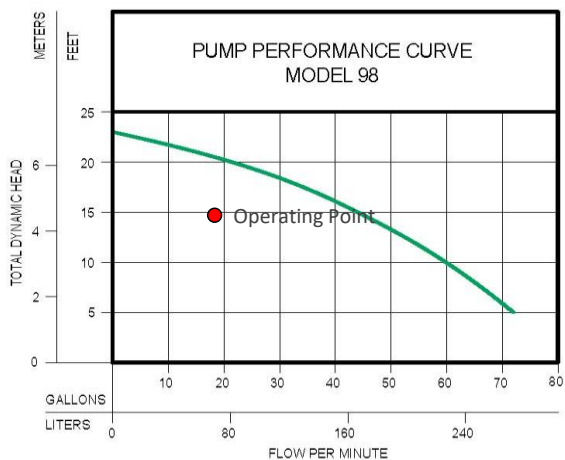
Hole Diameter  in.  
Hole Flowrate  gpm

Pump Efficiency  (assumed, typical)  
Motor Efficiency  (assumed for electric pumps)  
**Flow 18.04 gpm**

Required Horsepower  hp  
**TDH 14.91 ft.**

### Pump Selection

Manufacturer:	<input type="text" value="Zoeller"/>
Model:	<input type="text" value="N98"/>
Horsepower:	<input type="text" value="0.5"/>



## Septic Tank Buoyancy Calculation

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
 Dunn, NC 27334  
**County:** Harnett

Tank Size (nominal) 1250 gal

### Properties/Assumptions:

Min. liquid level to be maintained in tank at all times after initial installation.

Min. depth to water table	12.0 in.	from ground surface
Effluent Density	62.4 lb/ft <sup>3</sup>	(Specific Weight of Water)
Concrete Density	142.6 lb/ft <sup>3</sup>	
Soil App. Sp. Grav.	1.3	(typical value)
Soil Cover Over Tank	12 in.	(minimum)
Additional Cover	2 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):

		<u>Exterior</u>		<u>Interior</u>	
		Top	Bottom	Top	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.			
Area of Riser Openings		6.28 ft <sup>2</sup>			
Permanent Liquid Depth in Tank		0.0 in.		0.00 ft	
Tank Weight		11,000 lb		(per manufacturer)	

### Buoyancy Force Calculation:

Buoyancy Force Specific Weight of Water x Displaced Volume

Displaced Volume	282.4 ft <sup>3</sup> *
<b>Buoyancy Force</b>	<b>17,624 lb.</b>

### Weight Calculation:

Tank Weight	11000 lb		
Water Weight in Tank	0 lb	Volume	0.0 ft <sup>3</sup> *
Soil Weight Over Tank	4544 lb		
Soil Friction Force	4037 lb		
<b>Total Weight</b>	<b>19,581 lb</b>		

**Factor of Safety = 1.11**

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

\* Volume calculated by the prismoidal formula.

## Pump Tank Buoyancy Calculation

**Project:** Alton Fields  
**Location:** 141 Beebalm Run  
 Dunn, NC 27334  
**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	12 in.	from ground surface
Effluent Density	62.4 lb/ft <sup>3</sup>	(Specific Weight of Water)
Concrete Density	142.6 lb/ft <sup>3</sup>	
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):

		<u>Exterior</u>		<u>Interior</u>	
		Top	Bottom	Top	Bottom
Tank	Length	108.0	104.0	102.0	98.0 in.
	Width	58.0	54.0	52.0	48.0 in.
	Height	64.5	(w/o lid)	60.5	in.
Lid	Length	108.0 in.			
	Width	58.0 in.			
	Height	3.0 in.			
Area of Riser Openings		3.14 ft <sup>2</sup>			
Permanent Liquid Depth in Tank		0.0 in.		0.00 ft	
Tank Weight		10500 lb		(per manufacturer)	

### Buoyancy Force Calculation:

Buoyancy Force Specific Weight of Water x Displaced Volume

Displaced Volume 233.5 ft<sup>3</sup> \*  
**Buoyancy Force 14,573 lb**

### Weight Calculation:

Tank Weight	10500 lb		
Water Weight in Tank	0 lb	Volume	0.0 ft <sup>3</sup> *
Soil Weight Over Tank	3945 lb		
Soil Friction Force	4227 lb		
<b>Total Weight</b>	<b>18,672 lb</b>		

**Factor of Safety = 1.28**

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

\* Volume calculated by the prismoidal formula.