BLDR-2024-65290

ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 x3456 Mooresville Office (704) 660-3625

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PERMIT # OSWP 2024-65720

✓ PIN # 4636 -- 83 -- 5216

APPLICANT/OWNER: AWT

APPLICANT ADDRESS: 501 N Salem St, Suite 203, Apex NC 27502

SITE ADDRESS: ~~414 Canvasback Rd~~, Mooresville, NC 28117 273 Spring Run ✓

PHONE: 919-859-0669

ALT. PHONE:

SITE DIRECTIONS: Brawley School Rd -> L Canvasback -> lot on R, at corner of Spring Run

SAP CONTROLLED: ☐ YES ☑ NO

SUBDIVISION: Mallard Head Country Club ✓

SECTION: 1

LOT # 107 ✓

LOT AREA: 0.51

DESIGN FLOW: 480 gpd

L.T.A.R.(Initial): 0.3

L.T.A.R (Repair): EXEMPT

Septic Tank 1000 (gal) STB 7100 Date

Pump Tank 1275 (gal) PT 3633 Date 5/29/25

Pump Make Zoeller Model N152D Serial #

Nitrification Fields 1 # Lines 6 Linear Ft: 269

Trench Width 36 *Max. Trench Depth(Initial) 24 *Max. Trench Depth(Repair) N/A Gravel Depth n/a

* Measured on the downhill side of the trench

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

☑ New System ☐ Repair ☐ Expansion System Type: I II III IV V VI

System Description: HPPBPS - PM - IIIbe

Repair System Description: EXEMPT - 1978

Maintenance Agreement Required: ☐ YES ☑ NO

☐ GRAVITY ☑ PRESSURE

Usable Depth to LC (Initial): 36

☑ Residence ☐ Business ☐ Other ☑ Slab

No. Bedrooms 4 No. Persons 8 No. Employees

☐ Crawl Space ☐ Basement w/plumbing ☐ Basement w/o plumbing

Water Supply: ☐ Private ☑ Public ☐ Community

Usable Depth to LC (Repair): N/A *Limiting Condition*

Comments / Conditions: Do not pave, grade, drive, park, or bury utilties in drainfield.

See plat for property line lengths; front of house faces Spring Run entrance from Canvasback

INITIAL SITE SKETCH

Improvement permit issued pursuant to: G.S. 130A-335(a2), (a3) & (a4) using signed & sealed LLS/LG Evaluation attached, from:

Jeff Vaughn

LSS# 1227

Construction authorization issued pursuant to: G.S. 130A-335(a2) & (a5)

AOWE# 10003E

AS BUILT SKETCH

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

updated site plan w/ pool change attached. AWT approved

Lines - STI 7/7/25

* Line closest to pool 15'6" from waters edge. Pool grew per attached site plan

PM - STI 7/7/25

Tanks, Floats BW 7/8/25

Pressure Head MW 7/9/25

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** ***with plat*** *valid without expiration.* ☑ **IMPROVEMENT PERMIT** ***with site plan*** *valid for 60 mos.* ☑ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Online Signature Date:

Installed by: Percision

IMPROVEMENT PERMIT by: D. Wieberg Date: 11/25/24

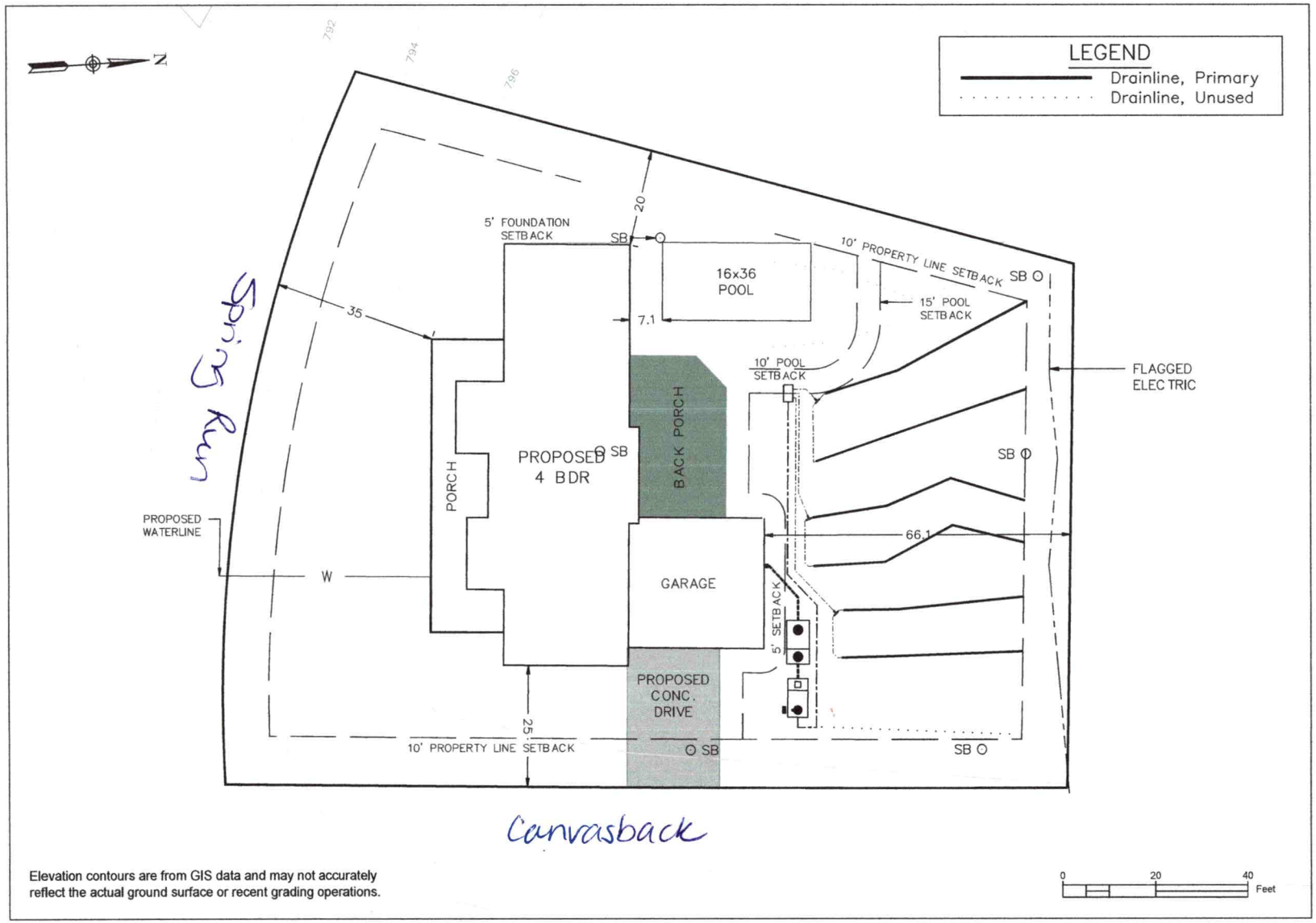
OPERATION PERMIT by: D Wieberg Date: 8/7/25

AUTHORIZATION TO CONSTRUCT by: D. Wieberg Date: 11/25/24

Existing System Inspected by: Date:

✓ ✓

updated site plan



PROPERTY LAYOUT
SOURCE: AWT, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex, NC 27502
agriwaste.com | 919.859.9669

Revin Projects
Revin Projects-Canvasback Rd

Project Location:
414 Canvasback Road
Mooresville, NC 28117
Iredell County
PIN: 4636835216

Project Owner:
Revin Projects
120 Bear Run Circle
Mooresville, NC 28117
469-451-9277
campbharry@gmail.com

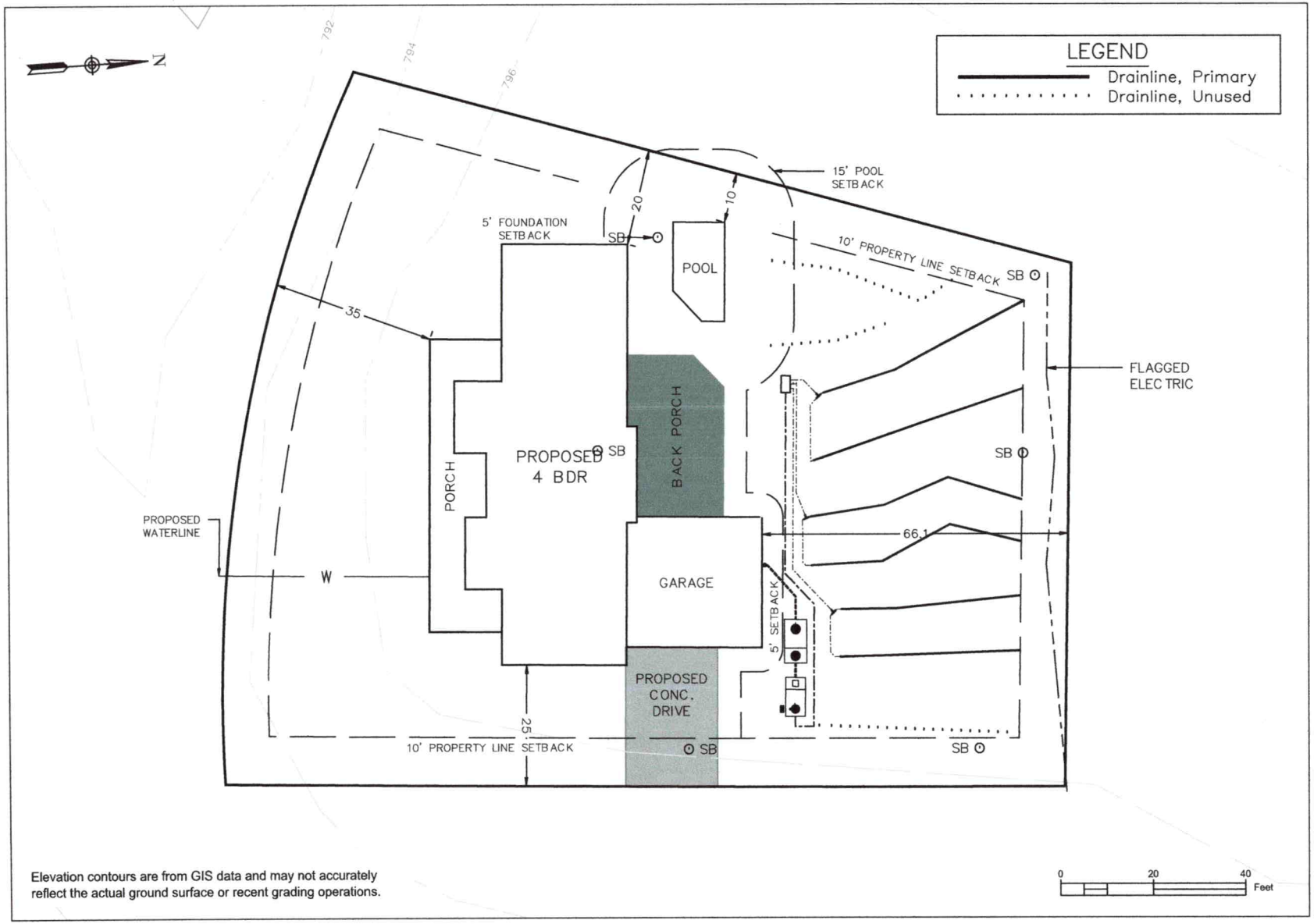
For Review Only

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Property Layout

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
--	--
Released By:	Released On:
--	--

Drawing Number:
WW-2



Elevation contours are from GIS data and may not accurately reflect the actual ground surface or recent grading operations.

PROPERTY LAYOUT

SOURCE: AWT, Inc.

AWT
Engineers and Soil Scientists

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

Revin Projects
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414 Canvasback Road
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For Review Only

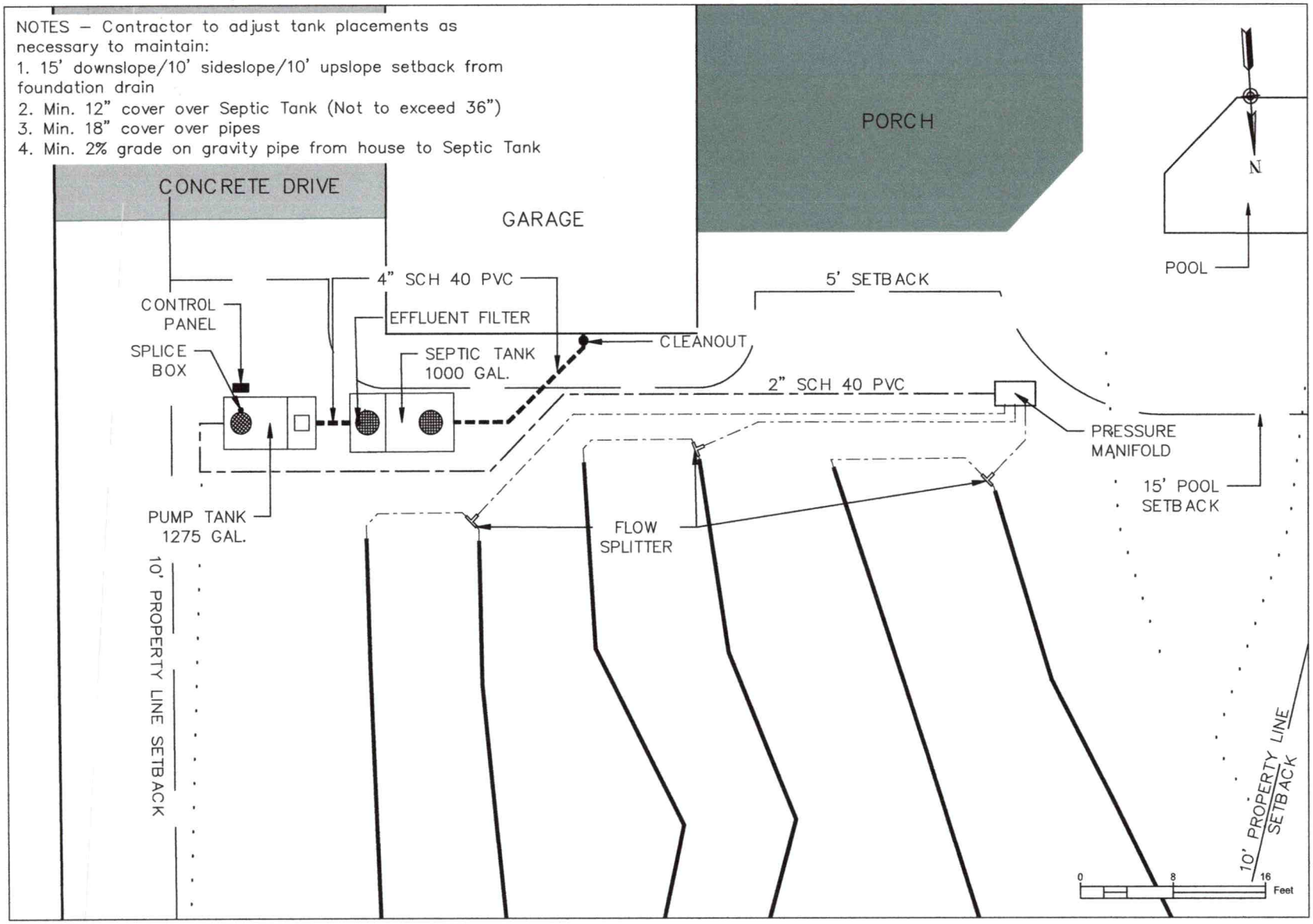
REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Property Layout

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
--	--
Released By:	Released On:
--	--

Drawing Number:
WW-2

NOTES – Contractor to adjust tank placements as necessary to maintain:
1. 15' downslope/10' sideslope/10' upslope setback from foundation drain
2. Min. 12" cover over Septic Tank (Not to exceed 36")
3. Min. 18" cover over pipes
4. Min. 2% grade on gravity pipe from house to Septic Tank



1 WW-3 COMPONENT LAYOUT
SOURCE: AWT, Inc.

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

Revin Projects
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Project Location:
414 Canvasback Road
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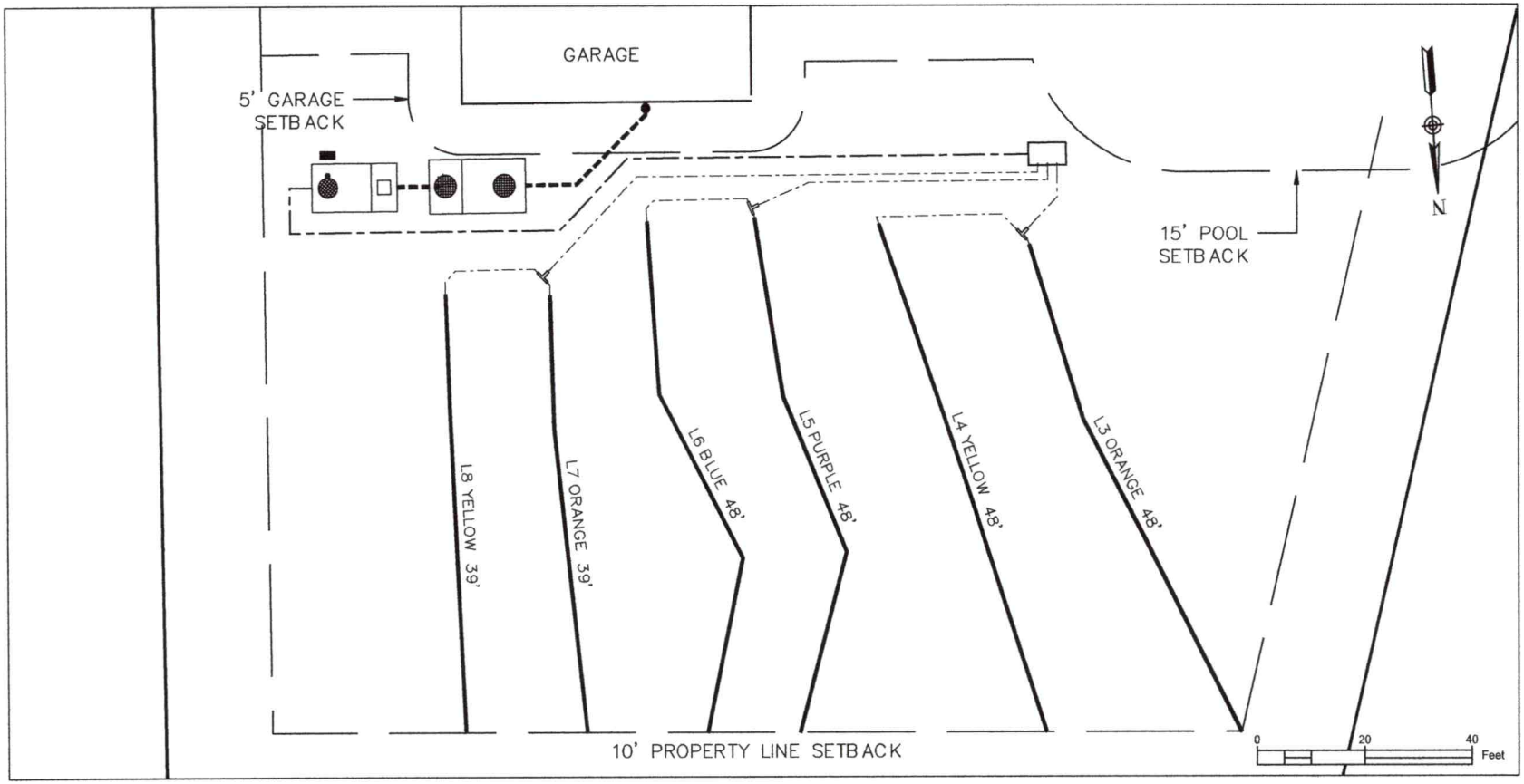
For Review Only

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Component Layout

Drawn By:	Drawn On:
C. Barbee	04/22/2024
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. - **Primary**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft)	Tap	Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
3	Orange	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
4	Yellow	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
5	Purple	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
6	Blue	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
7	Orange	39	3/4in SCH 80, Split	5.05	0.129	0.590
8	Yellow	39	3/4in SCH 80, Split	5.05	0.129	0.590
	Total	**269**	**Total**	**35.10**	**Avg.**	**0.59**

1 WW-4 **Primary Drainfield**
SOURCE: AWT, Inc.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex, NC 27502
agriwaste.com | 919.859.9669

Revin Projects
Revin Projects-Canvasback Rd

Project Location:
414 Canvasback Road
Mooresville, NC 28117
Iredell County
PIN: 4636835216

Project Owner:
Revin Projects
120 Bear Run Circle
Mooresville, NC 28117
469-451-9277
campbharry@gmail.com

For Review Only

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Primary Drainfield

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
--	--
Released By:	Released On:
--	--

Drawing Number:
WW-4

Permit/File #: OSWP-2024-65720

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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 Authorization ☐ Fee $_____

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)

County: Iredell
PIN/Lot Identifier: 4636835216.000
Issued To: Revin Projects LLC
Property Location: 414 Canvasback Road, Mooresville, NC 28117
Subdivision (if applicable) Mallard Head Country Club Lot #: 107 Block: _____ Section: 1
LSS Report Provided: Yes ☒ No ☐
If yes, name and license number of LSS: Jeff Vaughan, License number: 1227
New ☒ Expansion ☐ System Relocation ☐ Change of Use ☐
Facility Type: Single Family Residence
Number of bedrooms: 4 Number of Occupants: 8 Other: _____
Design Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process Wastewater
Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): -
Proposed Wastewater System Type*: Type IIIe, PPBPS Horizontal (Initial) Pump Required: ☒ Yes ☐ No ☐ May be required
Proposed Wastewater System Type*: Repair Area Exempt (Repair) Pump Required: ☐ Yes ☐ No ☐ May be required
**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*
Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW
Saprolite System (Initial): ☐ Yes ☒ No Saprolite System (Repair): ☐ Yes ☒ No
Fill System (Initial): ☐ Yes ☒ 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 ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Usable Depth to LC (Initial)[x]: 36" Usable Depth to LC (Repair)[x]: N/A ***[x] Limiting Condition***
Max. Trench Depth (Initial)[‡]: 24" Max. Trench Depth (Repair)[‡]: N/A ***[‡] Measured on the downhill side of the trench***
Artificial Drainage Required: ☐ Yes ☒ No If yes, please specify details: _____
Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared well ☒ Municipal Supply ☐ Spring ☐ Other: _____
Drainfield location meets requirements of Rule .0508: Yes ☒ No ☐ Drainfield location meets requirements of Rule .0601: Yes ☒ No ☐
Permit valid for: ☒ Five years [site plan submitted pursuant to GS 130A-334(13a)] ☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:

Licensed Soil Scientist Print Name: Jeff Vaughan
Licensed Soil Scientist Signature: _____ Date: 05/28/2024

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

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: OSWP-2024-65720

This Section for Local Health Department Use Only

Initial submittal received: 11/22/24 *Date* by DW *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: D. Wieberg Date: 11/25/2024

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: 11/25/29

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: OSWP-2024-65720

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County: Iredell **Pre-Construction Conference Required:** Yes ☐ No ■

PIN/Lot Identifier: 4636835216.000

Issued To: Revin Projects LLC

Property Location: 414 Canvasback Road, Mooresville, NC 28117

AOWE/PE Plans/Evaluations Provided: Yes ■ No ☐ If yes, name and license number of AOWE/PE: Jeff Vaughan, 10003E

Facility Type: Single Family Residence

Number of bedrooms: 4 Number of Occupants: 8 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 Wastewater System* Type IIIe, PPBPS Horizontal (Initial) Repair Area Exempt (Repair)

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

Design Daily Flow: 480 GPD Wastewater Strength: ■ Domestic ☐ High Strength ☐ Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow 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: 1,000 gallons Total Trench/Bed Length: 269 feet Trench/Bed Spacing: 8 feet on center

Trench/Bed Width: 36 inches LTAR: 0.3 gpd/ft² Usable Depth to LC (Initial)ˣ: 36 ˣ***Limiting condition***

Soil Cover: 6+ inches Slope Corrected Maximum Trench/Bed Depth‡: 24 inches ‡ ***Measured on the downhill side of the trench***

Pump Tank Size (if applicable): 1,275 gallons Requires more than 1 pump? ☐ Yes ■ No

Pump Requirements: 14.1 ft. TDH vs. 36.6 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:

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. *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 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: Jeff Vaughan

AOWE/PE Signature: Jeff V/ Date: 05/28/2024

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

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: OSWP-2024-65720

This Section for Local Health Department Use Only

Initial submittal received: 11/22/24 *Date* by DW *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: D. Wieberg Date of Issuance: 11/25/2024

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 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 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: 11/25/29

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

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

Application for Services

This application, in conjunction with the common form established in G.S. 130A-335(a3) and (a5), is optional for local health departments to be used for applications submitted in accordance with G.S. 130A-335(a2), (a3), and (a5).
[hereinafter, G.S. 130A-335(a3) and (a5) permits referred to as (a2) Improvement Permit and (a2) Construction Authorization]

Applying for:
☒ (a2) Improvement Permit ☒ (a2) Construction Authorization ☐ (a2) Repair/Construction Authorization

If applying for a Construction Authorization, please indicate desired system type(s):
☐ Accepted ☐ Conventional ☐ Innovative ☒ Other Type IIIe, PPBPS Horizontal ☐ Any

☒ New Construction ☐ Expansion ☐ System Relocation ☐ Change of Use ☐ Repair
☒ 5-Year Expiration Requested (site plan provided) ☐ Non-Expiring Permit Requested (plat provided, defined in G.S.130A-334(7a)
Requesting DHHS review? (systems >3000 GPD or IPWW) ☐ Yes ☒ No

Applicant: AWT, Trevor Hackney
Mailing Address: 501 N. Salem Street
City: Apex
State: NC Zip: 27502
Phone #: (704)268-9160
Email: thackney@agriwaste.com

Owner: Revin Projects LLC
Mailing Address: 120 Bear Run Circle
City: Mooresville
State: NC Zip: 28117
Phone #: 469-451-9277
Email: campbharry@gmail.com

If the answer to any of the following questions is "yes", applicant must attach supporting documentation.

☐ Yes	☒ No	Does the site contain any jurisdictional wetlands?
☐ Yes	☒ No	Is any wastewater going to be generated on the site other than domestic sewage?
☐ Yes	☒ No	Is the site subject to approval by any other public agency?
☐ Yes	☒ No	Are there any easements or right of ways on this property?

I understand that the documentation and fees, as required in G.S. 130A-335(a2), (a3), (a5), and (a6), attached to this application are to be used to issue an Improvement Permit and/or Construction Authorization pursuant to G.S. 130A-335(a2),(a3), and (a5). I understand that authorized county and state officials are granted right of entry to the property indicated on this application to conduct necessary inspections to determine compliance with applicable laws and rules. ***I understand that if the information in the application for an Improvements Permit and/or Construction Authorization is falsified, changed, or the site is altered, then the Improvement Permit and Construction Authorization shall become invalid.***

Applicant Signature: Trevor Hackney Date: 06/21/2024

Owner's Signature: Date: 06/21/2024

AGRITEC-01 CGARKALNS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/12/2024

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

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

PRODUCER Hartsfield & Nash Agency, Inc. 10405 Ligon Mill Rd., Ste H Wake Forest, NC 27587	CONTACT NAME: Connie Garkalns PHONE (A/C, No, Ext): (919) 556-3698 FAX (A/C, No): (919) 556-8758 E-MAIL ADDRESS: Connie@hartsfield-nash.com
INSURED Agri-Waste Technology Inc 501 N. Salem St Ste 203 Apex, NC 27502	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Selective Insurance Company of the Southeast — 39926 INSURER B : ACCIDENT FUND INSURANCE COMPANY OF AMERICA — 10166 INSURER C : Evanston Insurance Company — 35378 INSURER D : INSURER E : INSURER F :

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

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			S 2253659	1/18/2024	1/18/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 300,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			S 2253659	1/18/2024	1/18/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	[ ] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			S 2253659	1/18/2024	1/18/2025	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		100003072	1/18/2024	1/18/2025	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
C	Prof & Pollution			MKLV3ENV104078	8/22/2023	8/22/2024	Each Claim	5,000,000
A	Leased / Rented			S 2253659	1/18/2024	1/18/2025	Equipment	25,000

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

CERTIFICATE HOLDER

***This is ONLY For Informational Purposes
Contact Agency for Specific Holder info to be added
****

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

Connie Garkalns

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Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex, NC 27502
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Soil Suitability for Domestic Sewage Treatment and Disposal Systems
414 Canvasback Road, Mooresville, NC. 28117
(Iredell County PIN: 4636835216.000)

PREPARED FOR: Harry Campbell – Revin Projects LLC

PREPARED BY: Jeff Vaughan, Senior Agronomist & Soil Scientist
Trevor Hackney, Environmental Scientist
Nathan Estevez, Environmental Technician

DATE: May 28, 2024

Soil suitability for domestic sewage treatment and disposal systems was evaluated on February 14, 2024, for the proposed property located at (Lot 107) 414 Canvasback Road, Mooresville, NC. 28117. Trevor Hackney and Nathan Estevez 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 G.S. 130A-335(a2).

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.

This property is approximately 0.51 acres and is entirely wooded. The home is proposed near the front of the property and the septic system is proposed behind the home. The proposed septic system is a pressure manifold septic system with PPBPS (horizontal) drain field product for the primary system. This property is repair area exempt.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems

The drawing in Attachment 1 details the property boundaries (as surveyed by D.A.S Don Allen & Associates, PA Land Surveying), soil boring locations, and layout of drain field trenches (Completed by AWT). Soil borings were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A 18E Rules for Wastewater Treatment and Disposal Systems. These borings were advanced with a hand auger.

A septic layout was performed to demonstrate available space (.0508). The layout in Attachment 1 indicates there is available space for a four-bedroom pressure manifold septic system utilizing a PPBPS (horizontal) drain field product for the primary system. This property is repair area exempt.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.3 GPD/ft^2. The soils on this property are group IV soils within the distribution and treatment zone as used to define the LTAR. Since usable slope corrected soil depths meet or exceed 36" AWT is recommending the use of the PPBPS (horizontal) dispersal drain-field product. The maximum low side trench bottom should not exceed 24". With an LTAR of 0.3 GPD/ft^2, 267 linear feet of trench are necessary to support a four-bedroom home initial system. The attached drawing proves that 269 linear feet of trench can be installed for the primary septic system with the proposed home location on the property. This property is repair area exempt. Any disturbances or grading done in the usable area or within the proposed setbacks will change the potential of using the area designated for a drain field.

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

Sincerely,

Jeff Vaughan, LSS/AOWE

REVIN PROJECTS–CANVASBACK RD

Project Location
414 Canvasback Road
Mooresville, NC 28117
Iredell County
PIN: 4636835216

Project Owner
Revin Projects
120 Bear Run Circle
Mooresville, NC 28117
469–451–9277
campbharry@gmail.com

Project Consultant
Jeff Vaughan, L.S.S
(919) 367–6313
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 Bedroom, 480 gpd
PPBPS Horizontal Dispersal Primary
Pressure Manifold
Repair Exempt



VICINITY MAP

Sheet Index

Sheet 1	Cover Sheet
Sheet 2	Property Layout
Sheet 3	Component Layout
Sheet 4	Primary Drainfield
Sheet 5	Detail Sheet
Sheet 6	Detail Sheet
Sheet 7	Excavation Safety

North Carolina 811 www.nc811.org

AWT Engineers and Soil Scientists
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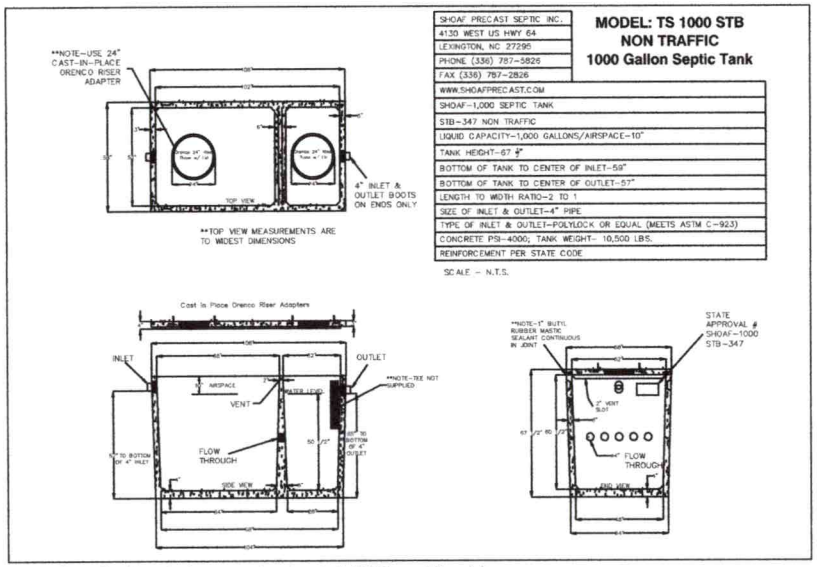
For Review Only

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Cover Sheet

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
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Released By:	Released On:
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Drawing Number:
WW-1



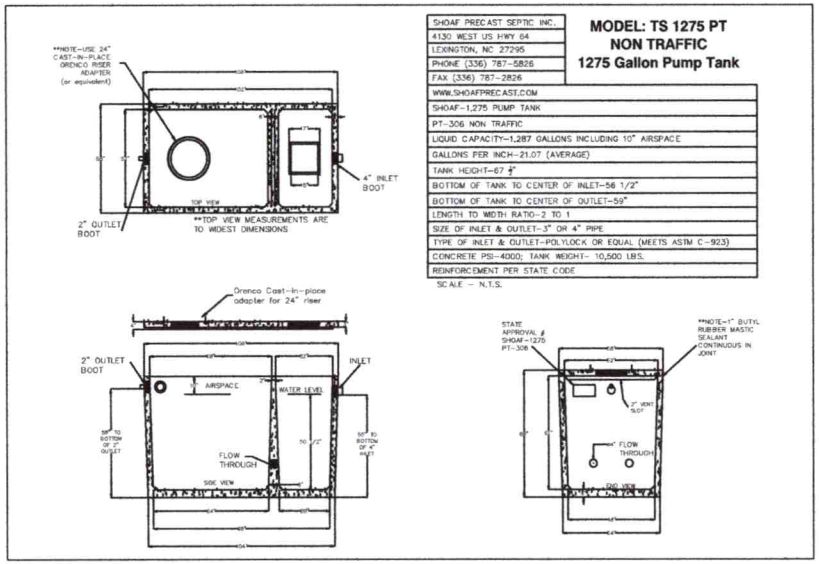
SHOAF PRECAST SEPTIC, INC.
4130 WEST US HWY 64
LEXINGTON, NC 27295
PHONE (336) 787-5826
FAX (336) 787-2826
WWW.SHOAFPRECAST.COM
SHOAF-1,000 SEPTIC TANK
STB-347 NON TRAFFIC
LIQUID CAPACITY-1,000 GALLONS/AIRSPACE-10"
TANK HEIGHT-67 ¾"
BOTTOM OF TANK TO CENTER OF INLET-59"
BOTTOM OF TANK TO CENTER OF OUTLET-57"
LENGTH TO WIDTH RATIO-2 TO 1
SIZE OF INLET & OUTLET-4" PIPE
TYPE OF INLET & OUTLET-POLYLOCK OR EQUAL (MEETS ASTM C-923)
CONCRETE PSI-4000; TANK WEIGHT- 10,500 LBS.
REINFORCEMENT PER STATE CODE

MODEL: TS 1000 STB
NON TRAFFIC
1000 Gallon Septic Tank

SCALE - N.T.S.

1 WW-5 Septic Tank (or equivalent 1,000-gal tank)

SOURCE: Shoaf Precast Septic, Inc.



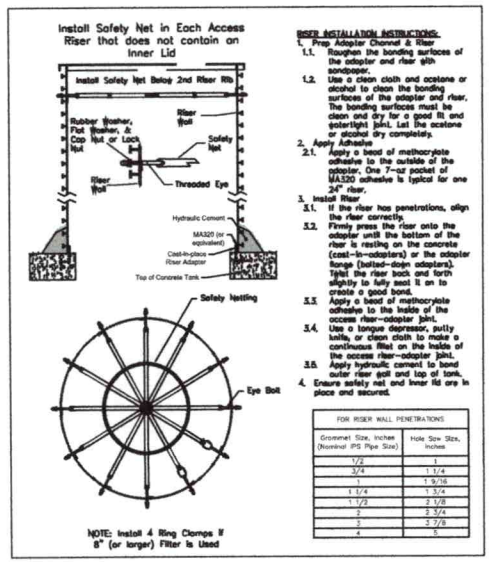
SHOAF PRECAST SEPTIC, INC.
4130 WEST US HWY 64
LEXINGTON, NC 27295
PHONE (336) 787-5826
FAX (336) 787-2826
WWW.SHOAFPRECAST.COM
SHOAF-1,275 PUMP TANK
PT-306 NON TRAFFIC
LIQUID CAPACITY-1,287 GALLONS INCLUDING 10" AIRSPACE
GALLONS PER INCH-21.07 (AVERAGE)
TANK HEIGHT-67 ¾"
BOTTOM OF TANK TO CENTER OF INLET-56 1/2"
BOTTOM OF TANK TO CENTER OF OUTLET-59"
LENGTH TO WIDTH RATIO-2 TO 1
SIZE OF INLET & OUTLET-3" OR 4" PIPE
TYPE OF INLET & OUTLET-POLYLOCK OR EQUAL (MEETS ASTM C-923)
CONCRETE PSI-4000; TANK WEIGHT- 10,500 LBS.
REINFORCEMENT PER STATE CODE

MODEL: TS 1275 PT
NON TRAFFIC
1275 Gallon Pump Tank

SCALE - N.T.S.

2 WW-6 Pump Tank (or equiv. tank with 1-day storage)

SOURCE: Shoaf Precast Septic, Inc.



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

3 WW-5 Riser Safety Nets

SOURCE: SIM-TECH, Inc.

NOTES

1. Installation to follow all NC DHHS and Iredell County applicable rules and regulations.
2. Iredell 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 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. Spigot to be located on outside of building within 50' of tanks.
18. All pressure lines to maintain 18" min. cover.
19. Contractor to adjust tank placement to meet site constraints.

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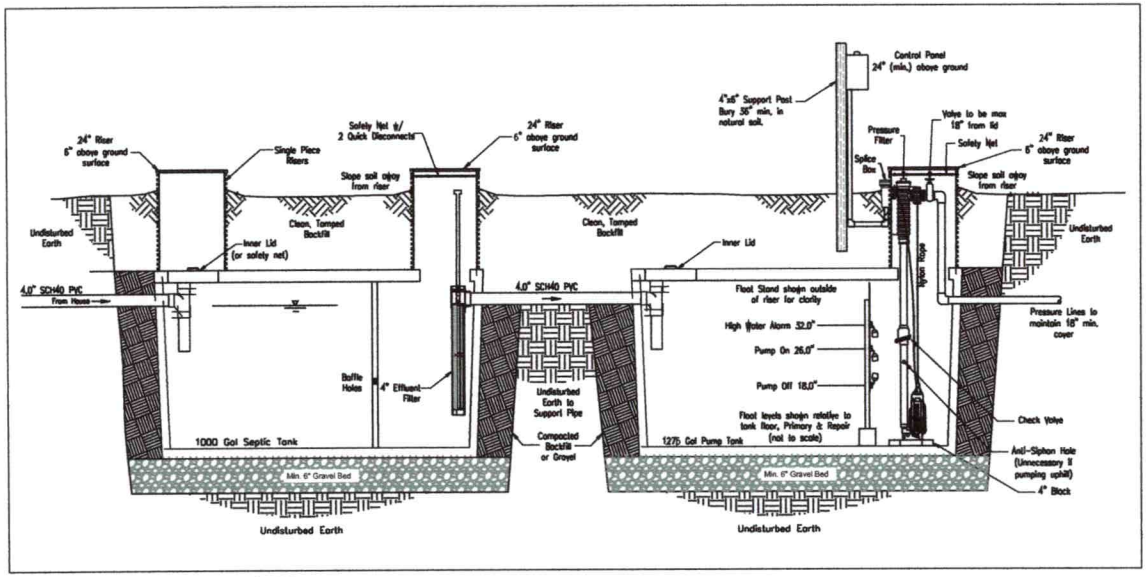
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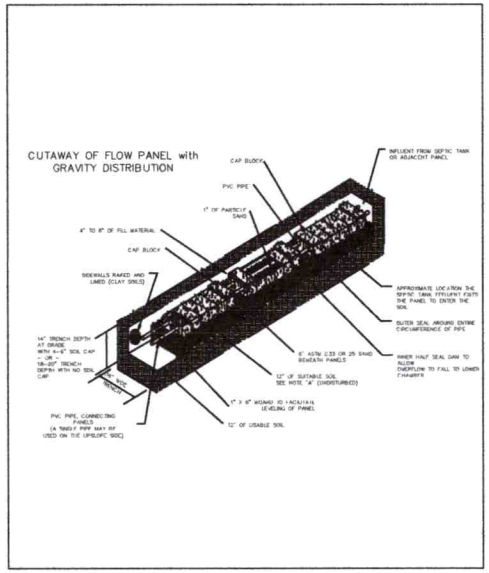
SHEET TITLE
Detail Sheet 1

DRAWN BY: C. Barbee	CREATED ON: 04/22/2024
REVISED BY: --	REVISED ON: --
RELEASED BY: --	RELEASED ON: --

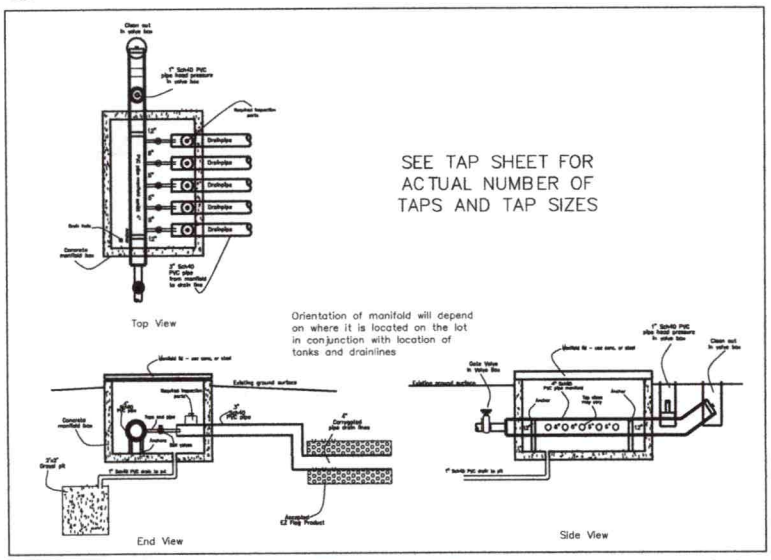
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WW-5



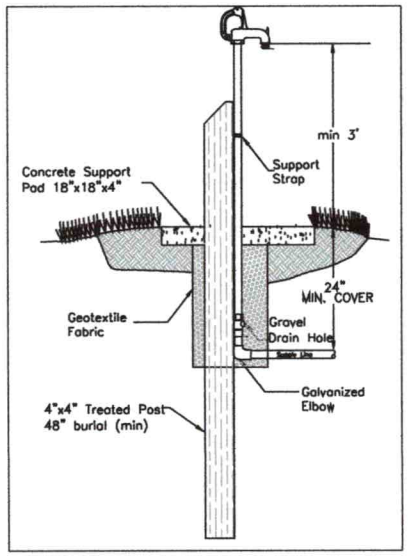
1 WW-6 **SYSTEM PROFILE VIEW**
N.T.S.



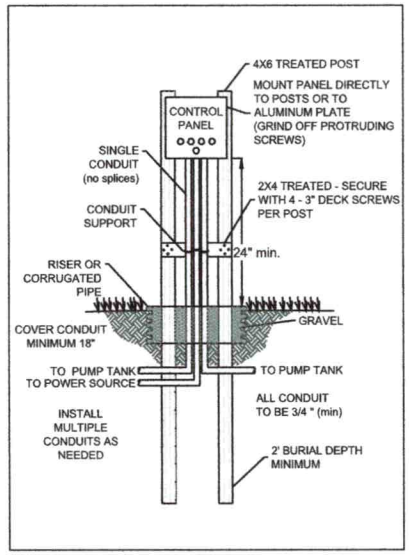
2 WW-6 **TRENCH X-SECTION (Typical)**
N.T.S. Source: AWT



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



5 WW-6 **YARD HYDRANT (if required)**
N.T.S. SOURCE: AWT



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

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REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Detail Sheet 2

DRAWN BY:	CREATED ON:
C. Barbee	04/22/2024
REVISED BY:	REVISED ON:
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RELEASED BY:	RELEASED ON:
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DRAWING NUMBER
WW-6

Trenching and Excavation Safety

The employer must comply with the trenching and excavation requirements of 29 CFR 1926.651 and 1926.652 or comparable OSHA-approved state plan requirements.

Inspection of Excavations

OSHA standards require that a competent person inspect trenches daily and as conditions change before worker entry to ensure elimination of excavation hazards. A competent person is an individual who is capable of identifying existing and predictable hazards or working conditions that are hazardous, unsanitary, or dangerous to workers, soil types and protective systems required, and who is authorized to take prompt corrective measures to eliminate these hazards and conditions.

Access and Egress

OSHA standards require safe access and egress to all excavations, including ladders, steps, ramps, or other safe means of exit for employees working in trench excavations 4 feet (1.22 meters) or deeper. These devices must be located within 25 feet (7.6 meters) of all workers.

Recommendations

Heavy equipment and trucks should stay as far as possible from the edge of any trench.
Always use pads under stabilizers to minimize ground pressures that could lead to failures.

(b) Definitions

"Cemented soil" means a soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.
"Cohesive soil" means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.
"Dry soil" means soil that does not exhibit visible signs of moisture content.
"Fissured" means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.
"Granular soil" means gravel, sand, or silt (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.
"Layered system" means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.
"Moist soil" means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.
"Plastic" means a property of a soil which allows the soil to be deformed or molded without cracking, or appreciable volume change.
"Saturated soil" means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or sheer vane.

"Soil classification system" means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the characteristics of the deposits and the environmental conditions of exposure.
"Stable rock" means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.
"Submerged soil" means soil which is underwater or is free seeping.

"Type A" means cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A.
However, no soil is Type A if:
(i) The soil is fissured; or
(ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
(iii) The soil has been previously disturbed; or
(iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
(v) The material is subject to other factors that would require it to be classified as a less stable material.

"Type B" means:
(i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
(ii) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
(iii) Previously disturbed soils except those which would otherwise be classed as Type C soil.
(iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
(v) Dry rock that is not stable; or
(vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

"Type C" means:
(i) Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
(ii) Granular soils including gravel, sand, and loamy sand; or
(iii) Submerged soil or soil from which water is freely seeping; or
(iv) Submerged rock that is not stable, or
(v) Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H:1V) or steeper.

"Unconfined compressive strength" means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.
"Wet soil" means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

(c) Requirements

(1) Classification of soil and rock deposits. Each soil and rock deposit shall be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix.
(2) Basis of classification. The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other recognized methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture textural classification system.
(3) Visual and manual analyses. The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.
(4) Layered systems. In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.
(5) Reclassification. If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

(d) Acceptable visual and manual tests

(1) Visual tests. Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

(i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained material material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material.
(ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular.
(iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations.
(iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil.
(v) Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers.
(vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water seeping from the sides of the excavation, or the location of the level of the water table.
(vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face.

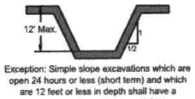
(2) Manual tests. Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

(i) Plasticity. Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive.
(ii) Dry strength. If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured.
(iii) Thumb penetration. The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils. (This test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard designation D2488 - "Standard Recommended Practice for Description of Soils (Visual - Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a minimum the effects of exposure to drying influences.If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly.
(iv) Other strength tests. Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shearvane.
(v) Drying test. The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry:
(A) If the sample develops cracks as it dries, significant fissures are indicated.
(B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as an unfissured cohesive material and the unconfined compressive strength should be determined.
(C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cohesive with fissures.If they pulverize easily into very small fragments, the material is granular.

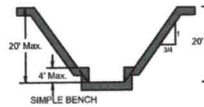
EXCAVATIONS IN TYPE A SOILS

All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of ¾:1.

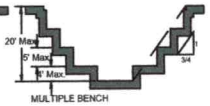




Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of ½:1

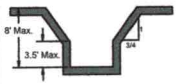


SIMPLE BENCH



MULTIPLE BENCH

All benched excavations 20 feet or less in depth shall have a maximum allowable slope of ¾:1 and maxium bench dimensions as follows:

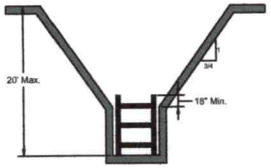


All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of ¾ feet.



All excavations more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of ¾ feet.

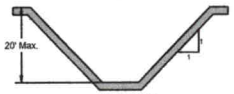
All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of ¾:1. The support or shield system must extend at least 18 inches above the top of the vertical side.



All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other options permitted under § 1926.652(b).

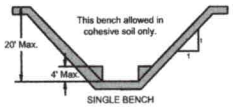
EXCAVATIONS IN TYPE B SOILS

All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.

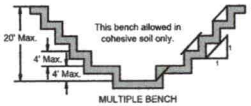


SIMPLE SLOPE

All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maxium bench dimensions as follows:

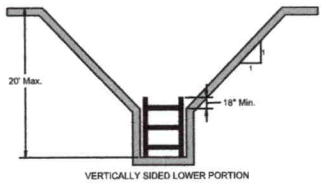


SINGLE BENCH



MULTIPLE BENCH

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 1:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

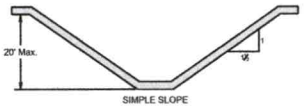


VERTICALLY SIDED LOWER PORTION

All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

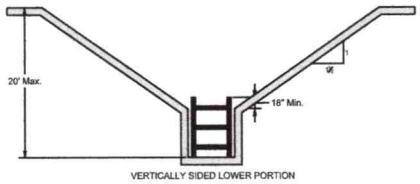
EXCAVATIONS IN TYPE C SOILS

All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1½:1.



SIMPLE SLOPE

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 1½:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

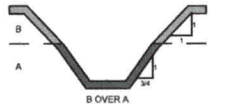


VERTICALLY SIDED LOWER PORTION

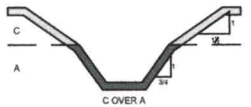
All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

EXCAVATIONS IN LAYERED SOILS

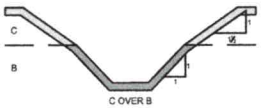
All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below.



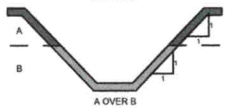
B OVER A



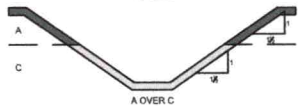
C OVER A



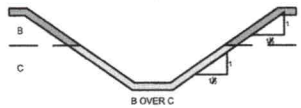
C OVER B



A OVER B



A OVER C



B OVER C

All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

AWT
Engineers and Soil Scientists

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

Revin Projects
Revin Projects-Canvasback Rd

Project Location:
414 Canvasback Road
Mooresville, NC 28117
Iredell County
PIN: 4636835216

Project Owner:
Revin Projects
120 Bear Run Circle
Mooresville, NC 28117
469-451-9277
campbharry@gmail.com

For Review Only

REV.	ISSUED DATE	DESCRIPTION

SHEET TITLE
Excavation Safety

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
--	--
Released By:	Released On:
--	--

Drawing Number:
WW-7

Septic System Design - Summary Page

Engineers and Soil Scientists
Agri-Waste Technology, Inc.

Project Manager:
Jeff Vaughan, PhD, LSS
jvaughan@agriwaste.com
919-859-0669

Catherine Barbee
cbarbee@agriwaste.com
919-729-5722

Project: Revin Projects-Canvasback Rd
Property: 414 Canvasback Road
Mooresville, NC 28117
Subdiv.:
Lot #:

Date: 5/2/2024
County: Iredell
Permit #:

Owner: Revin Projects
Address: 120 Bear Run Circle
Mooresville, NC 28117
Phone: 469-451-9277
Email: campbharry@gmail.com

Type of System: II a
PIN: 4636835216

EHS:

Soil Parameters

Soil Evaluation By:
-

LTAR: 0.30 gpd/ft^2

Special Conditions/Notes:

Repair Exempt

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: 1,000 gal
Tank Manufacturer: Shoaf
Tank Model: TS 1000 STB

	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.

Primary Drainfield Specifications

Type of Distribution: Parallel Pressure Manifold
Trench Media: PPBPS, Horizontal
Trench Width: 3 ft
Trench Depth: in.
(or as specified on permit)

Trench Bottom Area: 1600 ft^2
Minimum Drain Line: 267 ft
Actual Drain Line: 269 ft
Number of Lines: 6
Minimum Line Spacing: 8 ft O.C.

Wastewater Treatment System Design Calculations

Project: Revin Projects-Canvasback Rd
Location: 414 Canvasback Road
Mooresville, NC 28117
County: Iredell

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 15A NCAC 18E .0801

For individual residences with 4 bedrooms,

Minimum Liquid Capacity (V)= 1,000 gal

Septic Tank Specs:

Manufacturer:	Shoaf	
Model:	TS 1000 STB	
Volume:	1,000	gal
Weight:	10,500	lbs

	Exterior	Interior	
Length:	108.0	102.0	in.
Width:	58.0	52.0	in.
Depth:	67.5	60.5	in.

Shape of Risers: Circular
Diameter: 2.00 ft

Pump Tank Storage & Float Settings

Project: Revin Projects-Canvasback Rd
Location: 414 Canvasback Road
Mooresville, NC 28117
County: Iredell

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	26.0	in.	(set for dose volume)
Alarm On	32.0	in.	(6 in. above On Float)

Emergency Storage Available		
Pump Tank	600	gal
Days of Storage	1.25	days

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

ELEVATIONS

Project: Revin Projects-Canvasback Rd
Location: 414 Canvasback Road
Mooresville, NC 28117
County: Iredell

Benchmark	0	
BM Elev	0 ft	
Septic Tank	1,000 gal	
Ground Surface		796.92 ft
Depth of Soil Cover	12 in.	1.00 ft
Overall Ht of Tank	67.5 in.	5.63 ft
Elev, Base of Tank		790.30 ft
Ht to 4" Inlet Invert	57 in.	4.75 ft
Elev, 4" Inlet Invert		795.05 ft
Ht to 4" Outlet Invert	55 in.	4.58 ft
Elev, 4" Outlet Invert		794.88 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		789.80 ft
Pump Tank	1287 gal	
Ground Surface		797.06 ft
Depth of Soil Cover	18 in.	1.50 ft
Overall Ht of Tank	67.5 in.	5.63 ft
Elev, Base of Tank		789.94 ft
Ht to 4" Inlet Invert	57 in.	4.75 ft
Elev, 4" Inlet Invert		794.69 ft
Ht to 2" Outlet Invert	58 in.	4.83 ft
Elev, 2" Outlet Invert		794.77 ft
Gravel Base	6 in.	0.50 ft
Elev, Bot of Excavation		789.44 ft
ST Inlet Pipe		
Grade @ Stub-out		797.14 ft
Depth of Stub-out, top		1 ft
Elev, Stub-out Invert		795.79 ft
Elev @ ST Inlet Invert		795.05 ft
Length		19 ft
Slope		3.9 %
Pipe, ST to PT		
ID	4 in.	0.33 ft
OD	4.5 in.	0.38 ft
Elev, ST Outlet Invert		794.88 ft
Elev, PT Inlet Invert		794.69 ft
Length		10.48 ft
Slope		1.8 %
Cover over inlet pipe		1.52 ft
Pump Reqmt.		
Floor Thickness	4 in.	0.33 ft
Elev, Pump Tank Floor		790.27 ft
Pump Block Ht.	4 in.	0.33 ft
Elev, Pump Intake		790.60 ft
Grade @ Primary Manifold		798.00 ft
Min. Cover	18 in.	1.50 ft
Max Elev, Primary		796.50 ft
Elev Diff, Primary		5.90 ft

Drainfield Design

Project Revin Projects-Canvasback Rd
Location 414 Canvasback Road
Mooresville, NC 28117
County Iredell

Drainfield Sizing

Primary

LTAR	0.3 gpd/ft^2		
Daily Design Flow	480 gpd	**Type of Drainfield Media**	PPBPS, Horizontal
Req. Drainfield Area	1,600 ft^2	**Required Drainline**	
Trench Width, Eff.	3 ft	**After 50% Reduction**	267 ft
Required Drainline	533 ft	**Minimum Line Spacing**	8 ft (O.C.)

Repair Exempt

Drainfield Layout

Line	Use	Color	Elevation	Length	Primary
1	Layout Line	Blue	797.6	41	
2	Layout Line	Purple	798.1	25	
3	Layout Line	Orange	797.9	53	47.7
4	Layout Line	Yellow	797.9	49	47.7
5	Layout Line	Purple	797.4	47	47.7
6	Layout Line	Blue	797.1	47	47.7
7	Layout Line	Orange	797.0	47	39.0
8	Layout Line	Yellow	796.9	44	39.0
9	Layout Line	Purple	796.8	44	
10	Layout Line				
			Total	397	269
			Count	9	6

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

PRESSURE MANIFOLD DESIGN (Primary)

Site Information

Project: Revin Projects-Canvasback Rd
Location: 414 Canvasback Road
Mooresville, NC 28117
County: Iredell

Design Information

Estimated Daily Flow	480	gal/day
L.T.A.R. (from Iredell Co.)	0.3	gal/day/ft^2
L.T.A.R. + 5%	0.315	gal/day/ft^2
Trench Width	3	ft.
Line Length Required	533	ft.
Length after 50% Reduction	267	ft
L.T.A.R. Reduced	0.600	gal/day/ft^2
L.T.A.R. Reduced + 5%	0.630	gal/day/ft^2

DRAINFIELD INFO. - **Primary**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using PPBPS, Horizontal***

Line No.	Flag Color	Line Length (ft)	Tap	Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
3	Orange	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
4	Yellow	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
5	Purple	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
6	Blue	47.7	3/4in SCH 40, Split	6.25	0.131	0.597
7	Orange	39	3/4in SCH 80, Split	5.05	0.129	0.590
8	Yellow	39	3/4in SCH 80, Split	5.05	0.129	0.590
	Total	**269**	**Total**	**35.10**	**Avg.**	**0.59**

Note: Line lengths are calculated in 4'4" increments to reflect use of PPBPS product.

Total Run Time	13.68	min.	
Drainfield Capacity	223.2	gal	
% of Drainfield Cap	75.5%		(Max. 100.5% to not exceed 7.2 gal/panel)
Dose Volume	168.5	gal/dose	
Run Time/Dose	**4.8**	**minutes**	
Volume/depth	21.07	gal/in.	(Per tank manufacturer's specifications)
Estimated Drawdown	8.00	in.	

Manifold Box

Number of Taps	3	with	3	Split(s)	
Manifold Length	3.0	ft.	(approximate)		

PUMP DESIGN

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

Project: Revin Projects-Canvasback Rd
Location: 414 Canvasback Road
Mooresville, NC 28117
County: Iredell

Friction Losses

Suction Head	0	ft	*(submersible 0)*
Elev. Difference (highest point from pump)	5.90	ft	
Design Pressure At Outlet	2	ft	

Supply Line - 2" Schedule 40 PVC

Pipe Diameter, Nominal	2	in.		
Pipe Diameter (ID)	2.047	in.	Flow	35.1 gpm
Pipe Length	77.55	ft	Velocity	3.42 ft/sec
Pipe Length for Fittings	7.755	ft		Meets requirement that 2 ft/s < v < 5 ft/s.
Equivalent Length	85.305	ft		
Estimated Friction Loss in Supply Line			1.86 ft	

Pressure Filter Friction Loss	0.87	ft	*(from manufacturer)*
Friction Loss - Taps/Special Fittings	3.5	ft	
TOTAL	**14.13**	**ft.**	

Flow for Anti-Siphon Hole

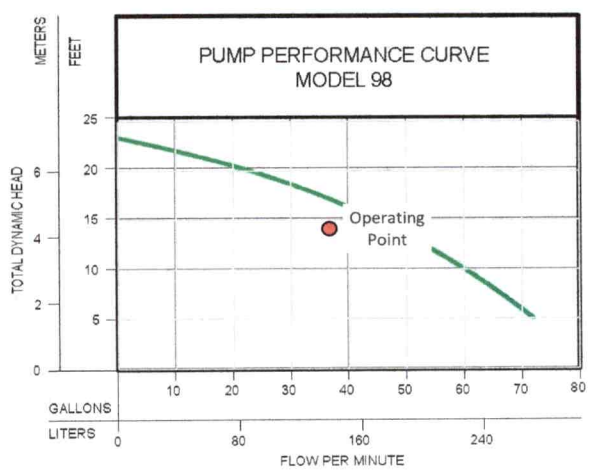
Hole Diameter	3/16	in.
Hole Flowrate	1.56	gpm

Pump Efficiency	0.7	*(assumed, typical)*
Motor Efficiency	0.9	*(assumed for electric pumps)*
Flow	**36.66 gpm**	

Required Horsepower 0.21 hp
TDH **14.13 ft**

Pump Selection

Manufacturer:	Zoeller
Model:	N98
Horsepower:	**0.5**



501 N Salem St, Suite 203
Apex, NC 27502

919.859.0669
agriwaste.com

Engineers and Soil Scientists

SOIL/SITE EVALUATION *for* ON-SITE WASTEWATER SYSTEM

OWNER: Revins Projects LLC APPLICATION DATE: _____
ADDRESS: 414 Canvasback Road, Mooresville, NC 28117 EVALUATION DATE: 02/14/2024
PROPERTY ID: 4636835216.000 COUNTY: Iredell
PROPOSED FACILITY: Single Family Residence PROPOSED DESIGN FLOW (.0400): 480 GPD PROPERTY SIZE: 0.46 ac.
LOCATION OF SITE: 414 Canvasback Road, Mooresville, NC 28117 PROPERTY RECORDED: _____
WATER SUPPLY: ☒ Public ☐ Single Family Well ☐ Shared Well ☐ Spring ☐ Other _____ WATER SUPPLY SETBACK: _____
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Domestic ☐ High Strength ☐ IPWW

PROFILE #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY .0503 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY .0503 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .0504 SOIL WETNESS/ COLOR	.0505 SOIL DEPTH	.0506 SAPRO CLASS	.0507 RESTR HORIZ	.0509 PROFILE CLASS & LTAR*	.0502(d) SLOPE CORRECTION
1	3%	0-14"	Gr; SCL	FR; SS; SP	-	37"	-	-	0.3 GPD/Ft2	36"
		14-36"	SBK ; C	FI; SS; SP						
2	3%	0-14"	Gr; SCL	FR; SS; SP	-	37"	-	-	0.3 GPD/Ft2	36"
		14-36"	SBK ; C	FI; SS; SP						
3	3%	0-14"	Gr; SCL	FR; SS; SP	-	37"	-	-	0.3 GPD/Ft2	36"
		14-37"	SBK ; C	FI; SS; SP						
4	3%	0-14"	Gr; SCL	FR; SS; SP	-	37"	-	-	0.3 GPD/Ft2	36"
		14-37"	SBK ; C	FI; SS; SP						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.0508)	Provisionally Suitable	Repair Area Exempt
System Type(s)	50% Reduction	Repair Area Exempt
Site LTAR	0.3 GPD/Ft2	Repair Area Exempt
Maximum Trench Depth	24"	Repair Area Exempt

SITE CLASSIFICATION (.0509): _____
EVALUATED BY: Trevor Hackney
OTHER(S) PRESENT: Nathan Estevez

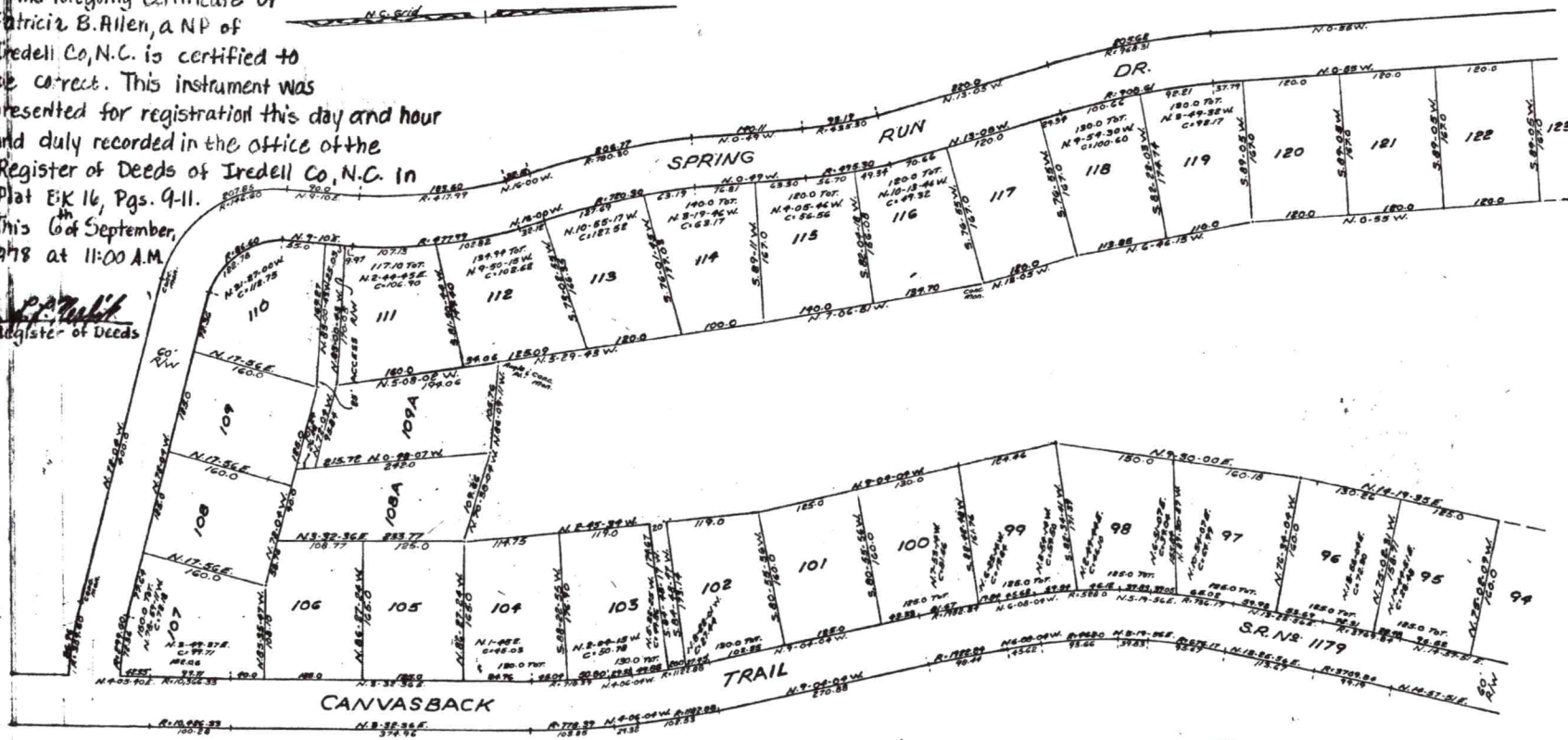
Comments: _____

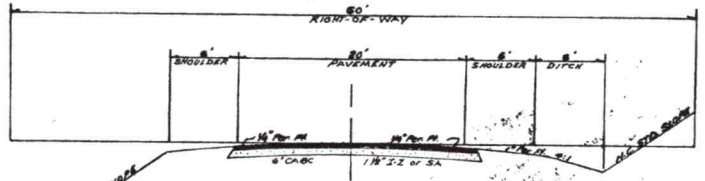
10

10

State of North Carolina - Iredell County
The foregoing certificate of
Patricia B. Allen, a NP of
Iredell Co, N.C. is certified to
be correct. This instrument was
presented for registration this day and hour
and duly recorded in the office of the
Register of Deeds of Iredell Co, N.C. in
Plat Bk 16, Pgs. 9-11.
This 6th of September,
1978 at 11:00 A.M.

Register of Deeds





NOTE:
1. Street grades will not exceed 7% Grade
2. All seeding to be in accordance with State Hwy. Comm. Standards
3. All Storm Drain to be installed to meet State Hwy. Comm. Secondary Rd. Standards

Know all men by these presents, that I(we) _____ OWNER'S CERTIFICATE AND NOTARIZATION:

hereby certify that I(we) are the owner(s) of the property shown on this plat, that I(we) hereby acknowledge this plat and allotment to be my (our) free act and do hereby dedicate to public use all streets, alleys, easements and other public areas shown on this plat. I(we) further certify that Donald Ray Allen (Surveyor) surveyed and made this plat at my(our) direction, and that entire subdivision is within the boundary of a tract conveyed to me by deed recorded in Deed Book ____ Page ____ Iredell County Registry.

John P. Campbell, Executive Vice President
Signature of Owners

Subscribed and Sworn to Before Me, this the 6th day of July, 1978
My Commission Expires 5-31-82
Date

Patricia B. Allen
Notary

PATRICIA B. ALLEN NOTARY PUBLIC IREDELL COUNTY, N.C.

Provided that the plat is recorded within sixty (60) days of final approval it is approved by the Iredell County Planning Board.

Sept 6 1978
Date

(Chairman or Agent)

Filed for registration at 11:00 A.M. this the 6th day of Sept. A.D. 1978
and recorded in Plat Book 16 at Page 10

Register of Deeds

Provided that the plat is recorded within sixty (60) days of final approval, it is approved by the Iredell County Board of Commissioners. This the 5 day of Sept A.D. 1978

Chairman or Agent

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED SUBDIVISION ROAD
CONSTRUCTION STANDARDS CERTIFICATION
APPROVED J. D. Anderson
DISTRICT ENGINEER
DATE 7-26-78

State of N. C.
County of Iredell

I, Patricia B. Allen, a Notary Public in and for the County of Iredell and State of North Carolina, do hereby certify that Donald Ray Allen, surveyor personally appeared before me this day and acknowledged the due execution of the foregoing certificate and upon his oath swore to the truth of the statements set forth therein.

Witness my hand and notarial seal this 6th day of July 19 78.

Patricia B. Allen
Notary Public

My commission expires 5-31-82

PATRICIA B. ALLEN NOTARY PUBLIC IREDELL COUNTY, N.C.

The undersigned surveyor, being duly sworn, deposes and says that the plat upon which this certificate appears was prepared in accordance with G. S. 47-30 as amended, is in all respects correct according to the best of his knowledge and belief, and was prepared from an actual survey made by him on the 26 TH day of July, 19 78, with a maximum linear error of closure of 1:10,000, and a maximum field error of angular closure of 1.5 Sec/Angle."

Donald Ray Allen
Reg. N.C. Surveyor

NORTH CAROLINA REGISTERED SEAL L-1131 LAND SURVEYOR DONALD RAY ALLEN

mallard head COUNTRY CLUB
SECTION 1

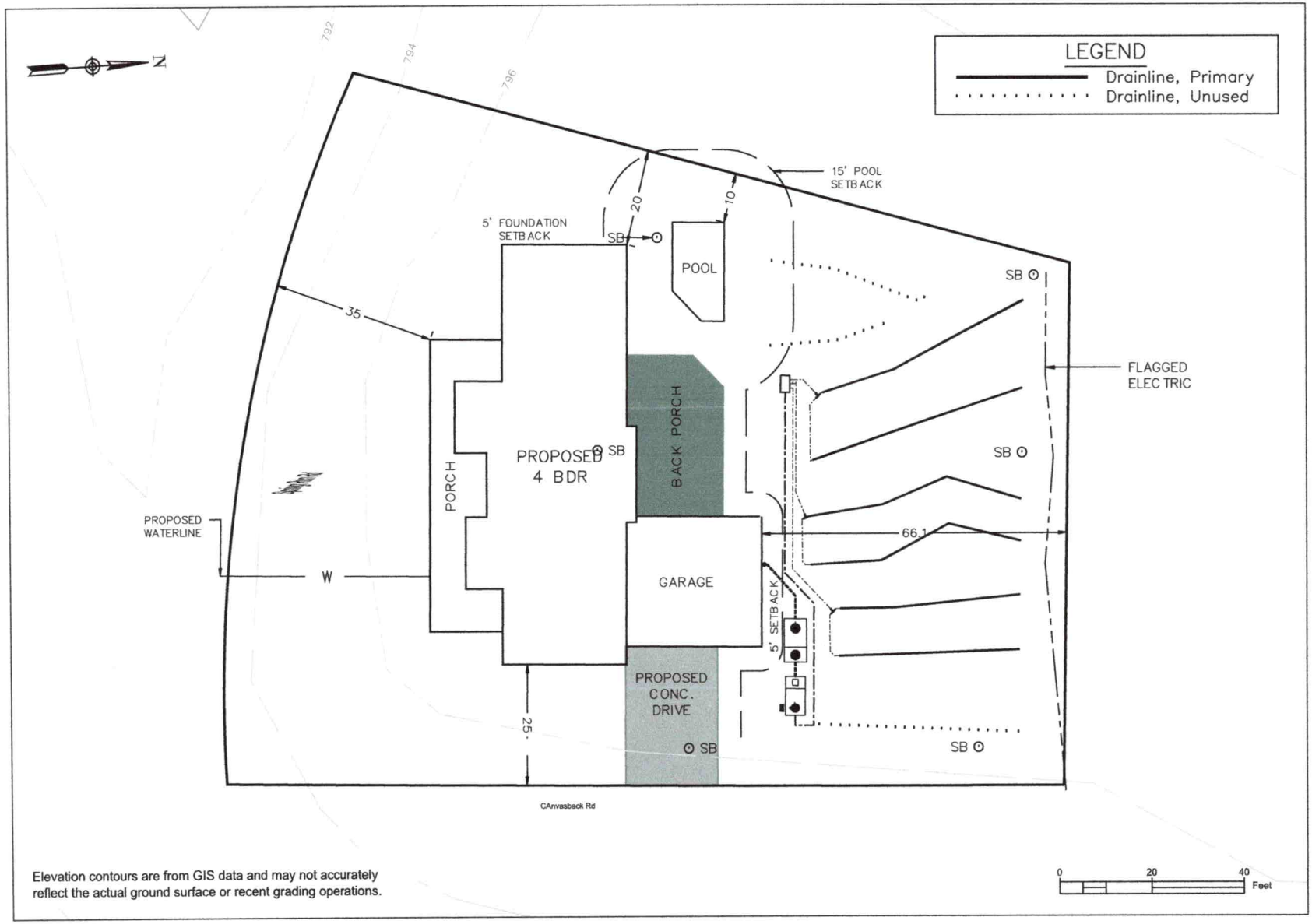
PROPERTY OF MALLARD HEAD DEV. CORP.
DAVIDSON TWP. - IREDELL CO., N.C.

SCALE: 1"=100'
DATE: July 26, 1978

DON ALLEN SURVEYOR
RT. 6, BOX 627-A
MOORESVILLE N.C.

GRAPHIC SCALE
0 100 200 300

Notes:
Iron pins at all lot corners and angle points, unless noted otherwise.
All street intersections subject to a 20' radius, however all distances are to intersection of streets.
All lot lines are subject to a 10.0 drainage and utility easement.



Elevation contours are from GIS data and may not accurately reflect the actual ground surface or recent grading operations.

PROPERTY LAYOUT

SOURCE: AWT, Inc.

AWT
Engineers and Soil Scientists

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

Revin Projects
Revin Projects-Canvasback Rd

Project Location:
414 Canvasback Road
Mooresville, NC 28117
Iredell County
PIN: 4636835216

Project Owner:
Revin Projects
120 Bear Run Circle
Mooresville, NC 28117
469-451-9277
campbharry@gmail.com

For Review Only

REV.	ISSUED DATE	DESCRIPTION

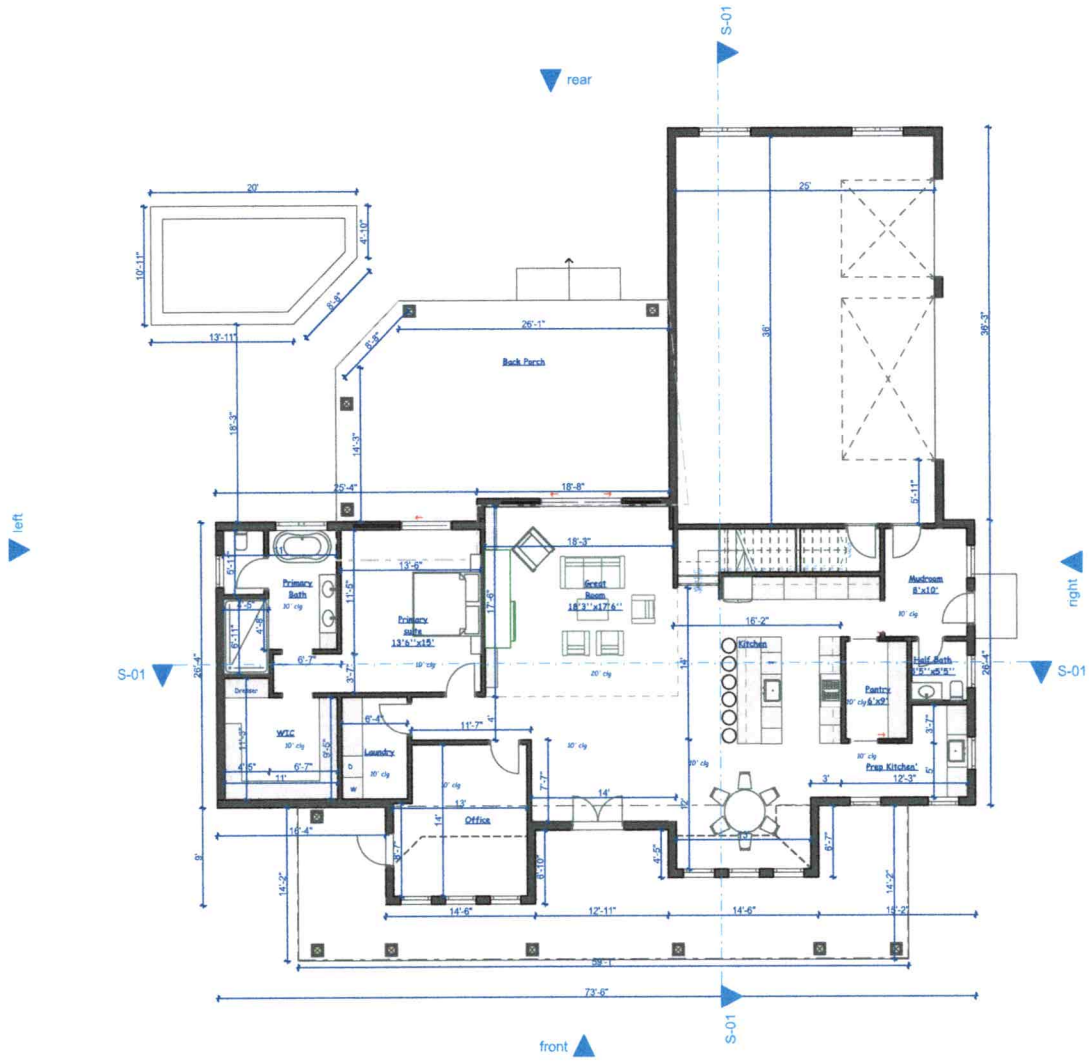
SHEET TITLE
Property Layout

Drawn By:	Drawn On:
C. Barbee	04/22/2024
Revised By:	Revised On:
--	--
Released By:	Released On:
--	--

Drawing Number:
SITE PLAN

Square footage break down :

Total Heated Area: 3997 sq. Ft.
Ground floor: 2060 sq. Ft
First Floor: 1937 sq. ft
Porches Combined: 1178 sq. Ft
Garages: 900 sq. Ft



GOUND FLOOR PLAN :

Revision History

RevID	CNID	Change Name	Date

Company Title

SAM BARNDOMINIUM DESIGN & DRAFT LLC EST. 2016

SAM Barndo Design & Draft LLC

Harry's residence

Drawing Name
Complete Version

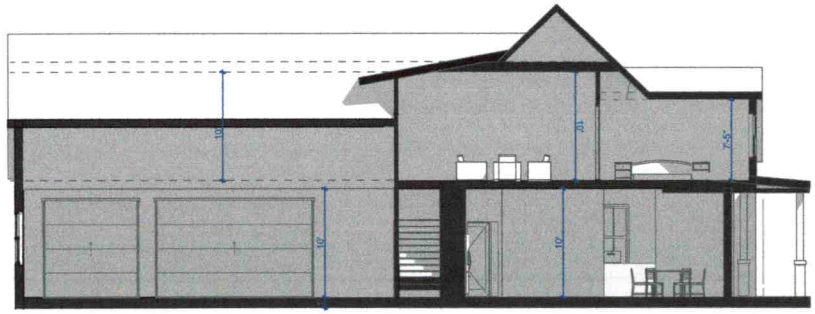
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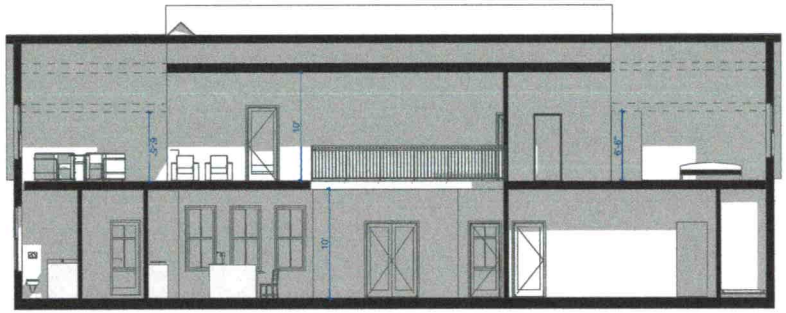
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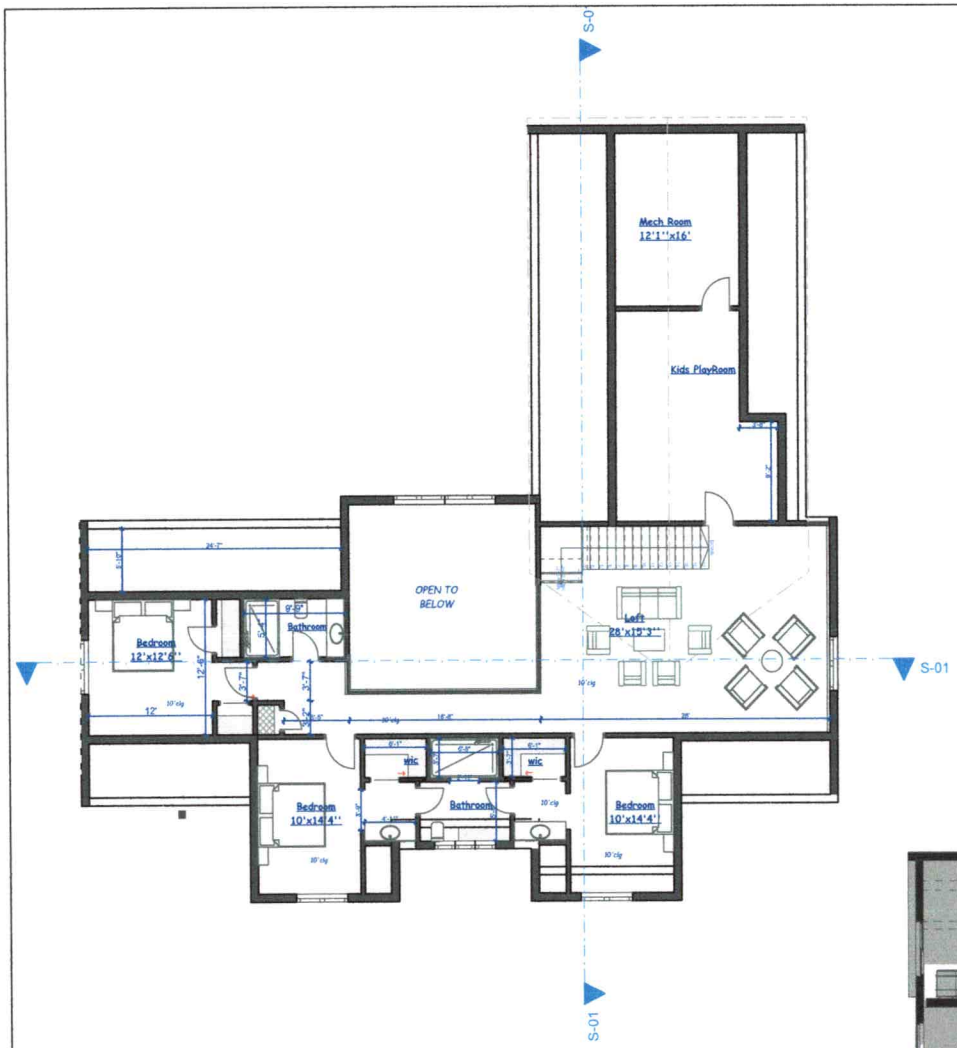
Drawing Scale
1:100 = 1'-0"

Layout ID **200032** Revision **0**

SECTIONS :







FIRST FLOOR PLAN :

Revision History

RevID	ChID	Change Name	Date

Company Title

SAM Barndominium Design & Draft LLC

Harry's residence

Drawing Name

Complete Version

Modified by Date

Checked by Date

Drawing Scale

1:100 = 1'-0"

Layout ID **200032** Revision **0**