MANF-2023-30600

ICHD - ENVIRONMENTAL HEALTH DIVISION

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

PERMIT # OSWP-2023-41217

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

PIN # 4751-20-5816

APPLICANT / OWNER: Thompson Environmental | APPLICANT ADDRESS: PO Box 541 Midland, NC 28107

SITE ADDRESS: 115 RAINWOOD DR, TROUTMAN, NC 28166 | PHONE: 704-301-4881 | ALT. PHONE:

SITE DIRECTIONS: Ostwalt Amity -> R Franklin Woods -> Rainwood | SAP CONTROLLED: YES ☐ NO ☑

SUBDIVISION: Summertree | SECTION: N/A | LOT #: 1 | LOT AREA: 1.29 | DESIGN FLOW: 360 | L.T.A.R.: 0.25

Septic Tank: 1000 (gal)	STB: 760	Date: 09/03/2023	☒ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 3	Water Supply: Existing Well
Pump Tank: 1000 (gal)	PT: 363	Date: 09/04/2023	System Description: 25% Reduction - PM		☐ Business	No. Persons: 6	
Pump Make:	Model:	Serial #:	Repair System Description: HPPBPS		☐ Other	No. Employees:	
# Nitrification Fields: 1	# Lines: 5	Linear Ft.: 360	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☑ Crawl Space	
Trench Width: 36	Trench Bottom Depth (Low side): 13		Gravel Depth: 0	☐ GRAVITY ☑ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

Comments / Conditions: Purpose of this permit is to move the repair area to accommodate the driveway that cut through the original repair area.

INITIAL SITE SKETCH

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

Larry Thompson

LSS# 1208 / AOWE# 100166

AS BUILT SKETCH

10/19/23 - Tanks, Lines HS

11/5/23 - Electrical, alarm, PH, float MW

Repair area relocated w/ this new permit

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: Larry Thompson | Date:

IMPROVEMENT PERMIT by: D.Meberg | Date: 11/20/23

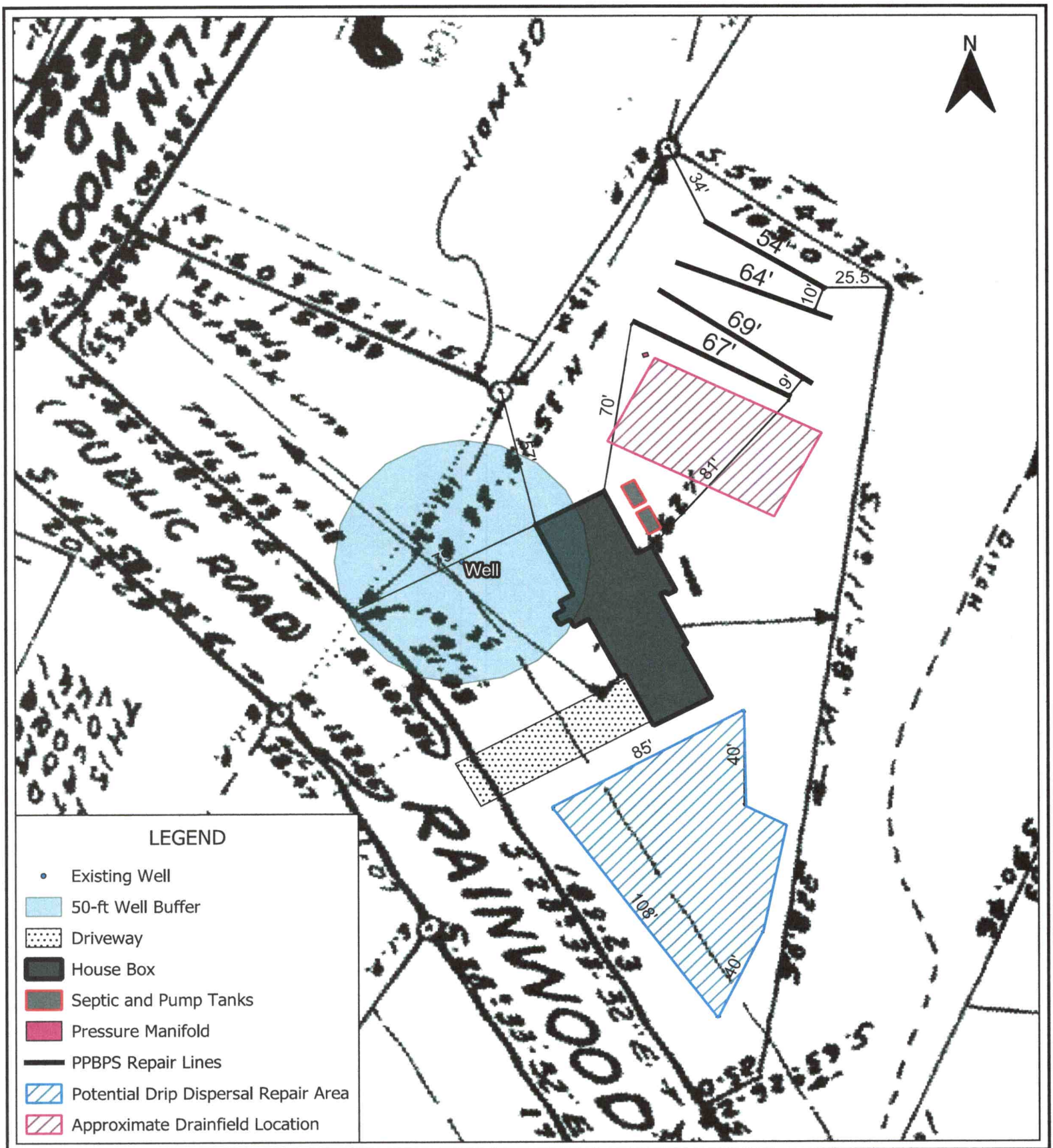
AUTHORIZATION TO CONSTRUCT by: D.Meberg | Date: 11/20/23

Installed By: Craig Thompson

OPERATION PERMIT by: D.Meberg | Date: 11/20/23

Existing System Inspected By: | Date:

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 BETWEEN 8am-9am the day the inspection is needed.



Thompson Environmental Consulting
WATER - WASTEWATER - WETLANDS

Prepared For:

Jerry and Amanda Hogan

Septic Repair Layout

Lot 1 - Summertree
Rainwood Drive
Troutman, NC 28166

Iredell County

Date: November 2023

Scale: 0 25 50 ft

TEC Job #: 22-344

Figure 3

Permit #: OSWP-2023-41217

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • 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: 4751-20-5816.000

Issued To: Jerry and Amanda Hogan

Property Location: 118 Spring Lake Drive Troutman, NC 28166

Subdivision (if applicable) Summertree Lot #: 1 Block: _____ Section: _____

LSS Report Provided: Yes ☑ No ☐

If yes, name and license number of LSS: Larry Thompson, NCLSS #1208

New ☑ Expansion ☐ System Relocation ☐ Change of Use ☐

Proposed Structure: New Single-Family Residence

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

Design Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 025 Proposed LTAR (Repair): 0.25

Proposed Wastewater System Type*: Accepted Type IIIb (Initial) Pump Required: ☑ Yes ☐ No ☐ May be required

Proposed Wastewater System Type*: Horizontal PPBPS Type IIIb (Repair) Pump Required: ☑ Yes ☐ No ☐ May be required

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

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 Soil Depth (Initial): 25 Inches Usable Soil Depth (Repair): 32 Inches

Max. Trench Depth (Initial)‡: 13 Inches Max. Trench Depth (Repair)‡: 20 Inches ***‡ 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 .1945: Yes ☑ No ☐ Drainfield location meets requirements of Rule .1950: 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: Larry Thompson, LSS

Licensed Soil Scientist Signature: _____ Date: 11-15-23

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

LOCATION: 5605 Six Forks Road, Building 3, Raleigh, NC 27609
MAILING ADDRESS: 1632 Mail Service Center, Raleigh, NC 27699-1632
www.ncdhhs.gov • TEL: 919-707-5854 • FAX: 919-845-3972

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

Permit #: OWP-2023-1217

This Section for Local Health Department Use Only

Initial submittal received: 11/20/23 (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 Wurtzbacher Date: 11/20/23

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 by the Health Department 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 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 evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: 11/20/28

See attached site sketch

Permit #: OSWP 2023 41217

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

County: Iredell

PIN/Lot Identifier: 4751-20-5816.000

Issued To: Jerry and Amanda Hogan

Property Location: 118 Spring Lake Drive, Troutman, NC 28166

AOWE/PE Plans/Evaluations Provided: Yes ☑ No ☐ If yes, name and license number of AOWE/PE: Larry Thompson, AOWE #10016E

Facility Type: Single-Family Residence

☑ New ☐ Expansion ☐ Repair ☐ System Relocation ☐ Change of Use

Basement? ☐ Yes ☑ No Basement Fixtures? ☐ Yes ☑ No

Type of Wastewater System* Accepted Type IIIb (Initial) Horizontal PPBPS Type IIIb (Repair)

**Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)*

Design Daily Flow: 360 GPD Wastewater Strength: ☑ domestic ☐ high strength ☐ industrial process

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

Installation Requirements/Conditions

Septic Tank Size: 1,000 gallons Total Trench/Bed Length: 360 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.25 gpd/ft²

Soil Cover: 6 inches Slope Corrected Maximum Trench/Bed Depth‡: 13 inches ***‡ Measured on the downhill side of the trench***

Aggregate Depth: N/A inches above pipe N/A inches below pipe 12 inches total

Pump Tank Size (if applicable): N/A gallons Requires more than 1 pump? ☐ Yes ☑ No

Pump Requirements: _____ ft. TDH vs. _____ GPM Grease Trap Size (if applicable): N/A 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 [.1937(h)]: ☐ Yes ☑ No

Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: ☐ Yes ☑ No

Declaration of Restrictive Covenants: ☐ Yes ☑ No

Pre-Construction Conference Required: Yes ☑ No ☐

Conditions: _____

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958, and .1959 are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

AOWE/PE Print Name: Larry Thompson, LSS Expiration Date: 12-31-23

AOWE/PE Signature: _____ Date: 11-15-23

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

See attached site sketch

Permit #: OSWP-2023-41217

This Section for Local Health Department Use Only

Initial submittal received: 11/20/23 (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 Weber Date of Issuance: 11/20/23

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: 11/20/25

See attached site sketch

Residential Subsurface Wastewater Treatment and Disposal System SL 2022-11 Proposal

for

Lot 1 – Summertree
115 Rainwood Drive
Troutman, NC 28173

Iredell County PIN: 4751-20-5816.000
March 9, 2023

Prepared for:

Jerry and Amanda Hogan
118 Spring Lake Drive
Troutman, NC 28166
704-528-7960



Prepared by:

Larry Thompson, REHS, LSS
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541
Phone: 704-301-4881
larry@thompsonenv.com



Details

Jerry and Amanda Hogan have contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a SL 2022-11 septic permit package for a new 3-bedroom single-family residence to be located at 115 Rainwood Drive, Troutman, North Carolina (Iredell County Parcel Number: 064751-20-5816.000).

Based upon a previous soil evaluation performed by TEC, it was determined that a sufficient amount of "Provisionally Suitable" Group IV soils are available for the installation of an initial **Pump to Accepted System** for a 360 gallon-per-day residence at a 0.25 GPD/sq/ft long-term acceptance rate (LTAR). The repair system will be a Pump to a Horizontal PPBPS at a 0.25 LTAR. The property will be served by a private well.

The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit and Construction Authorization in accordance with G.S. 130A-335(a2), (a5) and (a6). The property owner requests Iredell County Environmental Health (ICEH) issue the appropriate permits for a subsurface wastewater treatment and disposal system based upon the following SL 2022-11 proposal.

Location

From Statesville, take US-21 south for 1.6 miles, then left on Amity Hill Road. In 5.1 miles, left onto Pilch Road, then right onto Ostwalt Amity Road in 0.6 mile. First left onto Franklin Woods Lane, 115 Rainwood Drive will be on left in 0.3 mile.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, April 1, 2017.

Accepted Wastewater System No. AWWS-2005-02-R6; North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, August 21, 2015.

Primary Investigator's Credentials

NC Registered Sanitarian No. 1208
NC Licensed Soil Scientist No. 1287
NC Authorized Onsite Wastewater Evaluator No. 10016E
SC Certified Professional Soil Classifier No. 111
NC Subsurface Septic System Operator No. 22199
NC Grade IV Wastewater System Installer No. 1762
NC Certified Wastewater System Inspector No. 17621

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1,000 gallons in capacity.
2. The septic tank shall be fitted with an approved effluent filter.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tanks have had time to properly cure and are free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound, and 1,000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless-steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4x rated control panel. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
5. Panel and control equipment shall include lightning protection, be protected from unauthorized access, and always remain accessible to the system operator.
6. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. Pipe, Fittings and Supply Line

1. All discharge piping, connectors, and supply lines should be made of SCH 40 PVC and fitted with pressure-rated couplings.
2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
3. The supply line will be constructed of 2-inch SCH 40 PVC pipe with pressure fittings.
4. The supply line length is approximately 78 feet.

D. Distribution Method

1. The system will be fed by a pressure manifold.

2. The pressure manifold shall be contained within an adequately sized box/vault that will allow future repair lines to be installed and is designed to allow for drainage of effluent that may accumulate in it during flushing and head pressure adjustments. The box should be placed upon a gravel base.
3. A gate valve shall be provided at the pressure manifold box to allow for final pressure adjustment (2 foot of head pressure as per design).
4. The pressure manifold shall be constructed of SCH 80 PVC.
5. There shall be 5 taps: (5) 1/2in SCH 40 PVC
6. The connecting pipe between the pressure manifold taps and the drainfield shall be constructed of PVC.

E. Drainfield Installation

1. The drainfield has been previously laid out on-site utilizing metal stemmed flags. The property owner/builder should mark this area and isolate it as much as possible from construction traffic
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition.
3. The specified system is an accepted wastewater system, specifically the Infiltrator Quick 4 chamber system or any other system with a state-approved 25% reduction in required drainline length.
4. The drainfield consists of five (5) lateral trenches 3-foot wide by 72-ft long. **Total trench length is 360 feet**.
5. The maximum trench depth for this system shall be **13 inches**.
6. The laterals are to be installed on contour with the land, keeping the individual trench bottoms level from beginning to end.
7. The trenches should be left open for the final inspection by the health department.

F. Final Landscaping

1. The final soil cover over the drainfield shall be a minimum of 6 inches deep.
2. The drainfield shall be shaped to shed rainwater and be free from low spots.
3. The drainfield area should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

Maintenance

G. In General

1. The homeowner must maintain the drainfield area through periodic mowing. The drainfield must not be allowed to become overgrown.
2. The septic tank should be pumped every 4 years or when the solids within the septic tank reach an elevation equivalent to 25 percent of the tank's volume. In some situations, the tanks may need to be pumped more frequently. If using a garbage disposal, it is recommended that the homeowner has the septic and pump tanks cleaned out annually.

3. When cleaning the effluent filter, the filter should be removed, and the accumulated debris will be washed back into the septic tank – not onto the lawn.
4. Any damp areas, leakages, or malfunctions in the drainfield area should be addressed immediately.
5. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

Design Specifics

Daily Design Flow:	360 GPD – 3 bedroom house
Septic Tank Size:	1,000 Gallons (minimum)
Pump Tank Size:	1,000 Gallons (minimum)
Pump Requirement:	35.55 GPM at 13.73-ft TDH
Recommended Pump:	Goulds WE03L or equivalent
Recommended Dose Rate:	180 Gallons
Pump Run Time:	5.06 Minutes
Pump Tank Drawdown:	8.57 Inches (Assumes 21 GPI)
Effluent Loading Rate:	0.25 GPD per sq. ft.
Distribution Method:	Pressure Manifold
Number of Drainlines	(5) 3-ft Wide x 72-ft Long
Total Trench Length:	360 Linear Feet
Maximum Trench Depth:	13 Inches

Repair Option

Effluent Loading Rate:	0.25 GPD per sq. ft.
Drainfield Type:	Pump to Horizontal PPBPS
Required Linear Footage:	240 Linear Feet
Available Linear Footage:	254 Linear Feet
Maximum Trench Depth:	20 Inches

Figure 1. Rainwood Drive

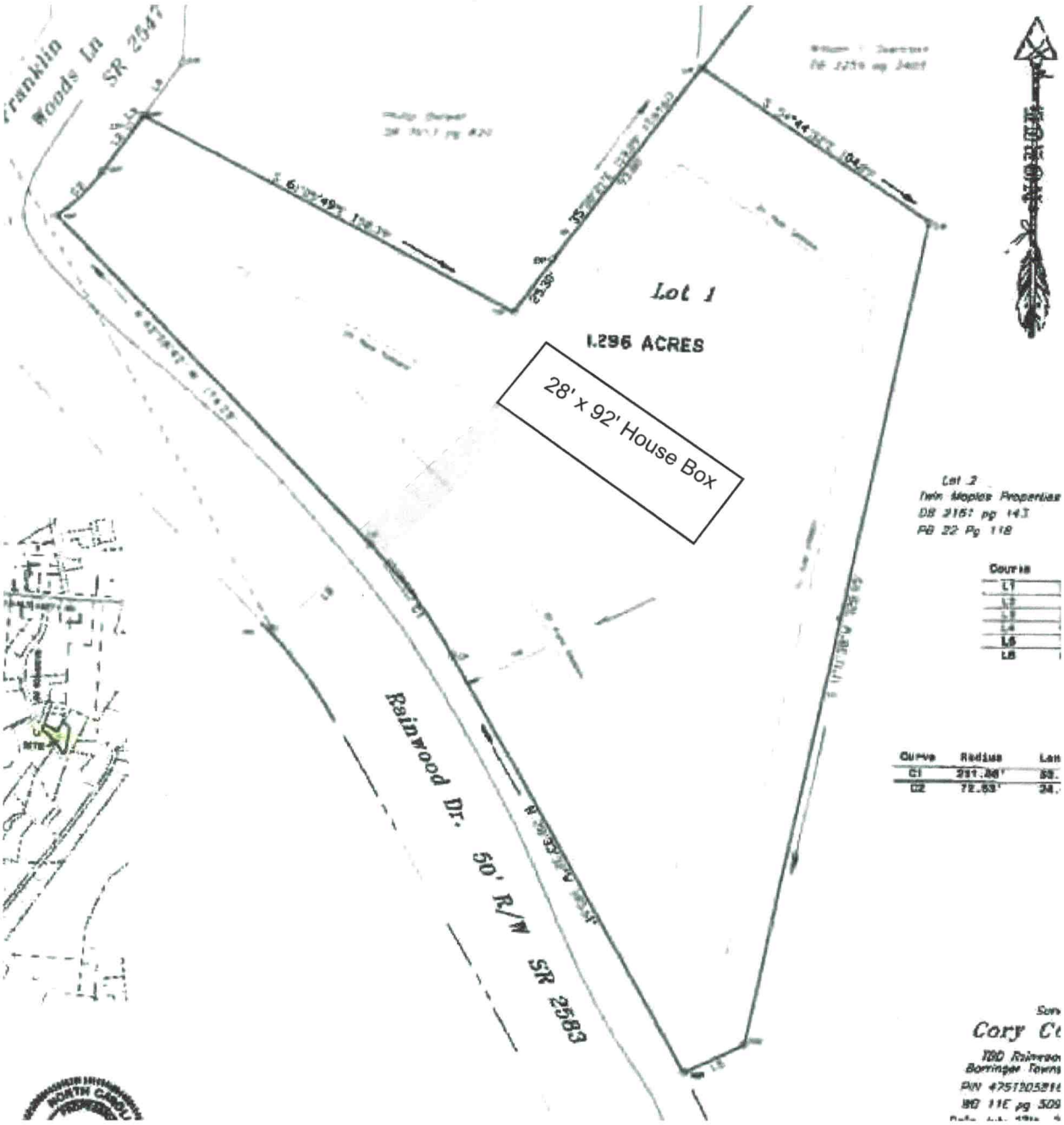
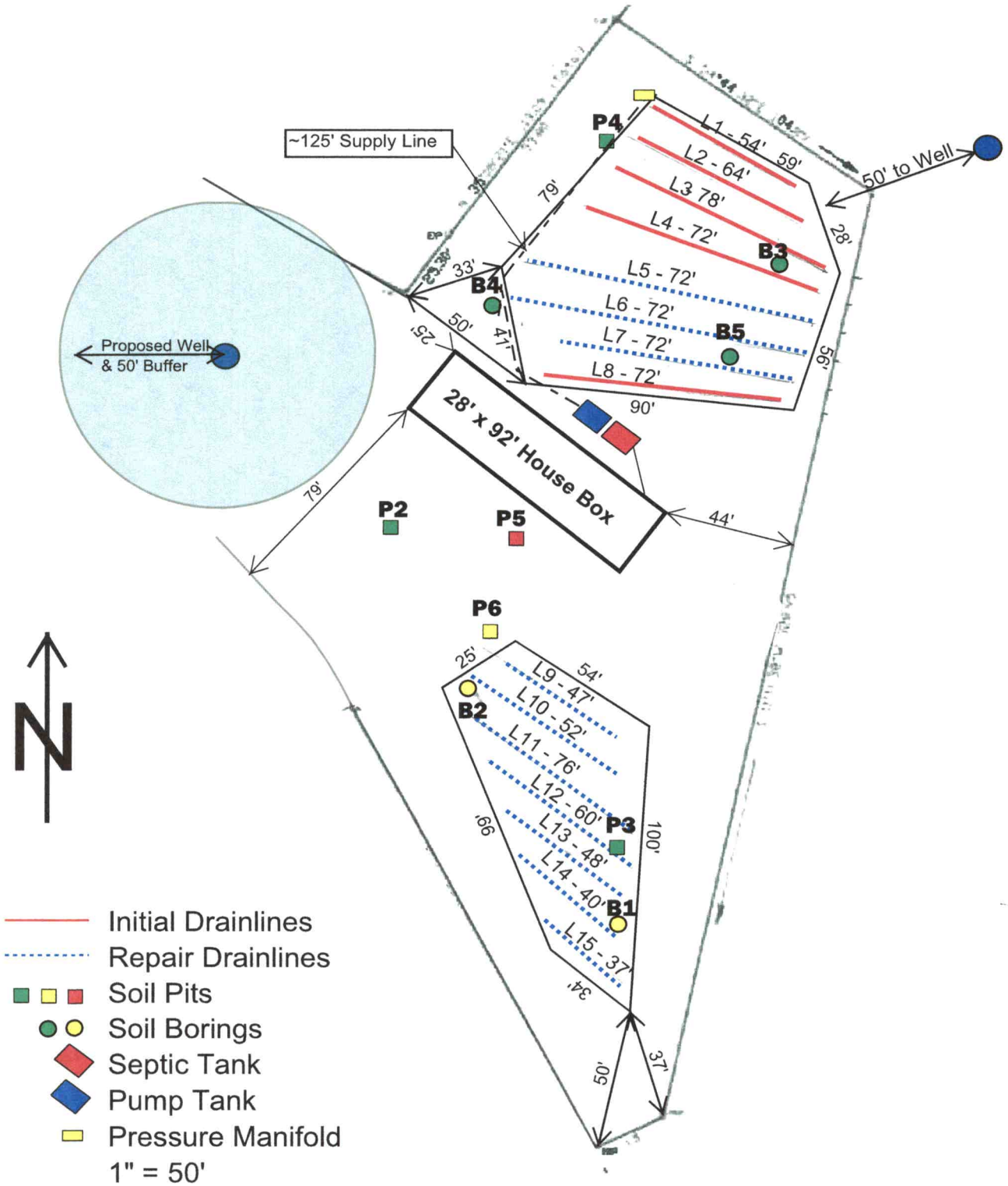


Figure 2. Original Layout



Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107

PROPERTY ID #: 1751205816 0000
COUNTY: Iredell

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

OWNER: Katherine Lacy
ADDRESS:
PROPOSED FACILITY: Res PROPOSED DESIGN FLOW (.1949):
LOCATION OF SITE: Rainwood Drive, Troutman, NC 28166

DATE EVALUATED: 9.26.22
PROPERTY SIZE: 1.29 ac
PROPERTY RECORDED:

WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LS 3%	0-50	FILL		10YR 6/2 22"				US
2	LS 5%	0-5 5-15 15-45	FILL GR/SCL SBK/C	FR/SS/SP/SM FI/SP/SM	—	46"	—	—	PS 0.25
3	LS 3%	0-2 2-53	GR/SL SBK/C	FR/SS/NP/SM FI/SP/SM	—	53"	—	—	PS 0.3
4	LS 3%	0-3 3-11 11-36	GR/SL SBK/SCL SBK/C	FR/SS/NP/SM FI/SS/NP/SM FI/SP/SM	10YR 6/2	36"	—	—	PS 0.25

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	"Accepted"	Low-Profile Chamber
Site LTAR	0.25	0.25

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): Provisionally Suitable
EVALUATED BY:
OTHER(S) PRESENT: Carter Rodgers

LICENSED SOIL SCIENTIST LARRY B. THOMPSON, JR. 1287 STATE OF NORTH CAROLINA

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

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

PROPERTY ID #: 4TS1205816.000
DATE OF EVALUATION: 9.26.22
COUNTY: Iredell

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
5	LS 3%	0-16	A&L/C	VFI/S/P/e&P	10YR 5/2	–	–	–	US
		16-46	M/CL	FI/SS/SP/S&P					
6	LS 4%	0-2	GR/SCL	FR NS/NS	10YR 5/2	22"	–	–	P3 0.2
		2-22	SCL/C	FI/SR/SP					

COMMENTS:

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			EXP (Expansive)	M (Massive)
D (Drainage Way)						CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

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

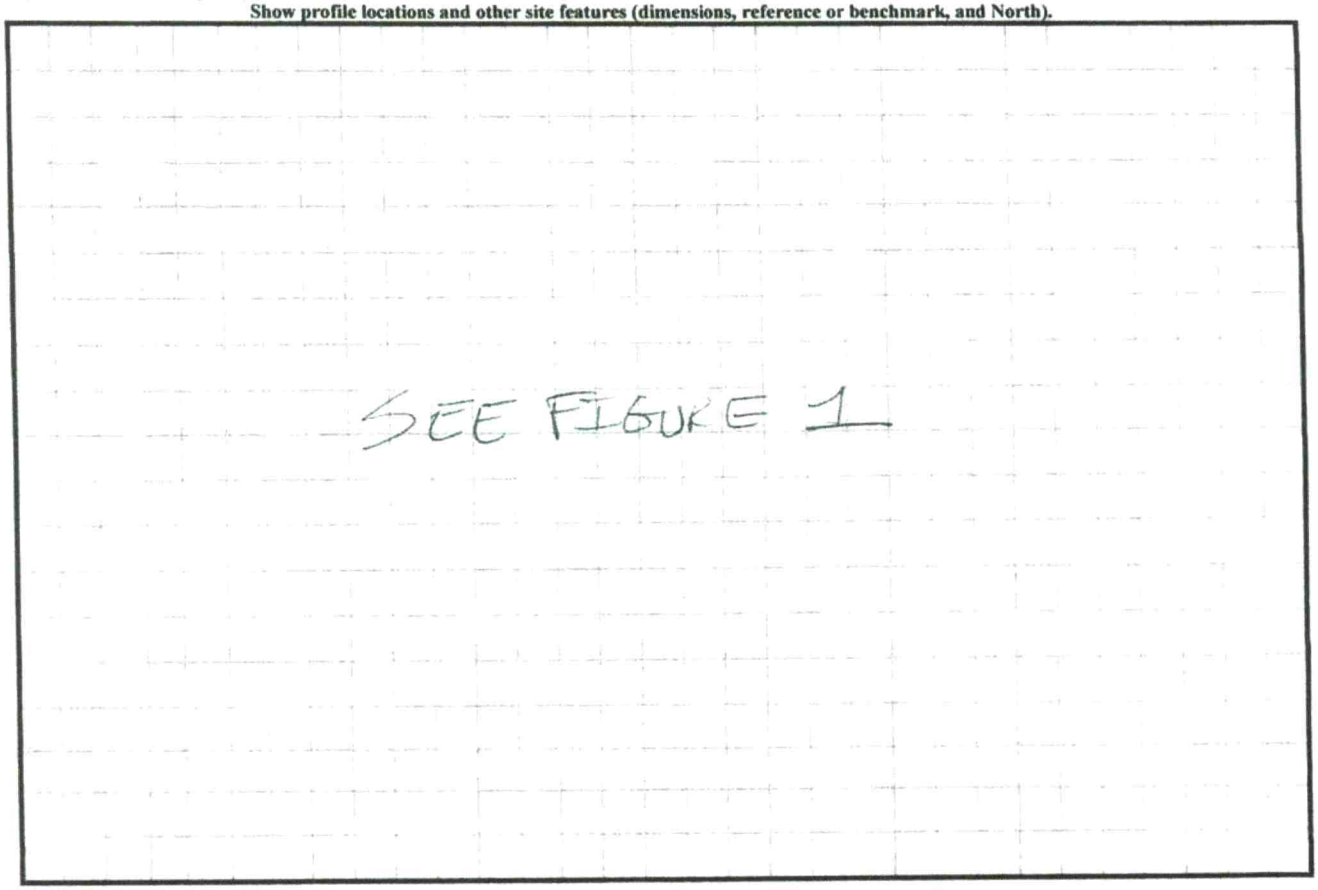
NOTES

HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S(suitable) or U(unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

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



Soil Evaluation Form

Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107

RAINWOOD

Sheet 1 of 1
Job: 115 RAINWOOD
County: IREDELL
Date: 3-1-23

Soil Borings

	B1	B2	B3	B4	B5					
Landscape Position	LS	LS	LS	LS/TS	LS/TS					
Slope (%)	5	5	4	3	2					
Horizon 1 Depth	0-24+	0-4	0-16	0-8	0-5					
Texture	C	CL	SL	SL	SL					
Consistence	FI	FR	FR	FR	FR					
Structure	SBK	GR	GR	GR	GR					
Clay Mineralogy	S	S	N	N	N					
Horizon 2 Depth		4-24+	16-35+	8-27+	5					
Texture		C	SC	C	C					
Consistence		FI	FI	FI	FI					
Structure		SBK	SBK	SBK	SBK					
Clay Mineralogy		S	S	S	S					
Horizon 3 Depth										
Texture										
Consistence										
Structure										
Clay Mineralogy										
Horizon 4 Depth										
Texture										
Consistence										
Structure										
Clay Mineralogy										
Horizon 5 Depth										
Texture										
Consistence										
Structure										
Clay Mineralogy										
Soil Wetness	23	23	34	25	32					
Restrictive Horizon										
Saprolite										
Other										
CLASSIFICATION	LPC	LPC	PS	PS	PS					
LTAR (gpd/ft^2)	0.25	0.25	0.3	0.25	0.25					

Comments:

Evaluated by: M. Wood, E. Wood

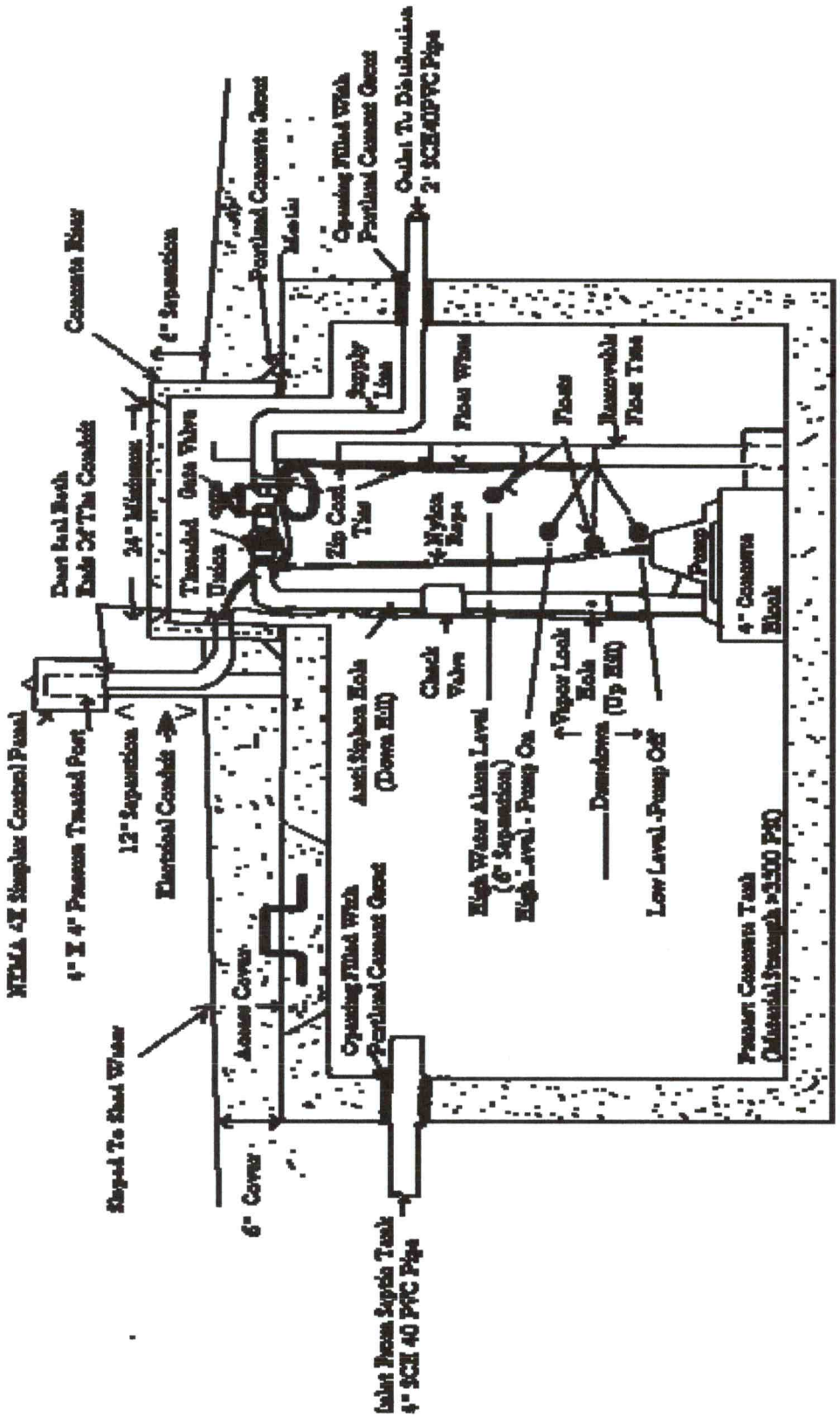
Thompson Environmental Consulting, Inc
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 4751205816.000

Location: 115 Rainwood Drive, Troutman, NC

Date: March 9, 2023

Recommended Pump Tank Design



PRESSURE MANIFOLD DESIGN - Initial System

Name: Michael Wood **Address:** Rainwood Road

Daily Flow: 360 **gal/day** **L.T.A.R.:** 0.250 **gal/day/sq.ft**

Septic Tank: 1000 **gals** **Pump Tank:** 1000 **gals** **Sq. Foot:** 1080

Number of Taps: 5 **Length of Trenches:** 360 **ft(See Tap Chart for Details)**

Depth of Trenches: 13 **in** **Manifold Length:** 48 **in**

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

Supply Line: length: 78 **ft** **Diameter:** 2 **in sch 40pvc**

Friction Loss + Fitting Loss: 4.23 **ft(supply line length + 70' for fittings in pump tank)**

Design Head: 2 **ft** **Elevation Head:** 7.50 **ft**

Total Head: 13.73 **ft** **Pump to Deliver:** 35.55 **gals/min at** 13.73 **ft head**

Dosing Volume: 176 **gals,**

Drawdown: 180 **gals divided by** 21 **gals/in =** 8.57 **inches**

TAP CHART

Bench Mark		is = 100.00	Pump Tank				**Design Head:**	2	
Pump tank elev.			100.00	**Pump elev.**	95.00		**Manifold elev.**	102.50	
line	**color**	**rod read**	**Elevation**	**length**	**hole size**	**flow/tap**	**gal/day**	**trench area**	**LINE LTAR**
4	Blue	5.5	101.50	72	1/2in SCH 40	7.11	72.00	216	0.333
5	Green	5.8	101.20	72	1/2in SCH 40	7.11	72.00	216	0.333
6	White	6.2	100.80	72	1/2in SCH 40	7.11	72.00	216	0.333
7	Blue	6.45	100.55	72	1/2in SCH 40	7.11	72.00	216	0.333
8	Green	6.7	100.30	72	1/2in SCH 40	7.11	72.00	216	0.333
		total	**feet =**	**360**	**gal/min =**	**35.55**		**LTAR =**	**0.250**
% of Dose Vol.		50		**Des. Flow**	360			**(ltar + 5%)**	0.263
Dose Volume		180						**(ltar W/ INOV)**	0.333
Dose Pump Time		5.06		**Tank Gal/IN**	21			**(ltar + 5%)**	0.350
Drawdown in Inches		8.57		**Elev. Head**	7.50				
Supply Line Length		78							

Comments:

Hydraulic Profile

Manifold Elevation	102.50
Pump tank elev.	100.00
Pump elev.	95.00

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • 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

Please check one of the following:
☑ New Construction ☐ Expansion ☐ System Relocation ☐ Change of Use ☐ Repair
☑ 5 Year Expiration Requested (site plan provided)
☐ Non-Expiring Permit Requested (plat provided, as defined in G.S. 130A-334(7a)

Property Owner Name: Jerry and Amanda Hogan
Property Owner Mailing Address: 118 Spring Lake Drive, Troutman, NC 28166
Property Owner Phone Number: 704-528-7960
Property Owner Email Address: mandi182127@yahoo.com

Applicant Name: Larry Thompson
Applicant Mailing Address: PO Box 541, Midland, NC 28107
Applicant Phone Number: 704-301-4881
Applicant Email Address: larry@thompsonenv.com

Does the property include, or is subject to, any of the following:
☐ Yes ☑ No Previously identified jurisdictional wetlands
☐ Yes ☑ No Existing or proposed easements, rights-of-way, encroachments, or other areas subject to legal restrictions
☐ Yes ☑ No Approval by other public agencies

A site plan or plat is required, **OR** the site sketch submitted from the LSS/AOWE, must include the following:
(A) existing and proposed facilities, structures, appurtenances, and wastewater systems
(B) proposed wastewater system showing setbacks to property line(s) or other fixed reference point(s)
(C) existing and proposed vehicular traffic areas
(D) existing and proposed water supplies, wells, springs, and water lines; and
(E) surface water, drainage features, and all existing and proposed artificial drainage, as applicable.

Requesting DHHS review: ☐ Yes ☑ No

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: _____ Date: 11-06-23

Owner's Signature: Paul T. Allen Date: 11-6-23

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

(Check and sign only ONE of the options below)

☐ **1. * APPLICANT AND OWNER ARE THE SAME. * (*Sign here*)** _____

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative: *Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship*

In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:

Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form. If there are multiple property owners, then all property owners must sign the form that designates a legal representative.

By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

☒ **2.** I, Amanda Hogan, am the legal owner(s) of the property located at 115 Rainwood Drive, Troutman, NC 28173, identified as PIN (Parcel Identification Number) 4751-20-5816.000, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Larry Thompson, Thompson Environmental, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

Amanda L. Hogan
Amanda L. Hogan (Mar 14, 2023 17:13 EDT)

Signature of Owner(s) — Date: Mar 14, 2023

The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5) and (a6).

Mooresville - Environmental Health
barbara.nebel@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677