Lot 123 - Ridgecrest
127 Beaverwood Lane

PIN#: 4738015327

State of NC LSS Permit Option COVID-19

LHD Reference: OSWP 2022 -10432

PART 3: **Authorization to Operate (ATO)**

Except for date received, the Section below is to be completed by the Owner.

LHD USE ONLY: Initial submittal of request for ATO received: 12/13/2022 (Date) by BB (Initials)

Date of Post-construction Conference: NA

The following items are included in this submittal for an Authorization to Operate under an LSS COVID-19 permit:

1. Signed and sealed copy of the LSS's report that includes:
   a. Signed and sealed evaluation of soil conditions and site features — [X] Yes [ ] No
   b. Drawings, specifications, plans — [X] Yes [ ] No
   c. Reports on special inspections and final inspection — [X] Yes [ ] No
   d. Management Program manual — [X] Yes [ ] No
   e. On-site Wastewater Contractor's signed statement — [X] Yes [ ] No
2. Fee (as applicable) — [X] Yes [ ] No
3. Notarized letter documenting Owner's acceptance of the system from the LSS — [X] Yes [ ] No
4. On-site Wastewater Contractor name: Sid Gaskins License number: 1077
   Mailing address: 4744 Celia Creek Road City: Lenoir State: NC Zip: 28645
   Telephone number: 828-244-9765 E-mail Address: sid@watermanagementnc.net
5. Proof of Errors and Omissions or other appropriate liability insurance for the On-site Wastewater Contractor is attached and includes the name of the insurer, name of the insured, and the effective dates of coverage.
   [X] Yes [ ] No

Attestation by the Owner for Authorization to Operate

I, Century Complete (*Print name of Owner*) hereby attest that all items indicated above have been provided to the Iredell County LHD and the system shall meet applicable federal, State, and local laws, regulations, rules and ordinances.

Glenn Bird (Dec 12, 2022 10:51 EST) (*Signature of Owner*) December 12, 2022 (*Date*)

This section for LHD Use Only.

LHD Review of required information for the ATO

[ ] INCOMPLETE

Based upon review of information submitted by the Owner in the Section above, the following items are missing from the information required for an Authorization to Operate for an LSS COVID-19 permit: _____.

Copies of this signed form were sent to the LSS and the Owner on _____ (*Date*) via _____ (*Email, FAX, USPS, Hand-delivered*).

_____ (*Print name of authorized Agent of the LHD*) _____ (*Signature of authorized Agent of the LHD*) _____ (*Date*)

[X] COMPLETE

Based upon review of information submitted by the Owner in the Section above, this Authorization to Operate is hereby issued in accordance with G.S. 130A-336.2(m).

A copy of this complete NOI/ATO with tracking information was sent to the State on 12/15/22 (*Date*) via Email (*Email, FAX, USPS, Hand-delivered*).

Benjamin A Botkins (*Print name of authorized Agent of the LHD*) Benjamin A Botkins (*Signature of authorized Agent of the LHD*) 12/15/22 (*Date*)

ISSUANCE OF CERTIFICATE OF OCCUPANCY: Once the LHD determines completeness based upon the ATO submission, the owner may apply to the local permitting agency for permanent electrical service to a residence, place of business or place of public assembly pursuant to G.S. 130A-339.

Century Complete
9325 Center Lake Dr., Suite 160
Charlotte, NC 28216

Subject: Septic System Installation
Lot 123 - Ridgecrest
127 Beaverwood Lane
Statesville, NC 28625

The septic system installed on the above-referenced property was specified by Larry Thompson, LSS, and installed by Sid Gaskins.

Century complete does hereby accept the septic system installation for Lot 123 – Ridgecrest.

Century Complete (signature) 12-12-22 Date

NORTH CAROLINA NOTARY ACKNOWLEDGMENT

THE STATE OF NORTH CAROLINA

COUNTY OF Union

I, Glenn R Bird, Notary Public, do hereby certify that Katie Dyess (name of individual(s) whose acknowledgment is being taken) personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal this 12 day of December 2022.

Notary Public Signature

Print Glenn R Bird

My commission expires: August 23, 2027

(Official Seal)

GLENN R BIRD
NOTARY PUBLIC
Union County
North Carolina
My Commission Expires August 23, 2027

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/14/2022

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 RIC, a Bankers Insurance Company 128 NC-65 Reidsville NC 27320 License#: 6387078 WATEMAN-01	**CONTACT NAME:** Betsy Darst **PHONE (A/C, No, Ext):** 336-280-0316 **FAX (A/C, No):** 800-899-0146 **E-MAIL ADDRESS:** bdarst@bankersinsurance.net
INSURED Water Management of North Carolina, LLC 4744 Celia Creek Rd Lenoir NC 28645-6706	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** Frankenmuth Mutual Insurance Company / 13986 **INSURER B :** **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 880362191 **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: [X] POLICY [ ] PRO-JECT [ ] LOC OTHER:			6657470	2/26/2022	2/26/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			6657469	2/26/2022	2/26/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
A	[ ] **UMBRELLA LIAB** [ ] OCCUR X **EXCESS LIAB** [ ] CLAIMS-MADE DED [X] RETENTION $ 10,000			6657470	2/26/2022	2/26/2023	EACH OCCURRENCE AGGREGATE $	$ 5,000,000 $ 5,000,000 $
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [Y] **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		6657468	2/26/2022	2/26/2023	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
A	Leased/Rented Equipment			6657470	2/26/2022	2/26/2023	Max Per Item (ACV) Deductible	$100,000 $500

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The Workers Compensation policy contains an Owner/Member exclusion for Sidney Gaskins.

CERTIFICATE HOLDER

Thompson Environmental Consulting
P.O. Box 541
Midland NC 28107
USA

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
Betsy G. Darst

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December 12, 2022

RE: Septic System Installation
Lot 123 – Ridgecrest Subdivision
127 Beaverwood Lane
Statesville, NC 28625

The purpose of this letter is to confirm that the septic system installation for Lot 123 – Ridgecrest has been installed in general accordance with the proposal submitted to your office by Larry Thompson, LSS.

Sincerely,

Sidney L. Gaskins, Jr.

Sidney L. Gaskins, Jr. (Dec 13, 2022 05:04 EST)

Sid Gaskins
Water Management of North Carolina, LLC

THOMPSON ENVIRONMENTAL CONSULTING, INC.
WATER ♦ WASTEWATER ♦ WETLANDS

December 15, 2022

RE: Septic System Installation
Ridgecrest – Lot 110
Statesville, NC 28625

The purpose of this letter is to confirm that the septic system installation for Ridgecrest – Lot 123, Statesville, NC 28625 was installed in general accordance with the proposals submitted to your office. This system has been inspected for the LSS COVID-19 permit closeout process.

Sincerely,

Larry B. Thompson, Jr.

PO BOX 541 • MIDLAND, NC • 28107
PHONE: 704-301-4881 • EMAIL: LARRY@THOMPSONENV.COM
WEB: WWW.THOMPSONENV.COM

Residential Subsurface Wastewater Treatment and Disposal System COVID-19 Proposal

for

Lot 123 - Ridgecrest
127 Beaverwood Lane
Statesville, NC 28625

Tax Parcel Number: 4738015327
November 30, 2022

Prepared for:

Glenn Bird
Century Complete
9325 Center Lake Dr., Suite 160
Charlotte, NC 28216
1-833-791-0192



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

Century Complete has contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a revised septic proposal for a new 3-bedroom single family residence to be constructed on Lot 123 – Ridgecrest, 127 Beaverwood Lane, Statesville, North Carolina.

Based upon a soil investigation performed by TEC, it was determined that a sufficient amount of "Provisionally Suitable" Group IV soils are available for the installation of a **Pump-To Accepted System** for a 360 gallon-per-day residence with a at a 0.3 GPD/sq/ft/ long-term acceptance rate (LTAR). The proposed repair area will be a Non-Treated Drip Dispersal System, and the property will be served by a public water.

The enclosed Licensed Soil Scientist Evaluation is being submitted pursuant to and meets the requirements of SL 2020-97 Section 3.19. Century Complete would like to request that local health department issue the appropriate permits for a subsurface wastewater treatment and disposal system based upon the following proposal and the enclosed Licensed Soil Scientist Evaluation.

Location

From Statesville, take NC-115 north 7.1 miles. Turn right on Branchwood Road for 0.8 mile, then right onto Grassy Meadow Lane. First left onto Beaverwood Lane, Lot 123 is on left in cul-de-sec.

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 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. 1762

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 (minimum) in capacity.
2. The septic tank will 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 tank has had time to properly cure and is 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. Supply line shall consist of a 2-inch SCH 40 PVC pipe with pressure fittings.

D. Pressure Manifold

1. A pressure manifold shall be used to distribute wastewater to six drainlines.

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 6 taps of varying sizes: (2) 3/4in SCH 40, (1) 3/4in SCH 80, (2) 1/2in SCH 40, and (1) 1/2in SCH 80.
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 six (6) lateral trenches comprised of (1) 3-ft wide by 70-ft long, (1) 3-ft wide by 66-ft long, (1) 3-ft wide by 58-ft long, (1) 3-ft wide by 42-ft long, (1) 3-ft wide by 38-ft long, and (1) 3-ft wide by 30-ft long. Total trench length is 304 feet.
5. The maximum trench depth for this system shall be **15 inches (Low-Side)**.
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 LSS.

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.

G. Utility Conflicts

1. The builder and property owner must take special care in planning for water, power, gas, telephone, and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation.

2. Lawn irrigation should not be placed over the drainfield area.
3. If there are any questions regarding preferred routes, contact the LSS as soon as possible.

Maintenance

H. 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 that is equivalent to 25 percent of the volume of the tank. 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 it becomes necessary to clean the effluent filter, the filter should be removed, and the accumulated debris 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 Home
Septic Tank Requirements:	1,000 Gallon Septic Tanks
Pump Tank Requirements:	1,000 Gallon Pump Tank
Effluent Loading Rate:	0.3 GPD per sq. ft.
Drainfield Type:	Infiltrator Quick4 Plus Standard
Distribution Method:	Pressure Manifold
Number of Taps:	6 Total (2) 3/4in SCH 40 (1) 3/4in SCH 80 (2) 1/2in SCH 40 (1) 1/2in SCH 80
Number of Drainlines:	6
Drain Lines:	(1) 3-ft wide by 70-ft long (1) 3-ft wide by 66-ft long (1) 3-ft wide by 58-ft long (1) 3-ft wide by 42-ft long (1) 3-ft wide by 38-ft long

	(1) 3-ft wide by 30-ft long
Total Trench Length:	304 Linear Feet
Maximum Trench Depth:	15 Inches (Low-Side)
Final Cover Requirement:	6 Inches (minimum)
Pump Requirements from Barn:	54.8 GPM at 25.48 Feet TDH
Recommended Pump:	Liberty FL30 (or equivalent)
Dose Volume:	180 Gallons
Pump Run Time:	3.28 Minutes
Pump Tank Drawdown:	8.57 Inches – Assumes 21 gallons per inch.

Repair Option

Effluent Loading Rate:	0.1 GPD per sq. ft.
Drainfield Type:	Non-Treated Drip Dispersal
Required Square Footage:	3,600 Square Feet
Available Square Footage:	4,600+ Square Feet
Installation Depth:	6 Inches

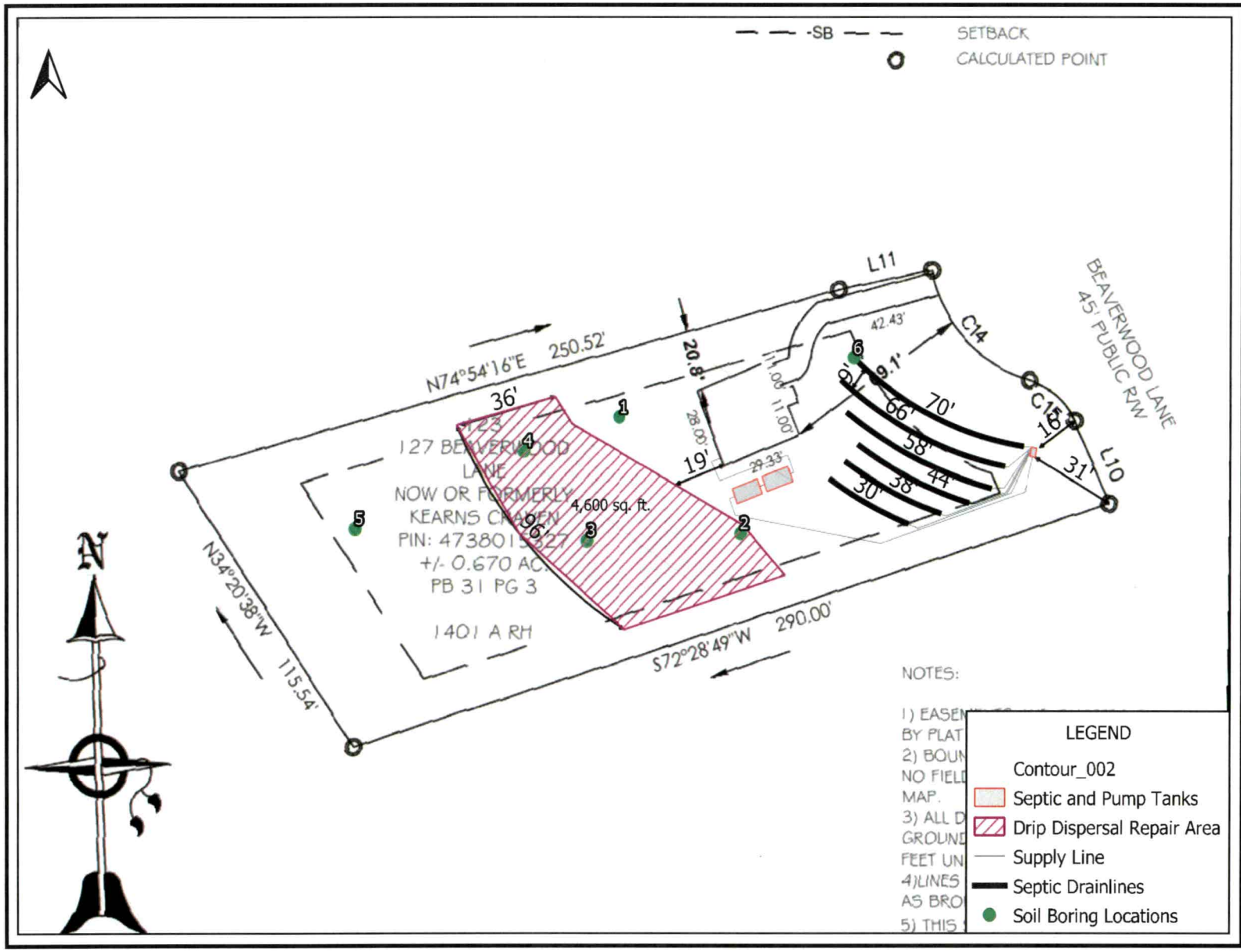


FIGURE 1

Prepared For:

Century Complete

Proposed Septic Layout

Lot 123 - Ridgecrest
127 Beaverwood Lane
Statesville, NC 28625

Iredell County

Scale:
0 20 40 ft

Date:	TEC Job No.
November 2022	22-370

Thompson Environmental Consulting
WATER · WASTEWATER · WETLANDS

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
HELEN WOLSTENHOLME • Interim Deputy Secretary for Health
MARK T. BENTON • Assistant Secretary for Public Health
Division of Public Health

COMMON FORM FOR LICENSED SOIL SCIENTIST COVID-19 PERMIT OPTION FOR NON-ENGINEERED SYSTEMS
See Instructions for Use in Appendix A

Except for "Date received", this Section to be completed by the LSS in accordance with S.L. 2020-97, Section 3.19 and G.S. 130A-336.2

LHD USE ONLY: Initial submittal of this NOI received: 12-7-2022 (Date) by BB (Initials)

PART 1: Notice of Intent to Construct (NOI) - Please check all that apply

☒ Single System or ☐ Multiple Systems

AND

☒ New ☐ Expansion ☐ Relocation of all or part of the Existing System ☐ Relocation of Repair Area

☐ Repair – LHD Permit Number _____ ☐ Repair – EOP/LSS COVID 19/AOWE Permit Number _____

1. Facility Owner's name: (Owner, Company Name, Utility, Partnership, Individual, etc.): Century Complete

Mailing address: 9325 Center Lake Dr., Suite 160 City: Charlotte State: NC Zip: 28216

Telephone number: 833-791-0192 E-mail Address: glenn.bird@centurycommunities.com

2. Licensed Soil Scientist (LSS) name: Larry Thompson, LSS LSS License number: 1287

Mailing address: PO Box 541 City: Midland State: NC Zip: 28107

Telephone number: 704-301-4881 E-mail Address: larry@thompsonenv.com

3. Licensed Geologist (LG) (if applicable) name: N/A License Number: _____

Mailing address: _____ City: _____ State: _____ Zip: _____

Telephone number: _____ E-mail Address: _____

4. Proof of Errors and Omissions or other appropriate liability insurance for the following persons is attached that includes the name of the insurer, name of the insured and the effective dates of coverage:

☒ LSS ☐ LG

5. Property location (physical address, tax parcel identification number or subdivision lot, block number of the property to be permitted): Lot 123 - Ridgecrest, 127 Beaverwood Lane, Statesville, NC 28625

County Name: Iredell

6. Type of facility: ☒ Place of residence No. Bedrooms: 3 No. Occupants: 6

☐ Place of business Basis for flow calculation: _____

☐ Place of public assembly Basis for flow calculation: _____

7. Factors that would affect the wastewater load: Design is for domestic strength wastewater only.

8. Type and located of proposed wastewater system: Pump-To PPBPS located to the front left of the proposed house site. System Type III(e).

9. Design wastewater flow: 360 gpd

   Design wastewater strength: ■ domestic ☐ high strength ☐ industrial process *(For industrial process wastewater, a Professional Engineer licensed in accordance with G.S. 89C shall design the on-site wastewater system.)*

10. A plat as defined in G.S. 130A-334(7a) is attached: ☐ Yes ■ No

    A site plan as defined in G.S. 130A-334(13a) is attached: ■ Yes ☐ No

11. Location of proposed or existing wells (drinking water, irrigation, geothermal, groundwater monitoring, sampling, etc.) and any potable and non-potable water conveyance lines is indicated on attached plans and complies with 15A NCAC 18A .1950: ■ Yes ☐ No

    This is a saprolite system. ☐ Yes ■ No

12. Evaluation(s) of soil conditions and site features in accordance with G.S. 130A-335(a1) signed and sealed by a LSS is attached: ■ Yes ☐ No

13. Evaluation of geologic and hydrogeologic conditions signed and sealed by a LG is attached ☐ Yes ■ NA

14. Proposed landscape, site, drainage, or soil modifications are attached: ☐ Yes ■ NA

Attestation by LSS pursuant to S.L. 2020-97, Section 3.19 and G.S. 130A-336.2

I, Larry Thompson, LSS hereby attest that the information required to be included with
Licensed Soil Scientist (Print Name)
this Notice of Intent to Construct is accurate and complete to the best of my knowledge and that the proposed system shall meet applicable federal, State, and local laws, regulations, rules and ordinances, and that the proposed system does not require a Professional Engineer, licensed in accordance with G.S. 89C, and in accordance with 15A NCAC 18A .1938 and activities determined to be engineering as determined by the North Carolina Board of Examiners for Engineers and Surveyors.

Signature of Licensed Soil Scientist 11-30-22 *Date*

Owner self-submittal of NOI:

I, _____ hereby submit this NOI prepared by _____
Print Name of Owner *Print Name of Licensed PE*

pursuant to G.S. 130A-336.1.

_____ _____
Signature of Owner *Date*

NOTES:

LIABILITY: The Department, the Department's authorized agents, or local health departments shall have no liability for wastewater systems designed, constructed, and installed pursuant to an LSS COVID-19 Permit Option [S.L. 2020-97, Section 3.19(d) and G.S. 130A-336.2(f)]

RIGHT OF ENTRY: The submittal of this **Notice of Intent to Construct** *grants right of entry to the Local Health Department and the State to the referenced property.*

ISSUANCE OF BUILDING PERMIT: Once the LHD deems that the Notice of Intent to Construct is complete via signature in the section below, the owner may apply to the local permitting agency for a permit for electrical, plumbing, heating, air conditioning or other construction, location, or relocation activity under any provision of general or special law pursuant to G.S. 130A-338.

This section for Local Health Department use only.

PART 2: *LHD Completeness Review of the Notice of Intent to Construct*

"(c) Completeness Review for Notice of Intent to Construct. –The local health department shall determine whether the notice of intent to construct required pursuant to subsection (b) of this section is complete within five business days after receiving the notice of intent to construct. A determination of completeness means that the notice of intent to construct includes all of the required components. If the local health department determines that the notice of intent to construct is incomplete, the local health department shall notify the owner and list the information needed to complete the notice. The owner may then submit additional information to the local health department to cure the deficiencies in the initial notice. The local health department shall make a final determination as to whether the notice of intent to construct is complete within five business days after the department receives the additional information. If the local health department fails to act within any time period set out in this subsection, the owner may treat the failure to act as a determination of completeness. The owner shall be able to apply for the building permit for the project upon the decision of completeness of the notice of intent by the local health department or if the local health department fails to act within the five business day time period."

The review for completeness of this Notice of Intent was conducted in accordance with G.S. 130A-336.2(c). This NOI is determined to be:

☐ INCOMPLETE (If box is checked, Information in this section is required.)

Based upon review of information submitted in Part 1, the following items are missing: _____

_____

Copies of this form listing missing items were sent to the LSS and the Owner on _____
Date

via _____ with directions to re-submit missing items using Page 5 of this form.
Email, FAX, USPS, hand-delivered

_____ _____ _____
Print Name of Authorized Agent of the LHD *Signature of Authorized Agent of the LHD* *Date*

☑ COMPLETE (If box is checked, information in this section is required.)

Based upon review of information submitted in Part 1 of this form, this NOI is deemed COMPLETE.

Copies of this signed form were sent to the LSS and the Owner on 12-9-22 via Email.
Date *Email, FAX, USPS, hand-delivered*

A copy of this NOI and tracking information was sent to the State on 12-9-22 via Email.
Date *Email, FAX, USPS, hand-delivered*

_____ _____ _____
Print Name of Authorized Agent of the LHD *Signature of Authorized Agent of the LHD* *Date*

Re-submittal of NOI with missing items included

This Section is for use by owner to submit items noted as missing during LHD Completeness Review above.
Resubmittals must be accompanied by a cover letter from the LSS.

LHD USE ONLY: This NOI resubmittal received: _____ by _____
Date *Initials*

Item # from initial NOI	Resubmittal description

Attestation by LSS pursuant to S.L. 2020-97, Section 3.19

I, _____ hereby attest that the information required to be included with
Licensed Soil Scientist (Print Name)
this Notice of Intent to Construct is accurate and complete to the best of my knowledge and that the proposed system shall meet applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ _____
Signature of Licensed Soil Scientist *Date*

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

LHD Follow-up Completeness Review of Notice of Intent to Construct

This follow-up review for completeness of this Notice and Intent was conducted in accordance with G.S. 130A-336.2(c). This NOI is determined to be:

☐ INCOMPLETE
Based upon review of information submitted in the RESUBMITTAL above, this Notice of Intent remains INCOMPETE because the following items from Part 1 of this form remain missing: _____
_____.

Copies of this signed form were sent to the LSS and the Owner on _____ via _____.
Date *Email, FAX, USPS, Hand-delivered*

_____ _____ _____
Print name of authorized Agent of the LHD *Signature of authorized Agent of the LHD* *Date*

☐ COMPLETE
Based upon review of information submitted in the RESUBMITTAL above in addition to information provided in Part 1 of this form, this NOI is deemed complete.

Copies of this signed form were sent to the LSS and the Owner on _____ via _____.
Date *Email, FAX, USPS, Hand-delivered*

A complete copy of this form with tracking information was sent to the State: _____ via _____.
Date *Email, FAX, USPS, hand-delivered*

_____ _____ _____
Print name of authorized Agent of the LHD *Signature of authorized Agent of the LHD* *Date*

PART 3: Authorization to Operate (ATO)

Except for date received, the Section below is to be completed by the Owner.

LHD USE ONLY: Initial submittal of request for ATO received: _____ by _____
Date *Initials*
Date of Post-construction Conference: _____

The following items are included in this submittal for an Authorization to Operate under an LSS COVID-19 permit:

1. Signed and sealed copy of the LSS's report that includes the information in G.S. 130A-336.2(k) ☐ Yes ☐ No
2. Operation and management program ☐ Yes ☐ No
3. Fee (as applicable) ☐ Yes ☐ No
4. Notarized letter documenting Owner's acceptance of the system from the LSS ☐ Yes ☐ No
5. On-site Wastewater Contractor name: _____ License number: _____
   Mailing address: _____ City: _____ State: _____ Zip: _____
   Telephone number: _____ E-mail Address: _____
6. Proof of Errors and Omissions or other appropriate liability insurance for the On-site Wastewater Contractor is attached and includes the name of the insurer, name of the insured, and the effective dates of coverage.
   ☐ Yes ☐ No

Attestation by the Owner for Authorization to Operate

I, _____ hereby attest that all items indicated above have been provided to the
Print name of Owner
_____County LHD and the system shall meet applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ _____
Signature of Owner *Date*

This section for LHD Use Only.

LHD Review of required information for the ATO

☐ INCOMPLETE

Based upon review of information submitted in the Section above, the following items are missing from the information required for an Authorization to Operate for an LSS COVID-19 permit: _____
_____.

Copies of this signed form were sent to the LSS and the Owner on _____ via _____.
Date *Email, FAX, USPS, Hand-delivered*

_____ _____ _____
Print name of authorized Agent of the LHD *Signature of authorized Agent of the LHD* *Date*

☐ COMPLETE

Based upon review of information submitted in the Section above, this Authorization to Operate is hereby issued in accordance with G.S. 130A-336.2(m).

A copy of this complete NOI/ATO with tracking information was sent to the State on _____ via _____.
Date *Email, FAX, USPS, Hand-delivered*

_____ _____ _____
Print name of authorized Agent of the LHD *Signature of authorized Agent of the LHD* *Date*

ISSUANCE OF CERTIFICATE OF OCCUPANCY: Once the LHD determines completeness based upon the ATO submission, the owner may apply to the local permitting agency for permanent electrical service to a residence, place of business or place of public assembly pursuant to G.S. 130A-339.

AGENT AUTHORIZATION FORM

PROPERTY LEGAL DESCRIPTION:

LOT NO. 123 PHASE _____ PARCEL ID: 4738015327

STREET ADDRESS: 127 Beaverwood Lane (Ridgecrest Subdivision)
Statesville, NC 28625

Please print:

Property Owner: Century Complete

Property Owner: _____

The undersigned, registered property owners of the above noted property, do hereby authorize

Larry Thompson, LSS (Contractor / Agent), of Thompson Environmental Consulting, Inc. (Name of consulting firm)

to act on my behalf and take all actions necessary for the processing, issuance and acceptance of this permit or certification and any and all standard and special conditions attached.

Property Owner's Address (if different than property above):
9325 Center Lake Dr., Suite 160, Charlotte, NC 28216

Telephone: 833-791-0192

We hereby certify the above information submitted in this application is true and accurate to the best of our knowledge.

Owner Signature:
Glenn Bird (Nov 30, 2022 16:47 EST)

Date: Nov 30, 2022

Owner Signature: _____

Date: _____

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 9/7/2022

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
Higginbotham Insurance Agency, Inc.
500 W. 13th Street
Fort Worth TX 76102

License#: 2081754

CONTACT NAME: David Vaughan
PHONE (A/C, No, Ext): 9187797880 **FAX (A/C, No):** 817-882-9284
E-MAIL ADDRESS: dlvjr@higginbotham.net

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Mid-Continent Casualty Company	23418
INSURER B : Hartford Underwriters Insurance Company	30104
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

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

THOMENV-01

COVERAGES **CERTIFICATE NUMBER:** 1600075032 **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			04-GL-001086672	9/25/2022	9/25/2023	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
	X Professional						MED EXP (Any one person)	$ Excluded
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 3,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 3,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N	N / A		38WECNW6175	10/17/2021	10/17/2022	X PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

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

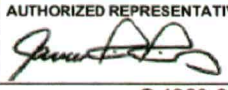
CERTIFICATE HOLDER

For Informational Purposes

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



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Residential Subsurface Wastewater Treatment and Disposal System COVID-19 Proposal

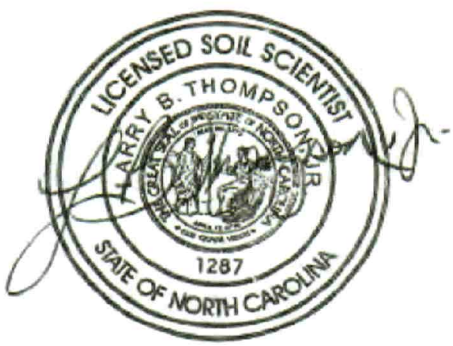
for

Lot 123 - Ridgecrest
127 Beaverwood Lane
Statesville, NC 28625

Tax Parcel Number: 4738015327
November 30, 2022

Prepared for:

Glenn Bird
Century Complete
9325 Center Lake Dr., Suite 160
Charlotte, NC 28216
1-833-791-0192



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

Century Complete has contracted with Thompson Environmental Consulting, Inc. (TEC) to prepare a revised septic proposal for a new 3-bedroom single family residence to be constructed on Lot 123 – Ridgecrest, 127 Beaverwood Lane, Statesville, North Carolina.

Based upon a soil investigation performed by TEC, it was determined that a sufficient amount of "Provisionally Suitable" Group IV soils are available for the installation of a **Pump-To Accepted System** for a 360 gallon-per-day residence with a at a 0.3 GPD/sq/ft/ long-term acceptance rate (LTAR). The proposed repair area will be a Non-Treated Drip Dispersal System, and the property will be served by a public water.

The enclosed Licensed Soil Scientist Evaluation is being submitted pursuant to and meets the requirements of SL 2020-97 Section 3.19. Century Complete would like to request that local health department issue the appropriate permits for a subsurface wastewater treatment and disposal system based upon the following proposal and the enclosed Licensed Soil Scientist Evaluation.

Location

From Statesville, take NC-115 north 7.1 miles. Turn right on Branchwood Road for 0.8 mile, then right onto Grassy Meadow Lane. First left onto Beaverwood Lane, Lot 123 is on left in cul-de-sec.

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 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. 1762

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 (minimum) in capacity.
2. The septic tank will 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 tank has had time to properly cure and is 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. Supply line shall consist of a 2-inch SCH 40 PVC pipe with pressure fittings.

D. Pressure Manifold

1. A pressure manifold shall be used to distribute wastewater to six drainlines.

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 6 taps of varying sizes: (2) 3/4in SCH 40, (1) 3/4in SCH 80, (2) 1/2in SCH 40, and (1) 1/2in SCH 80.
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 six (6) lateral trenches comprised of (1) 3-ft wide by 70-ft long, (1) 3-ft wide by 66-ft long, (1) 3-ft wide by 58-ft long, (1) 3-ft wide by 42-ft long, (1) 3-ft wide by 38-ft long, and (1) 3-ft wide by 30-ft long. Total trench length is 304 feet.
5. The maximum trench depth for this system shall be **15 inches (Low-Side)**.
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 LSS.

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.

G. Utility Conflicts

1. The builder and property owner must take special care in planning for water, power, gas, telephone, and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation.

2. Lawn irrigation should not be placed over the drainfield area.
3. If there are any questions regarding preferred routes, contact the LSS as soon as possible.

Maintenance

H. 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 that is equivalent to 25 percent of the volume of the tank. 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 it becomes necessary to clean the effluent filter, the filter should be removed, and the accumulated debris 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 Home
Septic Tank Requirements:	1,000 Gallon Septic Tanks
Pump Tank Requirements:	1,000 Gallon Pump Tank
Effluent Loading Rate:	0.3 GPD per sq. ft.
Drainfield Type:	Infiltrator Quick4 Plus Standard
Distribution Method:	Pressure Manifold
Number of Taps:	6 Total (2) 3/4in SCH 40 (1) 3/4in SCH 80 (2) 1/2in SCH 40 (1) 1/2in SCH 80
Number of Drainlines:	6
Drain Lines:	(1) 3-ft wide by 70-ft long (1) 3-ft wide by 66-ft long (1) 3-ft wide by 58-ft long (1) 3-ft wide by 42-ft long (1) 3-ft wide by 38-ft long

	(1) 3-ft wide by 30-ft long
Total Trench Length:	304 Linear Feet
Maximum Trench Depth:	15 Inches (Low-Side)
Final Cover Requirement:	6 Inches (minimum)
Pump Requirements from Barn:	54.8 GPM at 25.48 Feet TDH
Recommended Pump:	Liberty FL30 (or equivalent)
Dose Volume:	180 Gallons
Pump Run Time:	3.28 Minutes
Pump Tank Drawdown:	8.57 Inches – Assumes 21 gallons per inch.

Repair Option

Effluent Loading Rate:	0.1 GPD per sq. ft.
Drainfield Type:	Non-Treated Drip Dispersal
Required Square Footage:	3,600 Square Feet
Available Square Footage:	4,600+ Square Feet
Installation Depth:	6 Inches

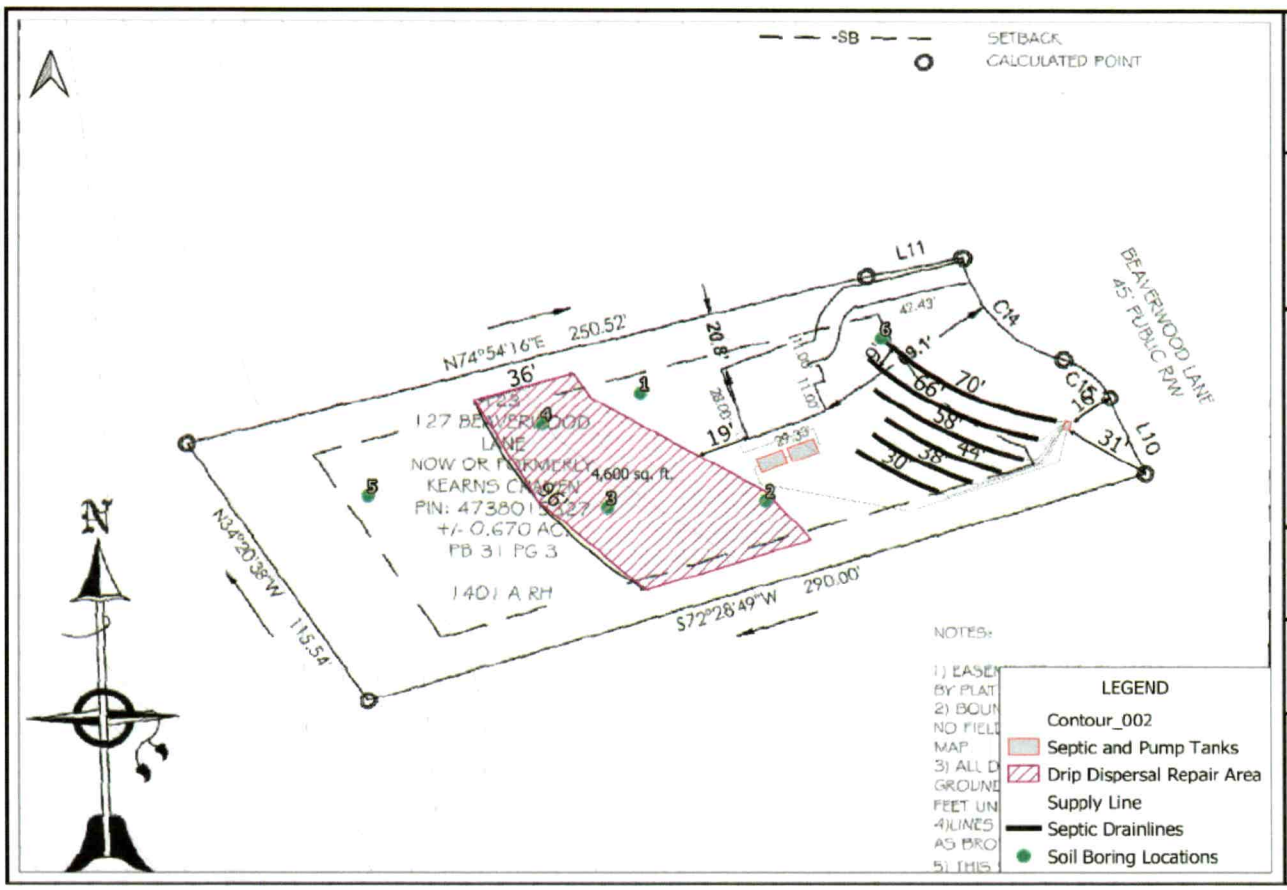


FIGURE 1

Prepared For:

Century Complete

Proposed Septic Layout

Lot 123 - Ridgecrest
127 Beaverwood Lane
Statesville, NC 28625

Iredell County

Scale:
0 20 40 ft

Date:	TEC Job No.
November 2022	22-370

Thompson Environmental Consulting
WATER · WASTEWATER · WETLANDS

Thompson Environmental Consulting
WATER • WASTEWATER • WETLANDS

LOT 123

Sheet 1 of 2

PROPERTY ID #: 4738-01-5327
COUNTY: IREDELL

SOIL/SITE EVALUATION
for **ON-SITE WASTEWATER SYSTEM**
(Complete all fields in full)

OWNER: DAVIDSON LAND DEVELOPMENT CO.
ADDRESS: 896 SHIRDAN ROAD, LEXINGTON, NC 27292
PROPOSED FACILITY: RES
PROPOSED DESIGN FLOW (.1949): 360
LOCATION OF SITE: 127 BEAVERWOOD LN. STATESVILLE, NC
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

APPLICATION DATE
DATE EVALUATED: 11-10-21
PROPERTY SIZE: 0.67 AC
PROPERTY RECORDED:

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LS/12	0-16	SBK/CL/FR	SS,SP,SE	—	16	—	16 Cr	DRIP
		16+	Cr						
2	LS/12	0-8	GR/SL/FR	NE	—	>40	—	—	PS 0.4
		8-40+	SBK/CL/FR	SS/SP/SE					
3	LS/12	0-20	SBK/CL/FR	SS,SP,SE	—	20	—	20 Cr	DRIP
		20+	Cr						
4	LS/12	0-26	SBK/L/FR		—	26	—	26 Cr	LPC 0.4
		26+	Cr						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	H-PPBPS	DRIP
Site LTAR	0.3	0.1

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): Prov. Suitable
EVALUATED BY: M. WOOD
OTHER(S) PRESENT: E WOOD

LICENSED SOIL SCIENTIST MICHAEL G. WOOD 1219 STATE OF NORTH CAROLINA

Updated February 2014

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

LOT 123
RIDGECREST

4738-61-5327
PROPERTY ID #:
DATE OF EVALUATION: 11-10-21
COUNTY: IREDELL

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
5	LS/28	0-15	GR/SL/VFR	NE	–	15	–	15 Cr	DRIP
		15+	Cr						
6	LS/19	0-16	GR/SL/VFR	NE	–	35	–	35 Cr	PS 0.35
		16-35	SBK/CL/FR	SS, SP, SE					
		35+	Cr						
7	LS/17	0-17	GR/SL/VFR	NE	–	>37	–	–	PS 0.35
		17-39	SBK/CL/FR	SS, SP, SE					

COMMENTS:

LEGEND

use the following standard abbreviations

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

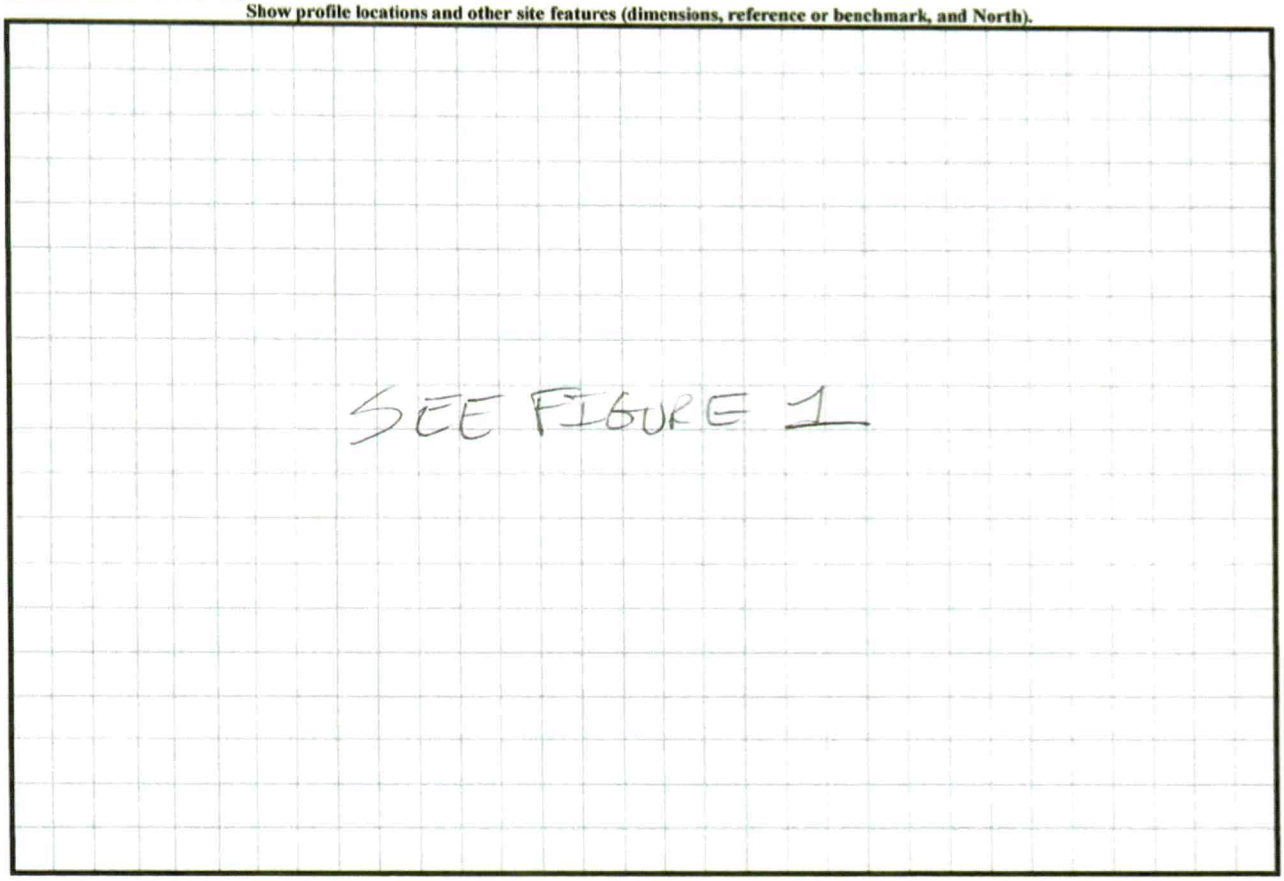
NOTES

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).



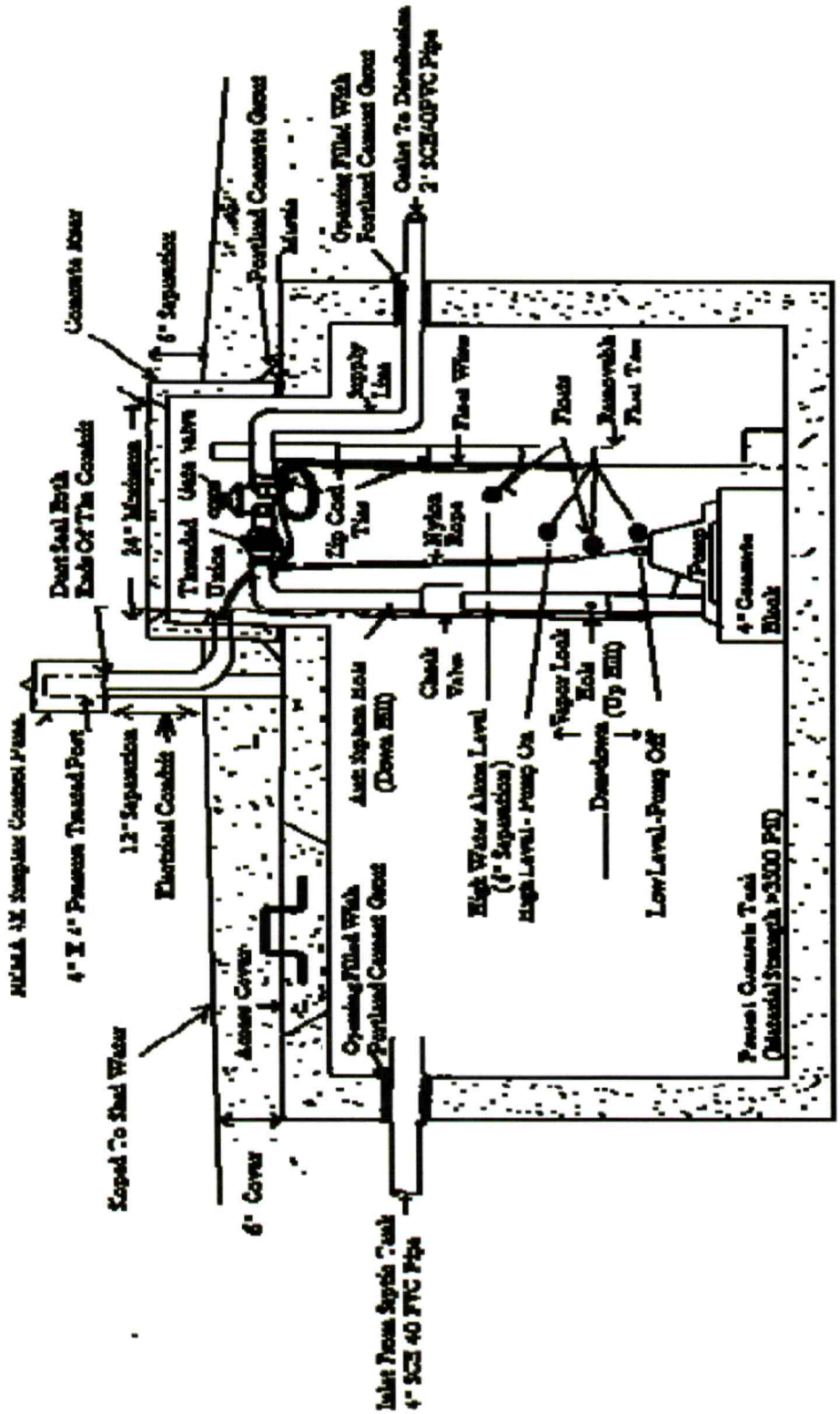
Thompson Environmental Consulting, Inc
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 4738015327

Location: Lot 123 - Ridgecrest

Date: November 29, 2022

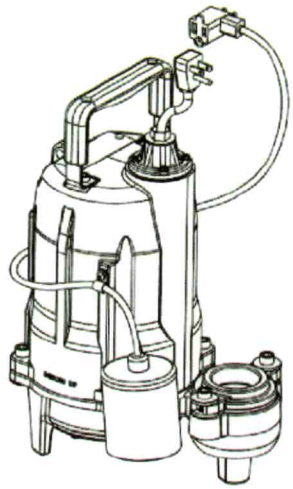
Recommended Pump Tank Design

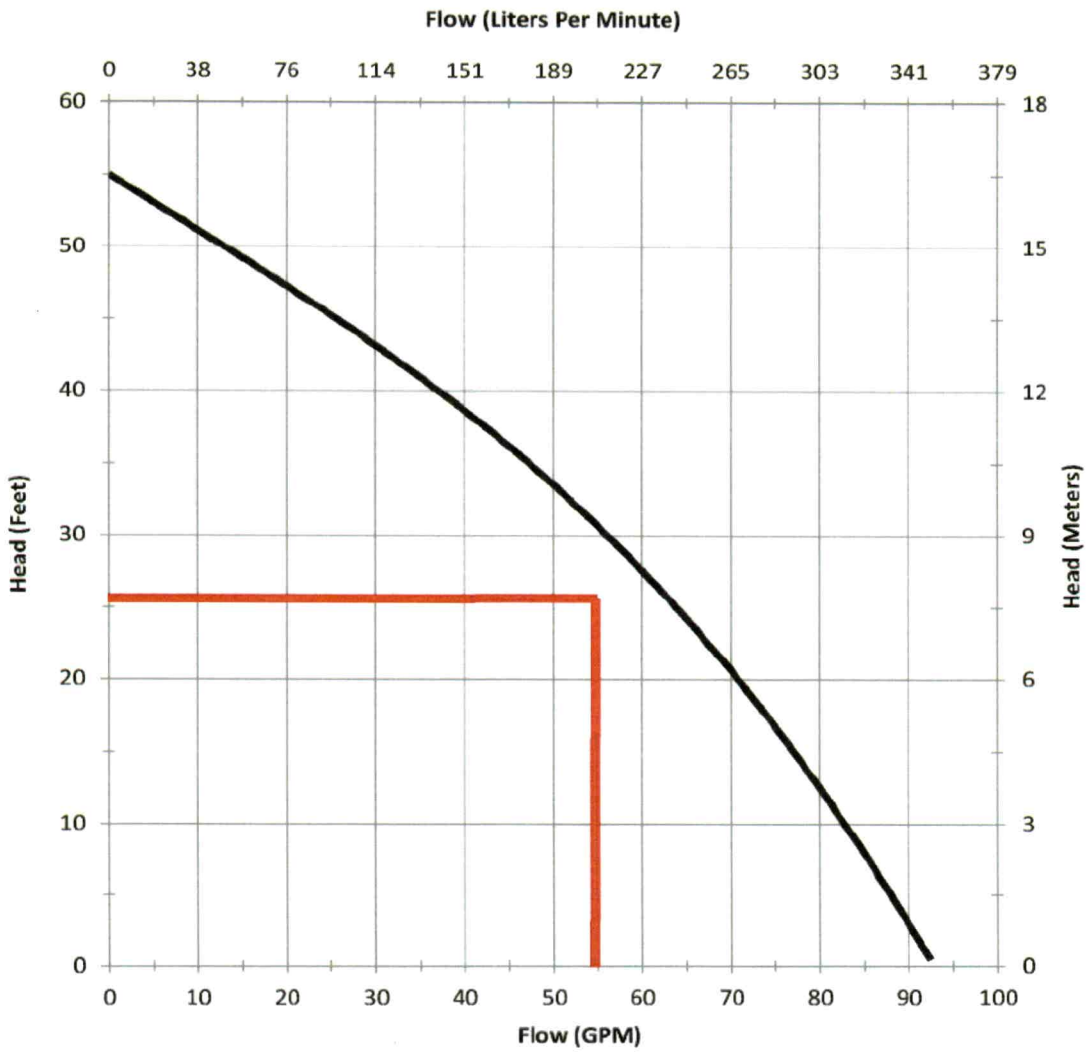


Liberty Pumps®

Pump Specifications

FL50 Series 1/2 hp Submersible Effluent Pump

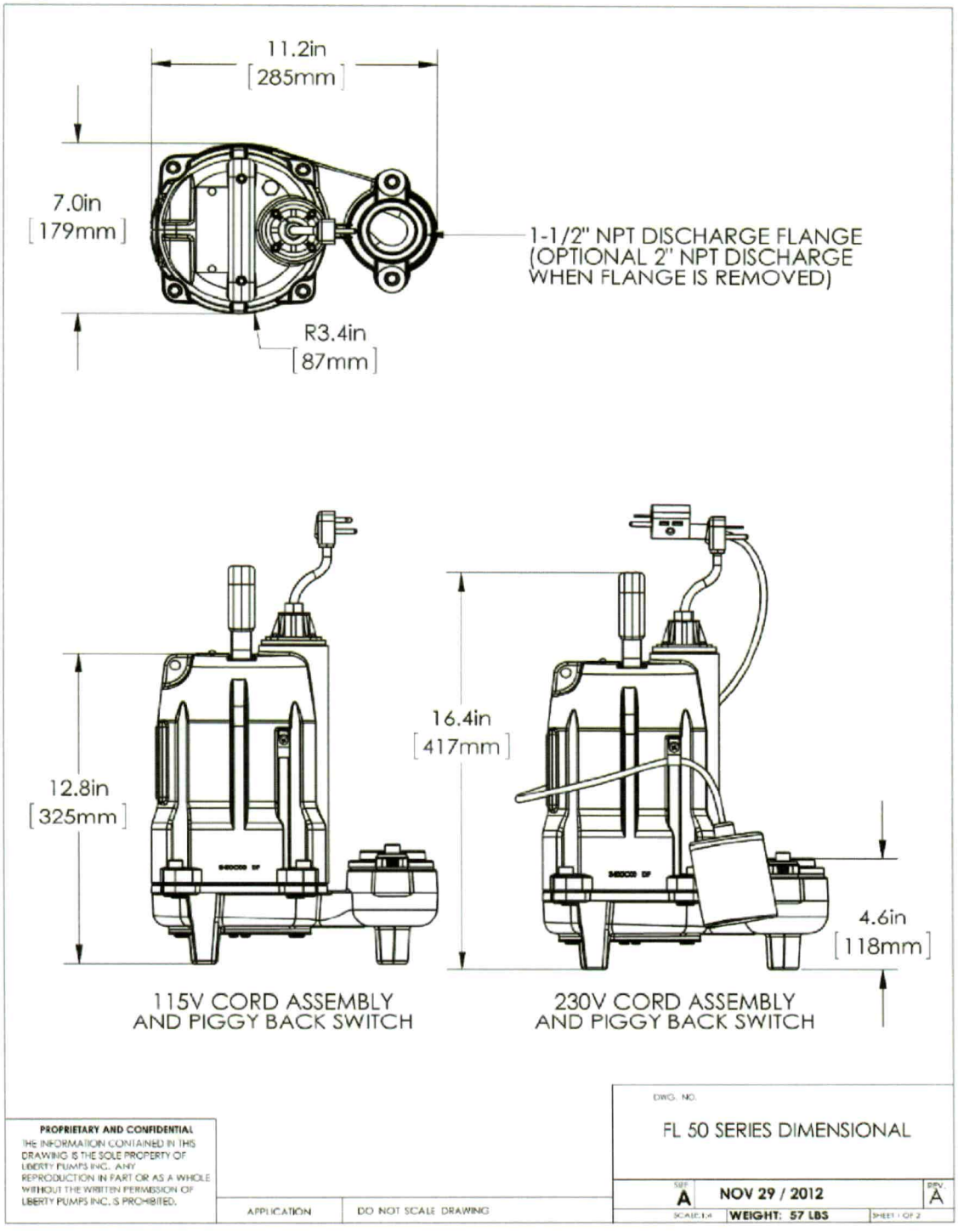




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FL50-Series Dimensional Data



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FL50-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH FT	DISCHARGE	AUTOMATIC	WGT.
FL51A	1/2	115	1	12	48.6	120°C 248°F	B	10	1 ½ OR 2"	YES	53 lbs.
FL51A-2	1/2	115	1	12	48.6	120°C 248°F	B	25	1 ½ OR 2"	YES	55 lbs.
FL51A-3	1/2	115	1	12	48.6	120°C 248°F	B	35	1 ½ OR 2"	YES	58 lbs.
FL51M	1/2	115	1	12	48.6	120°C 248°F	B	10	1 ½ OR 2"	NO	52 lbs.
FL51M-2	1/2	115	1	12	48.6	120°C 248°F	B	25	1 ½ OR 2"	NO	53 lbs.
FL51M-3	1/2	115	1	12	48.6	120°C 248°F	B	35	1 ½ OR 2"	NO	55 lbs.
FL52A	1/2	208-230	1	6.5	24.1	120°C 248°F	B	10	1 ½ OR 2"	YES	53 lbs.
FL52A-2	1/2	208-230	1	6.5	24.1	120°C 248°F	B	25	1 ½ OR 2"	YES	55 lbs.
FL52A-3	1/2	208-230	1	6.5	24.1	120°C 248°F	B	35	1 ½ OR 2"	YES	58 lbs.
FL52M	1/2	208-230	1	6.5	24.1	120°C 248°F	B	10	1 ½ OR 2"	NO	52 lbs.
FL52M-2	1/2	208-230	1	6.5	24.1	120°C 248°F	B	25	1 ½ OR 2"	NO	53 lbs.
FL52M-3	1/2	208-230	1	6.5	24.1	120°C 248°F	B	35	1 ½ OR 2"	NO	55 lbs.

FL50-Series Technical Data

IMPELLER	MULTI-VANE CAST IRON
PAINT	POWDER COAT
SOLIDS HANDLING CAPABILITY	¾"
MAX LIQUID TEMP	60°C 140°F
MAX STATOR TEMP	130°C 266°F
THERMAL OVERLOAD	120°C 248°F
POWER CORD TYPE	SJTW (1-PH) or SEOOW (3-PH), or SJOOW (35' – 1PH)
MOTOR HOUSING	CLASS 25 CAST IRON
VOLUTE	CLASS 25 CAST IRON
IMPELLER	CLASS 25 CAST IRON
SHAFT	STAINLESS
HARDWARE	STAINLESS
ORINGS	BUNA N
MECHANICAL SEAL	UNITIZED CERAMIC CARBON

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FL50-Series Specifications

1.01 GENERAL:

The contractor shall provide labor, material, equipment, and incidentals required to provide_____(QTY) centrifugal pumps as specified herein. The pump models covered in this specification are Series FL50 single phase pumps. The pump furnished for this application shall be model _____as manufactured by Liberty pumps.

2.01 OPERATING CONDITIONS:

Each submersible pump shall be rated at 1/2 hp_____volts single phase 60 Hz. 3450 RPM. The unit shall produce_____G.P.M. at_____ feet of total dynamic head.

The submersible pump shall be capable of handling sewage effluent with 3/4" solid handling capability. The submersible pump shall have a shut-off head of 55 feet and a maximum flow of 76 GPM @ 15 feet of total dynamic head.

The pump shall be controlled with:

_____A piggy back style on/off float switch.

_____A NEMA 4X simplex control panel with three float switches and a high water alarm.

_____A NEMA 4X duplex control panel with three float switches and a high water alarm.

3.01 CONSTRUCTION:

Each centrifugal sewage pump shall be equal to the ^{C} $_{US}$ certified Series FL50 SERIES pumps as manufactured by Liberty Pumps, Bergen NY. The castings shall be constructed of class 25 cast iron. The motor housing shall be oil filled to dissipate heat. Air filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All mating parts shall be machined and sealed with a Buna-N o-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with sealed cord entry plate with molded pins to conduct electricity eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a unitized ceramic/carbon seal with stainless steel housings and spring. The pump shall be furnished with stainless steel handle.

4.01 ELECTRICAL POWER CORD

The submersible pump shall be supplied with a 10, 25 or 35 feet of multiconductor power cord. It shall be cord type SJTW (1-PH) or SEOOW (3-PH), SJOOW (35' – 1PH), capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the National Electric Code. The power cable shall not enter the motor housing directly but will conduct electricity to the motor by means of a water tight compression fitting cord plate assembly, with molded pins to conduct electricity. This will eliminate the ability of water to enter internally through the cord, by means of a damaged or wicking cord.

5.01 MOTORS

Single phase motors shall be oil filled, permanent split capacitor, class B insulated NEMA B design, rated for continuous duty. At maximum load the winding temperature shall not exceed 130 degrees C unsubmerged. Since air filled motors are not capable of dissipating heat they shall not be considered equal. The pump motor shall have an integral thermal overload switch in the windings for protecting the motor. The capacitor circuit shall be mounted internally in the pump.

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6.01 BEARINGS AND SHAFT

Upper and lower ball bearings shall be required. The bearings shall be a single ball / race type bearing. Both bearings shall be permanently lubricated by the oil, which fills the motor housing. The motor shaft shall be made of 17-4 PH stainless steel and have a minimum diameter of .625".

7.01 SEALS

The pump shall have a unitized carbon / ceramic seal with stainless steel housings and spring equal to Crane Type 6A. The motor plate / housing interface shall be sealed with a Buna-N o-ring.

8.01 IMPELLER

The impeller shall be a class 25 iron. It shall be threaded to the motor shaft.

9.01 CONTROLS

All units can be supplied with CSA and UL approved automatic wide angle tilt float switches. The switches shall be equipped with piggy back style plug that allows the pump to be operated manually without the removal of the pump in the event that a switch becomes inoperable. Manual Pumps are operable by means of a pump control panel.

10.01 PAINT

The exterior of the casting shall be protected with Powder Coat paint.

11.01 SUPPORT

The pump shall have cast iron support legs, enabling it to be a free standing unit.

12.01 SERVICEABILTY

Components required for the repair of the pump shall be shipped within a period of 24 hours.

13.01 FACTORY ASSEMBLED TANK SYSTEMS WITH GUIDE RAIL AND QUICK DISCONNECT DISCHARGE

_____Guide factory mounted rail system with pump suspended by means of bolt on quick disconnect which is sealed by means of nitrile grommets or o-rings. The Discharge piping shall be schedule 80 PVC and furnished with a PVC check valve and shut-off ball valve. The Tank shall be wound fiberglass or roto-molded plastic. An inlet hub shall be provided with the fiberglass systems.

_____Stainless steel Guide Rail

_____Zinc plated steel Guide Rail

_____"diameter of basin size

_____"height of basin size

_____"distance from top of tank to discharge pipe outlet

_____Fiberglass cover

_____Structural foam polymer cover

_____Steel cover

_____Simplex System with Outdoor panel and alarm

_____Duplex System with Outdoor panel and alarm

_____Separate Outdoor Alarm

_____Remote Outdoor Alarm

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Liberty Pumps

14.01 TESTING

The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for electrical integrity, moisture content and insulation defects. The motor and volute housing shall be pressurized, and an air leak decay test is performed to ensure integrity of the motor housing. The pump shall be run, voltage current monitored, and the tester checks for noise or other malfunction.

15.01 QUALITY CONTROL

The pump shall be manufactured in an ISO 9001 certified Facility.

16.01 WARRANTY

Standard limited warranty shall be 3 years.

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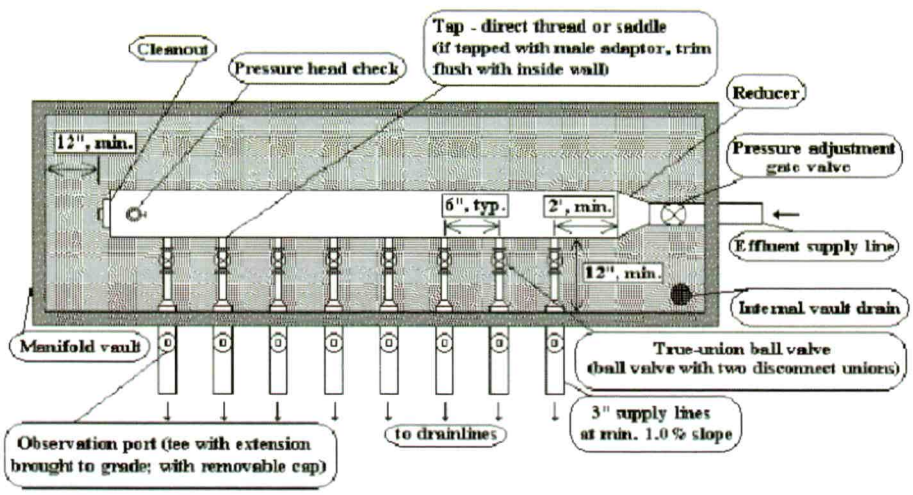
Thompson Environmental Consulting, Inc.
PO Box 541
Midland, NC 28107-0541

Tax ID Number: 4738015327

Location: Lot 123 - Ridgecrest

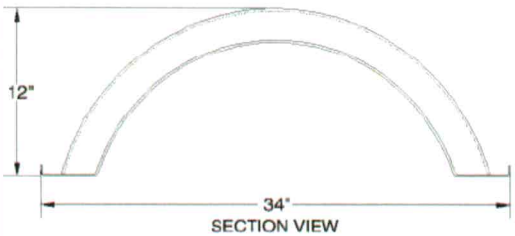
Date: November 26, 2022

Recommended Pressure Manifold Design
(Number of Taps May Vary)

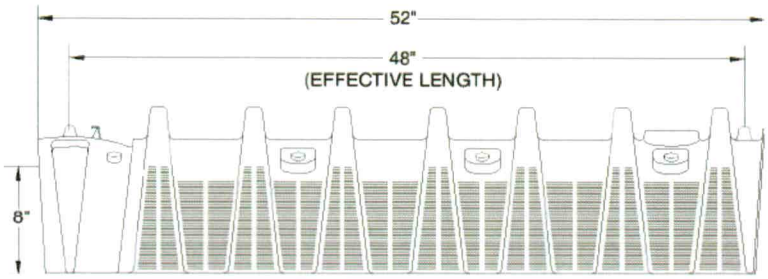


Quick4™
STANDARD CHAMBER

Quick4 Standard Chamber

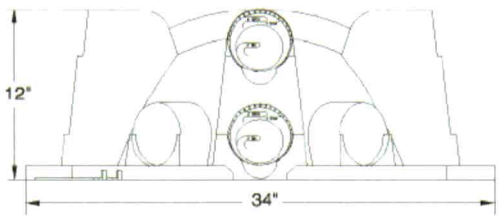


SECTION VIEW

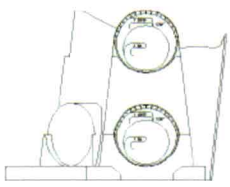


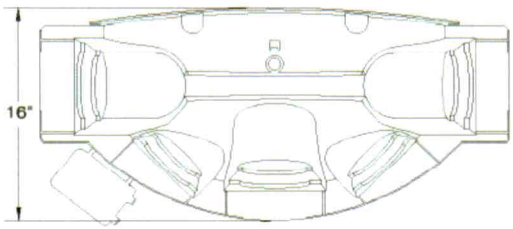
SIDE VIEW

MultiPort End Cap



FRONT VIEW


SIDE VIEW



TOP VIEW

Quick4 Standard Chamber Nominal Specifications

Size (W x L x H)	34" x 52" x 12"
Effective Length	48"
Invert Height	8"

MultiPort End Cap Nominal Specifications

Size (W x L x H)	34" x 16" x 12"
Invert Height	8" or 1.25"

INFILTRATOR SYSTEMS, INC. STANDARD LIMITED WARRANTY

(a) The structural integrity of each chamber, end plate, wedge and other accessory manufactured by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) This Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

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The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

INFILTRATOR® SYSTEMS INC
Environmental Onsite Wastewater Solutions℠
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Old Saybrook, CT 06475
860-577-7000 • FAX 860-577-7001
800-221-4436

U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844
Canadian Patents: 1,329,959; 2,004,564 Other patents pending.

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