

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN
AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED
***PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR
INTENDED USE CHANGED***

OPERATIONS PERMIT

PERMIT # WRP-135721-2024 **APPLICATION DATE:** 11/07/2024 **BLDG. PERMIT#:** RBPR-135669-2024
PIN: 1812606687 **RECORDED:** Yes
TOWNSHIP: 14 - New Light **JURISDICTION:** Wake County **ZONING:** R-40W
APPLICANT: VALENTI HOMES
JAY VALENTI
14916 COVESHORE **BUSINESS PHONE:** (919) 809-4044
HOME PHONE:
MOBILE PHONE: (919) 809-4044

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE **EXISTING USE:**

SITE ADDRESS: 8201 MARY CLAIRE LN

SUBDIVISION: PRESCOTT MANOR SUB PH 2 **LOT:** 93 **ACRES:** 0.74

DIRECTIONS: On hwy 98 going E to WF, take a left on Stony Hill Rd. Drive down Stony Hill Rd. almost 2 miles, Take a left on Prescott Manor Way, Take the first left onto Perry Bluff Dr, Take the first left onto Mary Claire Ln. Lot 93 is in the cul-de-sac

Systems defined as either type III-b, III-g with a pump, IV, V or VI, in accordance with the North Carolina administrative code 15A NCAC 18a .1961, table V as adopted by reference in the "Regulations Governing Wastewater Treatment Dispersal Systems in Wake County", requires Wake County Environmental Services to conduct periodic inspections of the system type pursuant to 15A NCAC 18a. 1961 (j). Fees for these inspections will be charged as per the approved Fee Schedule. In addition, all systems are to be operated and maintained as specified in 15A NCAC 18A .1961. This permit is based in part on information provided by the homeowner and/or his/her representative in the application submitted for this permit. The Environmental Health Specialist is not responsible for false or misleading information contained in the application. The environmental health specialist is also not responsible for concealed conditions on the property or for statements in this report that may have resulted from false or misleading statements provided to him/her in the application. Neither Wake County nor the Environmental Health Specialist warrants that the septic tank system will continue to function satisfactorily in the future or that the water supply will remain potable.

OPERATION PERMIT VALID FOR: No Expiration

INSTALLED BY: TRUELOVE, DAVID H - 1243 - IV

PROPRIETARY SYSTEM: PPBPS - Horizontal

PRETREATMENT SYSTEM:

SYSTEM TYPE INSTALLED: III BE

OPERATION PERMIT: STATUS: Issued

ISSUED BY: Bailey Stiles

ISSUED DATE: 07/28/2025

SEPTIC TANK: David Brantley & Sons - STB-323 - 1250 gallons **DATE OF MANUFACTURE:** 01/27/2025 **FILTER:** Polylok - PL-68

GREASE TRAP:

DATE OF MANUFACTURE:

FILTER:

DOSING PUMP TANK: Brantley - PT-237 - 1000 gal - 20.63 gal/in

DATE OF MANUFACTURE: 01/05/2025 **FILTER:**

CC1: 999,808

ETM1: 28

CC2:

ETM2:

RECIRCULATION TANK:

DATE OF MANUFACTURE:

CC1:

ETM1:

CC2:

ETM2:

SEPTIC TANK ELEVATION: 6.75

GREASE TRAP ELEVATION:

DOSING PUMP TANK ELEVATION: 7.42

RECIRCULATION TANK ELEVATION:

DISTRIBUTION DEVICE ELEVATION: 5

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
21	14	60	7.167
21	14	60	6.5
21	14	60	5.917
21	14	60	5.167

ACTUAL PRESSURE HEAD: 2

ACTUAL FLOW RATE: 28

ACTUAL DOSE VOLUME: 192

SPECIFIC OPERATION REQUIREMENTS:

- System designed for a 4 bedroom home, having 360 gals per day (Engineered Flow Reduction).
- Initial System (already installed) is Type III B 50% reduction PPBPS (horizontal), with a max trench depth of 21" and a 0.3 LTAR.
- Originally proposed Repair Area damaged during construction driveway installation. Future Repair System modified and is now Type V A TS-II Pretreated Drip. Repair trench depth for Drip Zone 1 is 16", and trench depth for Drip Zones 2 and 3 is 8".
- Limiting condition for Repair Drip Zone 1 encountered at 30", with restrictive fill material from 0-10". Limiting condition for Repair Drip Zones 2 and 3 encountered at 20" with restrictive fill material from 0-2".
- Both initial and repair systems utilize an engineered flow reduction
- Site serviced by community well water.
- No cutting, grading, alterations, or utilities in septic area.
- Maintain all required setbacks

ISSUED BY:

Bailey Stiles

DATE: 07/28/2025

PRELIMINARY PLOT PLAN FOR

VALENTI HOMES

LOT 93, PRESCOTT MANOR SUBDIVISION, PH.2

8201 MARY CLAIRE LANE

REF: B.M. 2023, PG. 2086-2088

NEW LIGHT TOWNSHIP

WAKE COUNTY, NORTH CAROLINA

JUNE 10, 2024

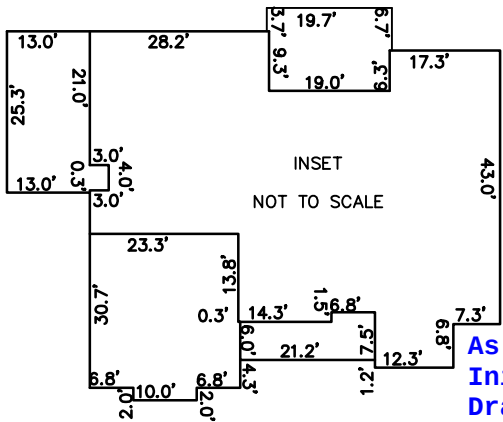
REVISED JUNE 24, 2024

REVISED APRIL 10, 2025

ZONED R-40W



SCALE 1"=50'



MARY CLAIR LANE
50' PUBLIC R/W

FLOOD REVIEW

94

PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

Required Setbacks	
Front	15
Side	7.5
Rear	15
Corner	

92

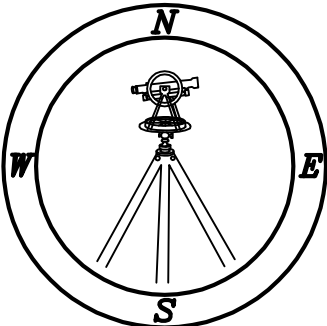
PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

Drip
Repair
Area

32,428 S.F.
0.744 AC.

IMPERVIOUS SURFACE TABLE	
HOUSE	3,528 S.F.
DECK	250 S.F.
DRIVEWAY	2,551 S.F.
SIDEWALKS	232 S.F.
MISC/UTILITIES	36 S.F.
TOTAL IMPERVIOUS AREA	6,597 S.F.
MAX IMPERVIOUS ALLOWED	8,500 S.F.

THIS SURVEYOR DOES NOT
WARRANTY THE ACCURACY
OF ARCHITECTURAL DIMENSIONS.
THEY ARE TO BE VERIFIED BY
THE CONTRACTOR.



CMP

Professional Land Surveyors
C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

NOTES:
-THIS PLAN DOES NOT REFLECT AN
ACTUAL SURVEY. IT IS A PRELIMINARY
PLAN AND SHOULD BE USED FOR ITS
INTENDED PURPOSE ONLY.
-NOT FOR RECORDATION, CONVEYANCES,
OR SALES.

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE

To Be Recorded In The Register Of Deed's Office In Wake County.

Deed book: 019526

Owner/Grantor ~~Joseph Valenti~~ **Valenti Homes LLC** Deedbook and Page Page: 00010

PIN No. 1812606687

Date Installed 3/17/25

Subdivision Name Prescott Manor

Lot No. 93

System Designed by MacConnell & Associates, P.C.

Installer True Work

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM USING AN ENGINEER DESIGNED FLOW RATE MODIFICATION PURSUANT TO SESSION LAW 2014-120 SECTION 53 HAS BEEN INSTALLED ON THIS PROPERTY.

The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Dispersal in Wake County effective November 21, 1988, amended effective May 23, 2002, October 27, 2011 and June 25, 2020.

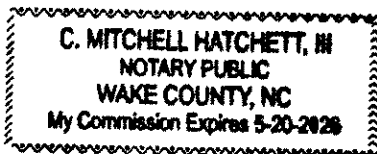
As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance.

This permit requires the use of pressure manifold distribution to a mode of subsurface wastewater dispersal. Experience and study have shown that pressure manifold systems require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to all pressure manifold systems. For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: 919-856-7400.

System Component	Frequency	Maintenance
1. Septic Tank	6-12 months 1-3 years	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump seepage.
2. Pump/Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	6-12 months	Check for settling, pipe exposure and leakage. Includes Manifold(s).
4. Drain Field(s)	1-4 weeks 6-12 months	Maintain vegetative cover (mow grass and remove weeds and brush). Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold	6-12 months	Check and reset pressure head, flush sludge from pressure manifold (any discharge sludge and effluent is to be treated with a chlorine solution).
6. Sampling	12 Months	Influent and Effluent sampling may be required once per year to ensure adherence to domestic strength wastewater standards.
7. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do no permit entry or grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained. <u>Adherence to permitted flow rate.</u>

Submitted electronically by C Mitchell Hatchett III Law in compliance with North Carolina statutes governing recordable documents and the terms of the submitter agreement with the Wake County Register of Deeds.

This system is permitted under S.L. 2014-120 for engineer flow reduction utilizing low flow fixtures and technologies, all of which must remain in use for the life of the applicable system. Neither the State nor any local government shall be liable for any damages by a system approved or permitted pursuant to this section.



[Signature]
Signature of Property Owner
6-9-2025
Date

NORTH CAROLINA Wake County, I, a Notary Public of the County and State aforesaid, certify that Joseph Valenti, Manager Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 9 day of June 2025.

My commission expires 5/20/2026 Notary Public *[Signature]*

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE

To Be Recorded In The Register Of Deeds Office In Wake County.

Deed book: 019526

Owner/Grantor ~~Joseph Valenti~~ **Valenti Homes LLC**

Deedbook and Page Page: 00010

PIN No. 1812606687

Date Installed 3/17/25

Subdivision Name Prescott Manor

Lot No. 93

System Designed by MacConnell & Associates, P.C.

Installer True Work

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM FOR REPAIR HAS BEEN DESIGNED FOR THIS PROPERTY.

The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Dispersal in Wake County effective November 21, 1988, amended effective November 19, 2021.

As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department of Onsite Water Protection A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance.

This permit requires the use of **pre-treatment and a mode of subsurface wastewater dispersal for the repair system**, which will require a contract with a Certified Operator to perform maintenance on the system as described in the above referenced regulations. **Due to this requirement, the initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted.** Experience and study have shown that pre-treatment systems require routine maintenance to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to all pre-treatment systems.

System Component	Frequency	Maintenance
1. Septic Tank	6-12 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation.
	1-3 years	Pump septage.
2. Pump/Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	6-12 months	Check for settling, pipe exposure and leakage. Includes Manifold(s).
4. Drain Field(s)	1-4 weeks	Maintain vegetative cover (mow grass and remove weeds and brush).
	6-12 months	Check for settling, erosion and surfacing of effluent. Repair any broken lateral turn-ups and make certain they are accessible from ground surface and are filled with screw-on type caps. Check and reset pressure head and flush sludge from lateral lines (any discharge sludge and effluent is to be treated with a chlorine solution). Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce wastewater load on system. Do no permit entry or grease and non-domestic waste to system. Use of a garbage disposal is prohibited . Addition of chemical or biological additives has not been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.
6. Pre-Treatment	6-12 months	Check for settling, erosion and surfacing of effluent. Perform all other inspections and sampling as required in the approval of the pre-treatment device.

Initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted. A certified operator is required for the life of the system, **once repair system is installed.**

C. MITCHELL HATCHETT, III
NOTARY PUBLIC
WAKE COUNTY, NC
My Commission Expires 5-20-2026

Signature of Property Owner

Date

NORTH CAROLINA

Joseph Valenti, Manager County 1, a Notary Public of the County and State aforesaid, certify that Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 9 day of June 2025.

My commission expires 5/20/2026

Notary Public

WWDS 7/12/2021



Health & Human Services

☎ 919 856 5700

Onsite Water Protection
P.O. Box 550 • Raleigh, NC 27602
336 Fayetteville St. • Raleigh, NC 27601
wake.gov

June 11, 2025

REQUIREMENTS TO COMPLETE YOUR ENGINEERED FLOW REDUCTION SYSTEM

Dear Sir/Madam:

Enclosed is your approved Engineer Flow Reduction plan as permitted under Session Law 2014-120 Section 53, and the "Engineer Flow Reduction Sewage Disposal System Maintenance Information Sheet". **"Neither the State nor local health department shall be liable for any damages caused by an engineered system approved or permitted pursuant to Session Law 2014-120 Section 53."**

To complete your permit:

- **System Installation** - A contractor **CERTIFIED** by the State of North Carolina and **REGISTERED** in Wake County, must be used to install your system, if applicable.
- **System Components** - All portions of the engineered design plans shall be completed using only materials specified in the engineered design plans.
- **Engineer Certification** - The engineer must certify that the design plans have been completed to the specifications in the approved design and provide an engineer certification letter to Wake County that is **SEALED, SIGNED, AND DATED** stating as much.
- **Alternative Sewage Disposal System Maintenance Schedule** - this document must be signed, notarized, and recorded at the Wake County Register of Deeds Office. A copy of the recorded document must be submitted to Wake County before your permit can be finalized.

A copy of the "Wake County Well and Septic System Owner's Guide", which contains information essential to the long-term performance of this wastewater disposal system, must be forwarded to the owner or user of the system, if other than yourself.

ANY PROPOSED MODIFICATION TO THE APPROVED PLANS MUST BE COORDINATED WITH YOUR DESIGN ENGINEER.

Please call (919) 480-9998 or email at CORY.LARSEN@wake.gov if you have any questions.

Sincerely,

CORY LARSEN, PE
Environmental Engineer

***** CA PART A - D *****

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NO PERMIT(S) FOR CONSTRUCTION, LOCATION OR RELOCATION ACTIVITY SHALL BE ISSUED UNTIL AN AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION AUTHORIZATION HAS BEEN ISSUED

PERMIT VOID IF NOT IN COMPLIANCE WITH ZONING REGULATIONS AND/OR IF SITE IS ALTERED OR INTENDED USE CHANGED

CONSTRUCTION AUTHORIZATION PERMIT

PERMIT # WRP-135721-2024

APPLICATION DATE: 11/07/2024

BLDG. PERMIT#: RBPR-135669-2024

PIN: 1812606687

RECORDED: Yes

TOWNSHIP: 14 - New Light

JURISDICTION: Wake County

ZONING: R-40W

APPLICANT: VALENTI HOMES

14916 COVESHORE

WAKE FOREST, NC 27587

BUSINESS PHONE: (919) 809-4044

HOME PHONE:

MOBILE PHONE: (919) 809-4044

HD USE: 101A CONVENTIONAL ONE-FAMILY HOUSE

EXISTING USE:

SITE ADDRESS: 8201 MARY CLAIRE LN

SUBDIVISION: PRESCOTT MANOR SUB PH 2

LOT: 93

ACRES: 0.74

DIRECTIONS: On hwy 98 going E to WF, take a left on Stony Hill Rd. Drive down Stony Hill Rd. almost 2 miles, Take a left on Prescott Manor Way, Take the first left onto Perry Bluff Dr, Take the first left onto Mary Claire Ln. Lot 93 is in the cul-de-sac

Contractors shall install system on contour. See attached SITE PLAN for wastewater system design and well location. No underground utilities, water lines or sprinklers systems may be located in the original system, or permit areas. A septic tank filter with two risers for access is required. The wastewater system shall not be covered or placed into use until inspected by the Wake County Department of Environmental Services and Operations Permit issued. An Accepted Status System may be used in place of conventional system, if it can be placed in the permitted/authorized trench footprint (except reduction in line length and/or number as allowed for in approval) and the installation in accordance with the accepted system approval, without unauthorized product alteration. If permit required use of an Accepted Status System, substitution with another accepted status system may be made, as long as no changes are necessary in the location of each nitrifications line (including any increase in line length), trench depth or effluent distribution method. If changes are necessary, prior approval by this office is required before system installation. Maximum depth of line is calculated using the downhill side of the trench and includes slope correction.

CONSTRUCTION AUTHORIZATION PERMIT VALID FOR: Five Years

CONSTRUCTION AUTHORIZATION PERMIT: CA STATUS: Issued

BY: Cory Larsen

DATE: 06/11/2025

CA VALID FOR: Five Years

DESIGN FLOW: 360 GALLONS

BASEMENT: No

BASEMENT FIXTURES:

SEPTIC TANK: 1200 GALLONS

SEPTIC TANK FILTER: Yes

DOSING PUMP TANK: 1200 GALLONS

DOSING PUMP TANK FILTER:

GREASE TRAP:

GREASE TRAP FILTER:

RECIRCULATION PUMP TANK:

RECIRCULATION PUMP TANK FILTER:

PROPOSED SYSTEM: PPBPS - Horizontal

EXISTING SYSTEM:

DRAINFIELD SQ. FT: 720

AGGREGATE DEPTH: 14

MAX. TRENCH DEPTH: 21 INCHES

DISTRIBUTION DEVICE: PM - Pressure Manifold

TRENCH #: 4

TRENCH LENGTH: 60, 60, 60, 60
TRENCH WIDTH: 36 INCHES

TOTAL TRENCH LENGTH: 240 FEET

CENTER SPACING: 9 FEET
PRETREATMENT:
SUBFIELDS #:
PUMP TDH: 15.5 FEET

MINIMUM SOIL COVER: 6 INCHES
APPROVAL #:
PUMP DESIGN FLOW: 28.44
ZONE VALVE: No

ASDMS REQUIRED: Yes

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: No

P.E. SIGN OFF/ASBUILT REQUIRED: Yes

TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:

***PERMIT REISSUED FOR CHANGE TO REPAIR SYSTEM DUE TO GRADING/ALTERATION IN ORIGINAL REPAIR AREA.
WATER LINE RELOCATION ALREADY PERFORMED.***

THIS PERMIT IS FOR A FOUR (4) BEDROOM (MAXIMUM OCCUPANCY OF 8) DWELLING WITH 360 GALLONS DAILY FLOW USING ENGINEERED FLOW REDUCTION. INITIAL SYSTEM IS AN EQUAL LINE LENGTH PRESSURE MANIFOLD SYSTEM PUMPING TO 4 DRAINLINES [50% REDUCTION PPBPS PRODUCT – HORIZONTAL INSTALLATION] WITH 21" TRENCH BOTTOM. REPAIR SYSTEM IS TS-II PRETREATMENT, SUBSURFACE ANAEROBIC SPLIT-ZONE DRIP SYSTEM WITH 6-16" TRENCH BOTTOM. ADEQUATE SPACE AS SHOWN ON PLANS MUST BE RESERVED FOR INSTALLATION OF PRETREATMENT TANKAGE AND COMPONENTS FOR FUTURE REPAIR SYSTEM. 1200 GALLON SEPTIC TANK AND 1200 GALLON PUMP TANK REQUIRED FOR INITIAL SYSTEM. FOUNDATION DRAIN ALLOWED.

WHEN INSTALLING SYSTEM, PLEASE MAINTAIN ALL REQUIRED SETBACKS. DO NOT DISTURB OR REMOVE ANY SOIL IN INITIAL OR REPAIR AREAS. MUST MAINTAIN REQUIRED EMERGENCY STORAGE IN PUMP TANK. A NEMA 4X CONTROL PANEL WITH TWO BREAKERS, TWO POWER SUPPLIES, ELAPSED TIME METER AND CYCLE COUNTER IS REQUIRED. IF FLAGS ARE MISSING, CALL DESIGNER TO RE-FLAG. THIS SYSTEM IS DESIGNED BY AN ENGINEER AND MUST BE INSTALLED PER THE DESIGN, INCLUDING THE USE OF THE MATERIALS SPECIFIED IN THE DESIGN. ANY DEVIATION MUST BE APPROVED BY THE ENGINEER OR WAKE COUNTY PRIOR TO SYSTEM INSTALLATION.

WASTEWATER SYSTEM AND REPAIR PERMITTED USING FLOW RATE PROVIDED BY A PROFESSIONAL ENGINEER PURSUANT TO SESSION LAW 2014-120 SECTION 53. FLOW RATES PROVIDED BY A PROFESSIONAL ENGINEER PURSUANT TO SESSION LAW 2014-120 SECTION 53 ARE NOT SUBJECT TO REVIEW BY THIS DEPARTMENT FOR ACCURACY OR CONFORMANCE TO STATE AND LOCAL REGULATIONS. PROFESSIONAL ENGINEER ASSUMES ALL LIABILITY FOR SYSTEM FAILURES RELATED TO FLOWS IN EXCESS OF DESIGN FLOW. NEITHER THE STATE NOR LOCAL HEALTH DEPARTMENT SHALL BE LIABLE FOR ANY DAMAGES CAUSED BY AN ENGINEERED SYSTEM APPROVED OR PERMITTED PURSUANT TO SESSION LAW 2014-120 SECTION 53.

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE MUST BE SIGNED, NOTARIZED AND RECORDED AT THE WAKE COUNTY REGISTER OF DEEDS OFFICE. ENGINEER CERTIFICATION OF REQUIRED FIXTURE INSTALLATION ARE REQUIRED PRIOR TO ISSUANCE OF OPERATION PERMIT. . ONCE REPAIR SYSTEM IS INSTALLED, THE REQUIREMENTS FOR OPERATION, MAINTENANCE, AND SAMPLING WILL BE IN EFFECT PER REPAIR SYSTEM OPERATION REQUIREMENT. PLEASE CONTACT WAKE COUNTY IF ANY QUESTIONS OR PROBLEMS ARISE PRIOR TO INSTALLATION.

Issued By:



Date: 06/11/2025

HOMEOWNER GUIDE FOR UTILIZATION AND MAINTENANCE OF ON-SITE WASTEWATER DISPOSAL SYSTEMS

What is an On-site Wastewater Disposal System?

There are a number of different types of on-site wastewater disposal systems each designed for your specific site conditions. However, there are several system components that are common to most systems. These include the following:

1. **A septic tank** - a concrete tank that is designed to receive wastewater from the house and to provide a degree of pretreatment for the waste, chiefly through removal of some of the solids in the waste. Note that these solids accumulate over time and necessitate periodic pumping of the septic tank. Currently septic tanks are equipped with two access risers (normally constructed of concrete) which are designed to be at least 6 inches above the ground surface to prevent surface and shallow groundwater from entering the septic tank and to provide access for maintenance. **Care must be taken not to damage or cover these risers so that water intervention can be prevented, and the tank can be accessed for maintenance.**
2. **In some installations, a pump tank** - a concrete tank, very similar to the septic tank, which contains a pump along with the associated controls/componentry. The pump tank and pump is designed to receive effluent from the septic tank, and pump the wastewater to a disposal field located at a higher elevation and/or to a pressurized distribution network in the disposal field. **The pump tank also has an access riser which must be protected in a similar manner to that indicated for the septic tank.** Servicing of the pump tank components often necessitates the assistance of a professional such a septic tank installer or Certified Subsurface System Operator. The later is required for operation and maintenance of certain types of systems.
3. **A disposal field** - a series of subsurface trenches and lines that are designed to distribute the wastewater into the soil and provide for the ultimate treatment and disposal of the wastewater. There are numerous variations on the design of the disposal field, related chiefly to the type of system chosen, site constraints, etc. Dependent on the type of disposal system, you may have to maintain a contract with a Certified Subsurface System Operator for operation and maintenance of your wastewater disposal system.

Utilization of Your Wastewater Disposal System

In order to obtain the maximum efficiency and life expectancy from your system, the following simple procedures must be adhered to:

1. **Practice water conservation.** This can include many practical considerations such as not leaving the water running while you brush your teeth, not overfilling the tub, limiting time in the shower, not replacing low flow fixtures with those of higher flows, over rinsing dishes (allow the dishwasher to do its job), immediate repair of any leaking fixtures, running washing machines and dishwashers only when full, etc.

NOTE: Washing machines generate significant volumes of wastewater. As a result, laundry activities should be spread over the week as opposed to accumulating all of laundry until the weekend.

2. **Do not utilize your wastewater disposal system as a trash can by dumping nondegradables down your drains or toilet.** These include cigarette butts, sanitary products, grease, plastics, disposable diapers, etc. Avoid use of garbage disposals. Do not retrofit garbage disposals unless the system is specifically permitted for their use. Also, do not dump harmful chemicals down the drain. These include petroleum products, paint thinner, paint, pesticides, antifreeze, etc.

Maintenance of Your Wastewater Disposal System

Every wastewater disposal system requires maintenance in order to function properly. The specific maintenance required is related to the type of system. The following are general considerations that apply to all systems.

1. **Protect your wastewater disposal system components including the tanks, access risers, disposal field and associated components.** Do not drive or park on any portion of the system. The area over the disposal field should be left undisturbed with the grass cover being maintained as you would your lawn. Location of trees and shrubs on or in close proximity to the disposal field is not recommended since roots may clog or damage your drain lines. Additionally, great care must be exercised when considering the addition of any structure(s) to the site. The location of any appurtenances cannot encroach on the installation or repair areas for your system. It is not recommended that irrigation systems be located in proximity to the disposal system since their construction can cause system damage and/or result in additional hydraulic load on the disposal field.
2. **Protect the system from excess surface and shallow groundwater.** The land surface on and around the wastewater disposal system should be landscaped to shed rainfall and runoff and prevent ponding. Be sure that foundation drains, runoff from roofs and drives, etc. are diverted away from the disposal system.
3. **Regularly have the septic tank/pump tank pumped and cleaned by a permitted septage hauler.** Although the necessary frequency of pumping varies with the

household, most tanks need pumping at a frequency of 3-5 years and at any time solids occupy one-fourth to one-third of the septic tank liquid depth.

Note that all septic tanks being currently installed incorporate an effluent filter within the outlet compartment of the septic tank. This filter is to be cleaned anytime the septic tank is pumped. If plumbing becomes sluggish, this filter should be checked. If filter service is found.

4. **Be alert to warning signs that your system may not be functioning properly.** These include sewage surfacing over the disposal system, sewage backups/slow draining in the house, lush growth over the disposal system, sewage odors, etc.
5. **Do not make or allow repairs to your system unless all necessary permits are obtained from Wake County Onsite Water Protection Division.**
6. **Commercial additives for septic tank systems** - It has generally not been demonstrated that these additives enhance the function of septic systems or reduce the need for tank pumping and other necessary maintenance.
7. **Special maintenance considerations** - As already alluded to, some of the more complex wastewater disposal systems require that you retain/maintain the services of a Certified Wastewater System Operator in order to comply with Laws and Rules and maintain a valid operation permit for your system. In Wake County this maintenance requirement should be recorded with Register of Deeds if applicable.

Where Do I Obtain Information and Assistance?

If you are purchasing a new home, you should request a copy of your wastewater system permit from the builder/seller along with information regarding any special maintenance requirements. You may also obtain information and assistance from the **Wake County Onsite Water Protection Division**, 336 Fayetteville Street, Raleigh, NC 27602. Telephone (919) 856-5700.



PRESSURE MANIFOLD SYSTEMS

A Pressure Manifold System is one of several types of septic systems approved for use in Wake County. The Pressure Manifold System, while somewhat more expensive to install, is a flexible and high-quality method of wastewater disposal. A pump doses a pressure distribution manifold that disperses the effluent evenly to each trench. Dosed systems are more common for larger flows. The manifold can be constructed with different size taps to accommodate different trench lengths. This allows for better utilization of the area on the lot. The pressure manifold can include valves or plugs that permit more control over trench loading or trench resting.

Experience and study have shown that pressure manifold systems require routine maintenance in order to function properly. Items 1, 4 and 6 are also recommended for conventional septic systems. The maintenance schedule frequency is as follows:

<u>System Component</u>	<u>Frequency</u>	<u>Maintenance</u>
1. Septic Tank	6-12 months 1-3 years	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Check and clean septic tank filter. Pump septage when 1/3 to 1/4 of the liquid capacity of the tank is occupied by solids.
2. Pump or Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines (Manifold)	6-12 months	Check for settling, pipe exposure and leakage.
4. Ground Absorption Field	1-4 weeks 6-12 months	Maintain vegetative cover (mow grass and remove weeds and brush). Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold	6-12 months	Flush sludge from pressure manifold (any discharge sludge and effluent is to be treated with a chlorine solution). Check and reset pressure head.
6. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce wastewater load on system. Do not permit entry of grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained.

A certified operator may be required.

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE

To Be Recorded In The Register Of Deed's Office In Wake County.

Owner/Grantor

Deedbook and Page

PIN No.

Date Installed

Subdivision Name

Lot No.

System Designed by

Installer

AN ALTERNATIVE OR NON-TRADITIONAL SEWAGE DISPOSAL SYSTEM USING AN ENGINEER DESIGNED FLOW RATE MODIFICATION PURSUANT TO SESSION LAW 2014-120 SECTION 53 HAS BEEN INSTALLED ON THIS PROPERTY.

The design specifications and locations for alternative sewage disposal systems are specified or authorized in Regulations Governing Wastewater Treatment and Dispersal in Wake County effective November 21, 1988, amended effective May 23, 2002, October 27, 2011 and June 25, 2020. As A Condition Of Issuance Of This Improvements/Operation Permit, The Property Owner Hereby Grants The Wake County Department Of Environmental Services A Right Of Access To The System During Regular Working Hours For Purposes Of Monitoring Compliance With State And Local Regulations, Recorded Maintenance Agreements And Certified Operator Compliance.

This permit requires the use of **pressure manifold distribution to a mode of subsurface wastewater dispersal**. Experience and study have shown that pump to manitee systems require routine maintenance in order to function satisfactorily. In as much as each system must be individually designed and sited, special maintenance requirements may apply to a specific installation; however, the following maintenance schedule is applicable to all pressure manifold systems. This permit also requires the use of **pre-treatment and a mode of subsurface wastewater dispersal for the repair system**, which will require a contract with a Certified Operator to perform maintenance on the system as described in the above referenced regulations. **Due to this requirement, the initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted.** For additional information, technical assistance or if a malfunction of the system occurs, contact the Wake County Department of Environmental Services, Telephone: 919-856-7400.

<u>System Component</u>	<u>Frequency</u>	<u>Maintenance</u>
1. Septic Tank	6-12 months	Check riser condition (must be accessible from ground surface), excess in/exfiltration, entry of water at riser, and solids accumulation.
	1-3 years	Pump seepage.
2. Pump/Dosing Tank	6-12 months	Check riser conditions (must be accessible from ground surface),excess in/exfiltration, entry of water at riser, and solids accumulation. Pump sludge accumulation as required and when septic tank is pumped. Check pump(s), controls, floats, electrical connections, and alarm for proper operation. Wash (hose) sludge accumulation from pump housing.
3. Supply lines	6-12 months	Check for settling, pipe exposure and leakage. Includes Manifold(s).
4. Drain Field(s)	1-4 weeks	Maintain vegetative cover (mow grass and remove weeds and brush).
	6-12 months	Check for settling, erosion and surfacing of effluent. Check site drainage, eliminate low or settled areas and divert surface or shallow groundwater movement around fields.
5. Pressure Manifold	6-12 months	Check and reset pressure head, flush sludge from pressure manifold (any discharge sludge and effluent is to be treated with a chlorine solution).
6. Sampling	12 Months	Influent and Effluent sampling may be required once per year to ensure adhearance to domestic strength wastewater standards.
7. General	At all times	Prohibit vehicular or equipment traffic on ground absorption field. Prohibit tillage (gardening) or other soil disturbance over ground absorption field. Practice water conservation to reduce waste water load on system. Do no permit entry or grease and non-domestic waste to system. Use of a garbage disposal is <u>prohibited</u> . Addition of chemical or biological additives has <u>not</u> been demonstrated to be necessary to maintain proper system function. Prevention of root intervention on lateral lines and trenches may be necessary on certain sites. Surface and groundwater diversion structures must be maintained. <u>Adherence to permitted flow rate.</u>

This system is permitted under S.L. 2014-120 for engineer flow reduction utilizing low flow fixtures and technologies, all of which must remain in use for the life of the applicable system. Neither the State nor any local government shall be liable for any damages by a system approved or permitted pursuant to this section. Initial system must be inspected by a certified inspector or operator at a frequency of at least once every five years and a report submitted. A certified operator is required for the life of the system, **once repair system is installed.**

Signature of Property Owner

Date

NORTH CAROLINA _____ County. I, a Notary Public of the County and State aforesaid, certify that _____ Owner, Personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this ____ day of _____ 20____.

My commission expires _____ Notary Public _____

WWDS 12/18

WAKE COUNTY N.C. P.D.L.
REVISED SITE PLAN

Site Plan Reviewed
Wake County Inspections & Permits
This review does not constitute an approval.
This site plan has been reviewed by Wake County Inspections & Permits
Department for compliance with minimum permitting requirements.
Additional site plan requirements, reviews and revisions may be required
by other departments as part of the permitting process.
Teresa Burton
06/03/2025 12:40:31 PM

PRELIMINARY PLOT PLAN FOR

VALENTI HOMES

LOT 93, PRESCOTT MANOR SUBDIVISION, PH.2

8201 MARY CLAIRE LANE

REF: B.M. 2023, PG. 2086-2088

NEW LIGHT TOWNSHIP

WAKE COUNTY, NORTH CAROLINA

JUNE 10, 2024

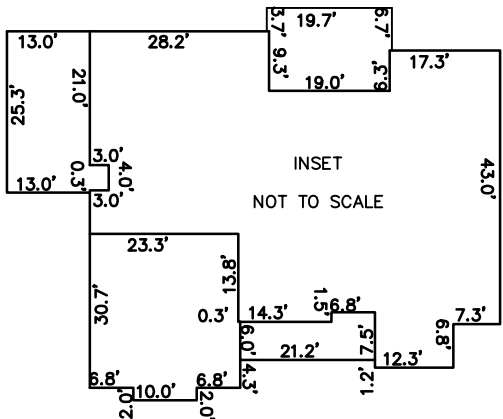
REVISED JUNE 24, 2024

REVISED APRIL 10, 2025

ZONED R-40W



SCALE 1"=50'



Required Setbacks	
Front	15
Side	7.5
Rear	15
Corner	

92
PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

FLOOD REVIEW

94
PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

93
32,428 S.F.
0.744 AC.

PROPOSED
REPAIR DRIP
SEPTIC

COVERED
PORCH

PROPOSED
HOUSE

SEE INSET

PROPOSED
DRIVEWAY

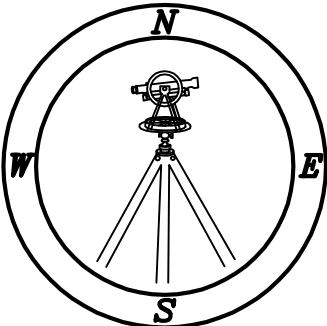
PROPOSED
REPAIR DRIP
SEPTIC

30' PERIMETER
SETBACK

IMPERVIOUS SURFACE TABLE	
HOUSE	3,528 S.F.
DECK	250 S.F.
DRIVEWAY	2,551 S.F.
SIDEWALKS	232 S.F.
MISC/UTILITIES	36 S.F.
TOTAL IMPERVIOUS AREA	6,597 S.F.
MAX IMPERVIOUS ALLOWED	8,500 S.F.

JERRY W. KEITH TRUSTEE &
SANDRA E. KEITH TRUSTEE
D.B. 15040, PAGE 2451
B.M. 1989, PAGE 494
PIN #1812.04-60-6487

THIS SURVEYOR DOES NOT
WARRANTY THE ACCURACY
OF ARCHITECTURAL DIMENSIONS.
THEY ARE TO BE VERIFIED BY
THE CONTRACTOR.



CMP

Professional Land Surveyors
C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

NOTES:
-THIS PLAN DOES NOT REFLECT AN
ACTUAL SURVEY. IT IS A PRELIMINARY
PLAN AND SHOULD BE USED FOR ITS
INTENDED PURPOSE ONLY.
-NOT FOR RECORDATION, CONVEYANCES,
OR SALES.

PRELIMINARY PLOT PLAN FOR

VALENTI HOMES

LOT 93, PRESCOTT MANOR SUBDIVISION, PH.2

8201 MARY CLAIRE LANE

REF: B.M. 2023, PG. 2086-2088

NEW LIGHT TOWNSHIP

WAKE COUNTY, NORTH CAROLINA

JUNE 10, 2024

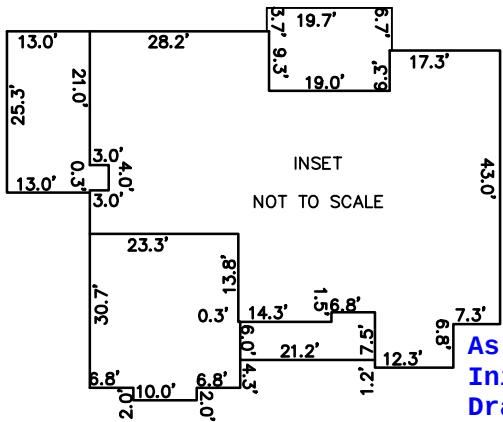
REVISED JUNE 24, 2024

REVISED APRIL 10, 2025

ZONED R-40W



SCALE 1"=50'



MARY CLAIRE LANE
50' PUBLIC R/W

FLOOD REVIEW

94

PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

Required Setbacks	
Front	15
Side	7.5
Rear	15
Corner	

92

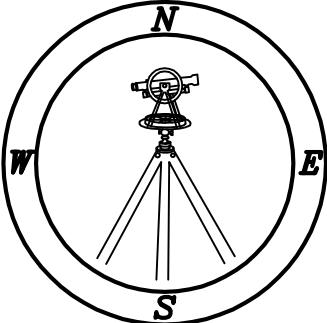
PRESCOTT MANOR
SUBDIVISION, PH.2
B.M. 2023, PG. 2086-2088

Drip
Repair
Area

32,428 S.F.
0.744 AC.

IMPERVIOUS SURFACE TABLE	
HOUSE	3,528 S.F.
DECK	250 S.F.
DRIVEWAY	2,551 S.F.
SIDEWALKS	232 S.F.
MISC/UTILITIES	36 S.F.
TOTAL IMPERVIOUS AREA	6,597 S.F.
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OR SALES.

MARY CLAIR LANE
50' PUBLIC R/W
CA PART B (2)

UNDERGROUND
POWER & GAS
ARE BURIED BETWEEN
THE SEPTIC SUPPLY LINE
AND PROPERTY LINE

EXISTING
WATER LINE

REPAIR DRIP
SEPTIC AREA 1
TD 16"

EXISTING
WATER LINE
SECTION
TO BE REMOVED

NEW WATER LINE
SECTION TO BE
ADDED TO
MEET SEPTIC
SETBACKS

REPAIR DRIP
SEPTIC AREA 2
TD 8"

CLEAN OUT
STUB UP
REPAIR DRIP
SEPTIC AREA 3
TD 8"

PROPOSED
HOUSE
SEE INSET

COVERED
PORCH

EXISTING 1200 GALLON
SEPTIC TANK &
PUMP TANK;
10.6' TBM GROUND @ PT

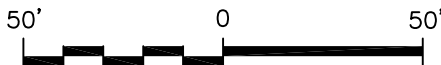
AREA FOR EXTRA
TANK(S)/TREATMENT
DEVICE FOR SEPTIC REPAIR

4-BEDROOM FLOW REDUCTION
PRESSURE MANIFOLD SYSTEM
4- 60FT LINES 0.3 LTAR HORIZONTAL PANEL BLOCK
4-BEDROOM FLOW REDUCTION
ANAEROBIC DRIP REPAIR
LINES 1-15 & NOT FLAGGED LINES 0.15 LTAR TS-II PRETREATMENT

LEGEND

- SYSTEM LINE
- - - DRIP REPAIR LINE
- ST SEPTIC TANK
- PT PUMP TANK

GRAPHIC SCALE
1" = 50'



NOTES:

- 1) SITE DATA TO INCLUDE PROPERTY BOUNDARIES, STRUCTURE LOCATION, UTILITIES, ROADS, AND OTHER SITE FEATURES WERE PROVIDED BY THE CAWTHRONE, MOSS, PANICERIA SURVEYORS AND ARE SHOWN TO DISPLAY GENERAL SITE CONDITIONS.
- 2) ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS ARE APPROXIMATE AND AS SUCH NO SPECIFIC ACCURACY EITHER VERTICAL OR HORIZONTAL IS IMPLIED.
- 3) THIS MAP AND CORRESPONDING SITE EVALUATION IS NOT CONFORMANT TO THE ENGINEERED OPTION PERMIT (EOP) OR LSS OPTION PERMIT PROCESS. ADDITIONAL SITE TESTING AND EVALUATIONS WILL BE REQUIRED TO UTILIZE THE EOP OR LSS OPTION PROCESS.
- 4) PROPERTY AND EASEMENT BOUNDARIES SHOWN ON THIS SITE SKETCH ARE APPROXIMATE AND ARE NOT INTENDED FOR LOCATING PROPERTY OR IDENTIFYING PROPERTY OR EASEMENT CORNERS. THIS IS NOT A SURVEY. 4-2-2025

S&EC

Soil & Environmental Consultants, Inc.

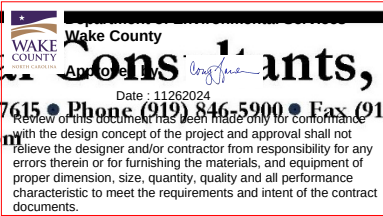
8412 Falls of Neuse Rd., Suite 104 • Raleigh, North Carolina 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467
www.SandEC.com
© 2023 Soil & Environmental Consultants, PA. N.C. FIRM LICENSE NO. F-1523

Project: PRESCOTT MANOR, LOT 93 8201 MARY CLAIR LN		Project No.: 14267.512	
Location: WAKE CO., NC	Client: VALENTI HOMES	Project Manager: RP	Drawn: CC, JM
Sheet Title: SEPTIC SYSTEM AND REPAIR LAYOUT		Scale: 1" = 50'	Field Work: JM, CC
		Sheet No.: 1 of 1	



Soil & Environmental Consultants, Inc.

8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone (919) 846-5900 • Fax (919) 846-9467
sandec.com



November 26, 2024
Project #14267.S12

Attached is a proposed design for a Pressure Manifold Septic System for a four bedroom residence located at 8201 Mary Claire Ln, Lot 93 Prescott Manor Subdivision, Wake County, NC

<u>Contents:</u>	<u>Page</u>
Information for the Contractor -----	1
Design Specifications-----	2 – 6
Site Plan-----	7
Septic Tank Diagram-----	8 - 9
Pump Tank Diagram-----	10 - 11
Pressure Manifold-----	12
Control Panel Specifications-----	13 – 14
Pump Specifications-----	15 – 16
Septic Tank Filter Specifications-----	17 – 19
Repair Tap Sheet-----	20

S&EC PROJECT #14267.S12
DESIGN – J. McGaughey
PROJECT MGR – R. Pontello

INFORMATION FOR THE CONTRACTOR

The permit should be read very carefully prior to bidding. The following are details that must be considered by the contractor prior to and during installation:

- The septic installer for this system must have a valid septic installer certification from the North Carolina Onsite Wastewater Contractor Inspector Board (NCOWCICB).
- Tanks shall be approved by NCDHHS and meet 18E requirements, and certification supplied by the manufacturer.
- The installer shall be responsible to the owner for placement of the tanks and to ensure that final grades are returned to the original grade, with the exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement without damage or displacement of pipe or fittings.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy-bodied PVC pipe glue applied to weld all joints.
- Trenches shall be carefully excavated so the bottom is within 2 inches from the highest to the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to ensure that trenches are not over excavated during initial trenching. All fine grading within the trench will be done by hand with a shovel. No loose material will be left in the trench.
- All pipe openings in the tanks shall be properly filled with press boot seal.
- All tanks shall be properly back filled and compacted to prevent settlement.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the drainfield during or after installation. The use of a small loader (i.e. Bobcat skid steer) or a trencher/mini excavator (i.e. CAT 309 CR) or similar machinery may be used for septic installation.
- Elevations at pin flag locations should be checked by the contractor prior to beginning trench excavation.
- Pump tank riser shall be 6 inches above grade, control panel shall be 24 inches above grade.
- System uses Horizontal Panel Block drain line.
- Repair uses Horizontal Panel Block drain line.

PRESCOTT MANOR LOT 93
S&EC Project # 14267.S12
Date: 9/30/2024

**PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT**

Owner: Valenti homes, LLC
Address: 14916 Coveshore Dr.
Wake Forest, NC 27587
County: Wake
Location:

Source of Wastewater Flow: 4 Bedroom Residence (Flow Reduction)
Estimated Daily Wastewater Production: 360 gpd
System Flow: 28.44 gpm

Design Specifications

Number of Drain Lines: 4
Drainfield Size: 240 ft
Loading Rate (LTAR): 0.300 gpd/sq ft
Distribution Method: HORIZONTAL PPBPS
Gravel Size (if applicable): NA
Minimum Trench Depth: LHD in **Max Trench Depth:** LHD in
Trench Width: 36 in
Minimum Septic Tank Liquid Capacity: 1200 gal
Pump Tank: 1200 gal
Grease Trap: NA -
Supply Line Length: 187 ft
Supply Line Diameter: 2.0 in. SCH 40 PVC
Supply Line Volume: 32.54 gal
Supply Manifold: 4 in. SCH 80 PVC
Supply Manifold Length: 3.5 ft (minimum)
Supply Manifold Volume: NA
Threaded Union: In Tank
Gate Valves: 1 in Pump Tank
1 at Pressure Manifold
Check Valves: 1 in Pump Tank
Anti-Siphon Hole: 1 in Pump Tank
Solenoid Valve: NA
Air Release/Vacuum Break Valve: NA
Recommended Septic Tank Filter: STF 110 or County Approved Equivalent
Recommended Float Controls: SJE Sensor Float Control Switches as Required
for Control Panel or County Approved Equivalent
Recommended Control Panel: SJE-Rhombus Model 112 (NEMA 4x) Control
Panel or County Approved Control Panel.
Recommended Pump: Zoeller 151 or County Approved Equivalent
TDH Capacity: 15.5 ft
Flow Capacity: 28.44 gpm

Additional Comments: Soil suitability was performed by the
Wake County Health Department.

PRESCOTT MANOR LOT 93
S&EC Project # 14267.S12
Date: 9/30/2024

DESIGN CALCULATIONS

Supply line length	187	ft
2.0 in. SCH 40 PVC	0.174	gal/ft
Supply line Volume	32.54	gal
 Total drain field length	 240	 ft
 Total # of Horizontal PPBPS Panels needed	 56	

Dose volume	201.60	gal
Pump tank	19.65	gal/in
Pump tank Drawdown	10.3	in
 Ground Elevation at Pump Tank	 95.7	 ft
Pump Tank Installation Depth	3	ft
Pump Tank Elevation	92.7	ft
Pump Elev. Difference	4.8	ft
Pump Elevation	87.9	ft
Manifold Elevation	97.3	ft
	9.3	ft
Elevation Head	9.35	ft
 System flow	 28.44	 gal/minute
Friction Factor*	1.61	f / 100ft
Supply Line Length	187	ft
Friction Adjustment for Fittings**	257	ft
Friction Head	4.1	ft
 Pressure Head	 2.0	 ft
 (TDH) Total Dynamic Head	 15.5	 ft

FRICTION FACTOR
INTERPOLATER
2.0 in. SCH 40 PVC

GPM	f
20	0.84
22	1.01
25	1.27
27.5	1.53
30	1.78
32.5	2.08
35	2.37
37.5	2.70
40	3.03
42.5	3.40
45	3.77
47.5	4.18
50	4.58
55	5.50
60	6.42

Daily flow	360	gal/day
LTAR	0.300	sqft/day
Max Design LTAR w/ Product Reduction + 5%	0.630	sqft/day
Trench width	3.0	ft
Required drain field length (PPBPS Product)	200	ft

* Computed by Hazen Williams Formula, assuming C=140

**If supply line is greater than 350ft, then 20% is added to account for fittings. If supply line is less than 350ft, then 70ft is added to account for fittings.

PRESCOTT MANOR LOT 93

S&EC Project # 14267.S12

Date: 9/30/2024

SYSTEM TAP CHART

HORIZONTAL PANEL BLOCK (PPBPS) PRODUCT

Line #	Color	Field Elev. (ft)	Length (ft)	Hole Size (in)	Flow/Tap (gpm)	gpd	Trench Area (sq ft)	Line LTAR (gpd/sq ft)	# OF PANELS PER TRENCH
4	YELLOW	96.25	60	1/2" SCH. 40	7.11	90.00	180	0.500	14
5	RED	95.50	60	1/2" SCH. 40	7.11	90.00	180	0.500	14
6	ORANGE	94.83	60	1/2" SCH. 40	7.11	90.00	180	0.500	14
7	WHITE	93.83	60	1/2" SCH. 40	7.11	90.00	180	0.500	14

total feet = 240 Flow Capacity gal/min = 28.44 total # of panels = 56

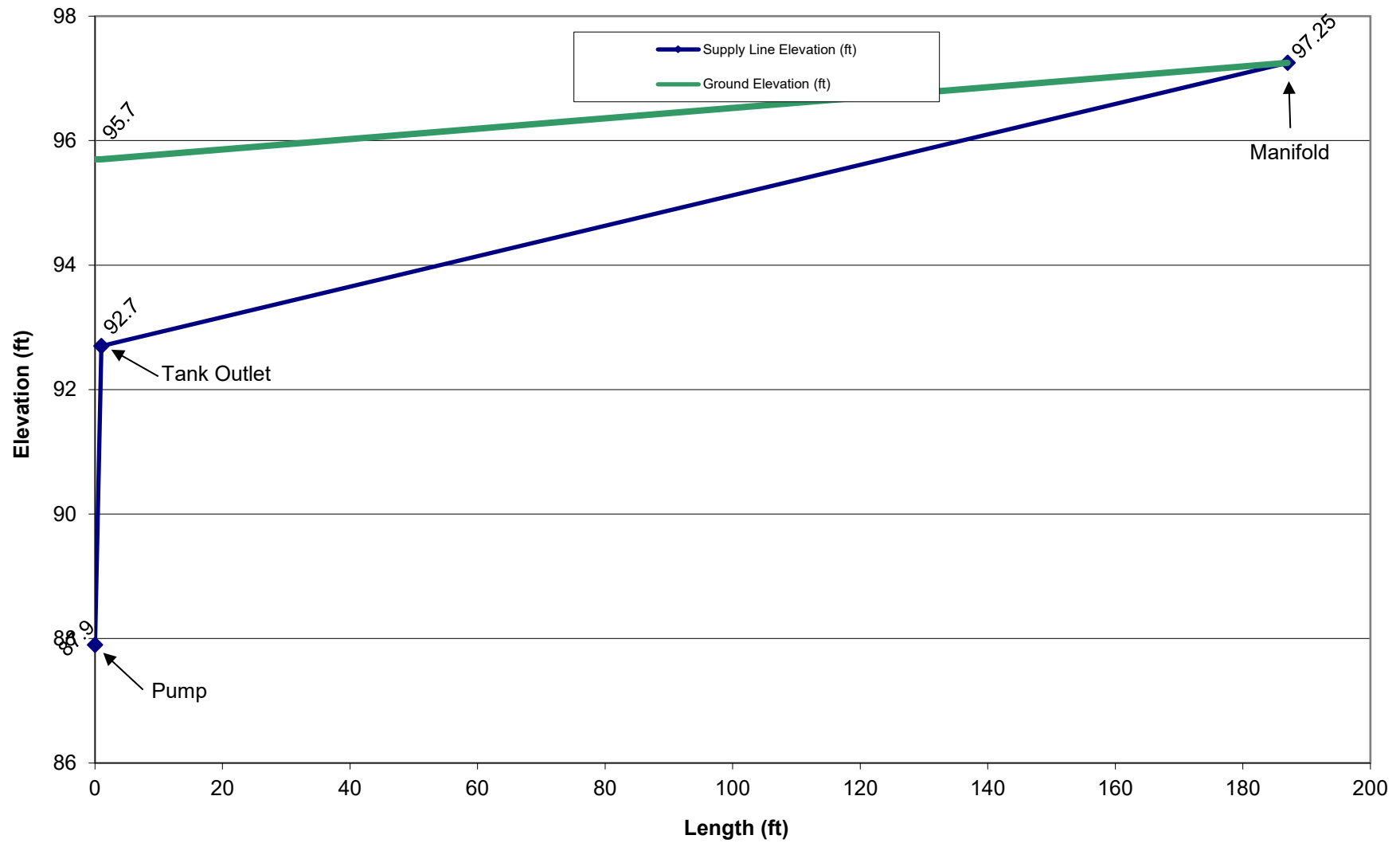
Des. Flow 360 gpd
Pump Run= 12.66 min
soil LTAR 0.300 gpd/sq ft
Product Reduction 50%
LTAR with Product Reduction 0.600 gpd/sq ft
LTAR with Product Reduction + 5% 0.630 gpd/sq ft
total # of panels X 3.6 gallons per panel
Dose Volume 201.60 gal

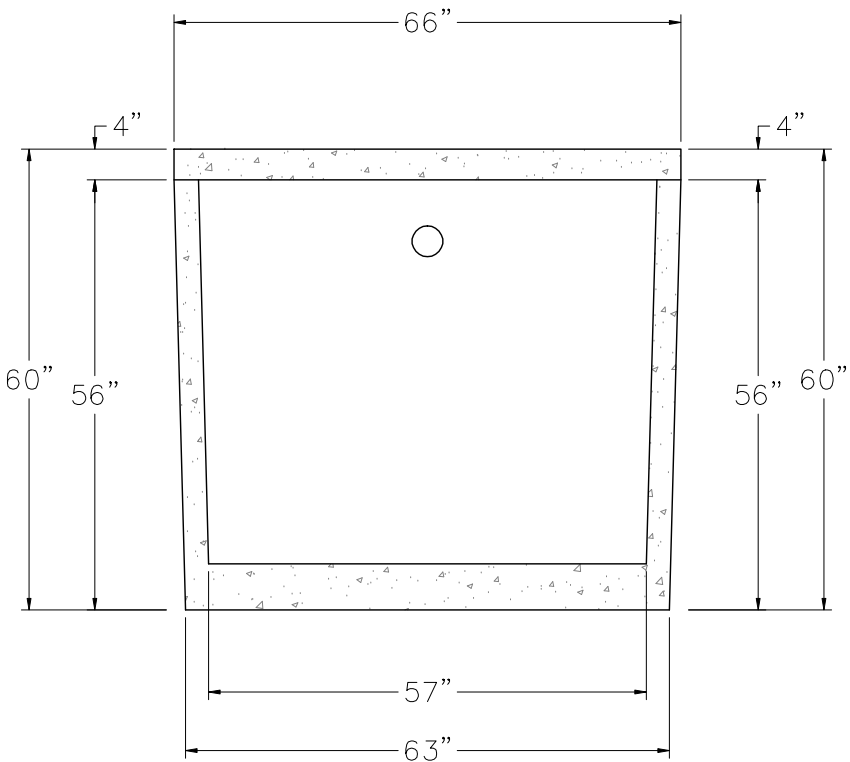
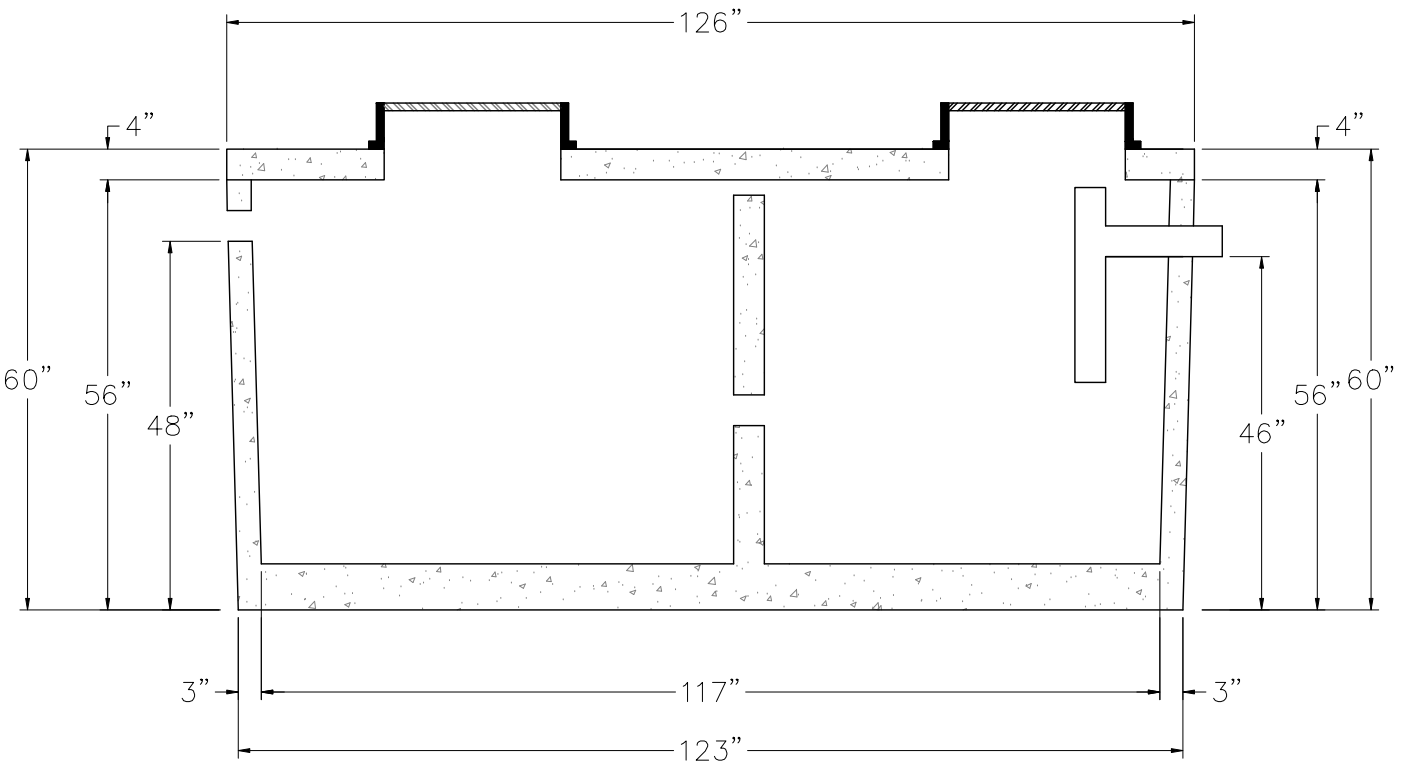
Pump Run Time 7.09 min

Pressure Head 2.0 ft

Minimum Trench Depth: in Max Trench Depth: in
SEE LHD NOTES SEE LHD NOTES

Supply Line Profile





1,250 ST 323
NTS

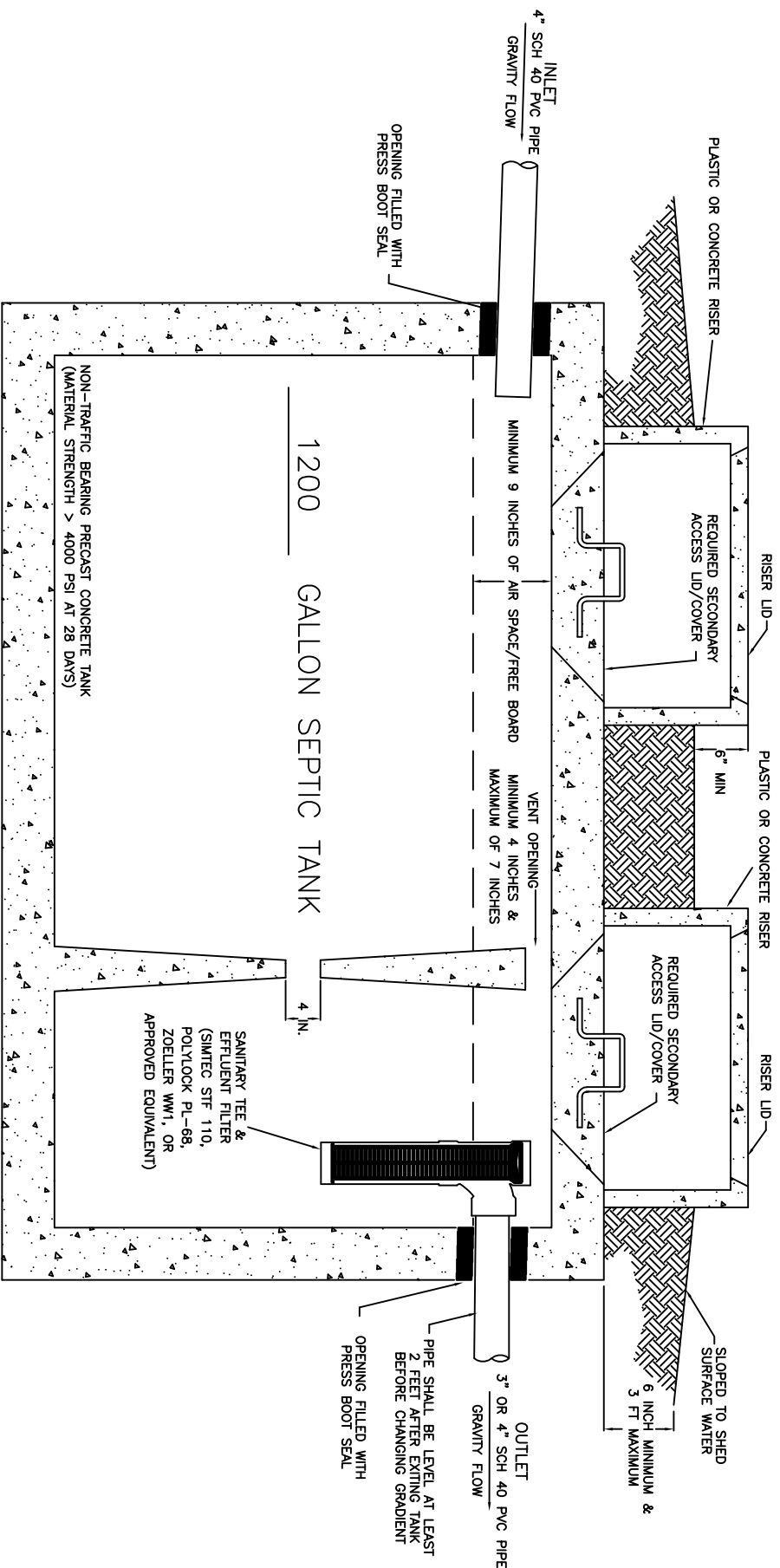
NON TRAFFIC BEARING

DAVID BRANTLEY & SONS
37 Pine Ridge Rd.
Zebulon, NC 27597
Office 252-478-3721
Fax 919-573-0443
1installer@gmail.com

PREPARED FOR : David Brantley & Sons
37 Pine Ridge Rd.
Zebulon, NC 27597
DATE : April 11, 2014
CONTACT: CORY BRANTLEY

REVISION NO.	DATE
Original Submittal	April 11, 2014
Revision 1	
Revision 2	
Revision 3	
Master Set	----

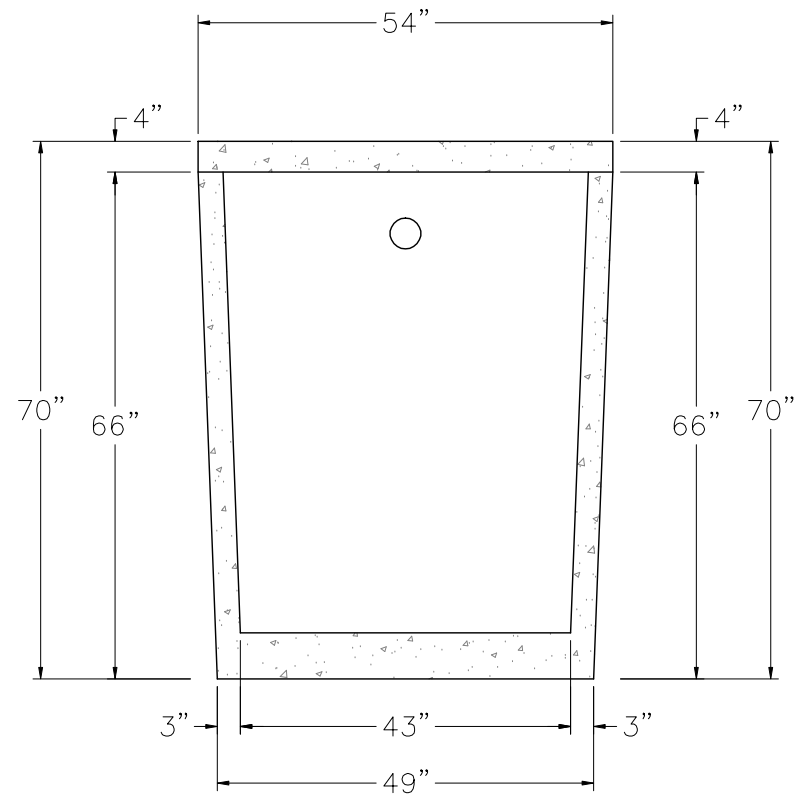
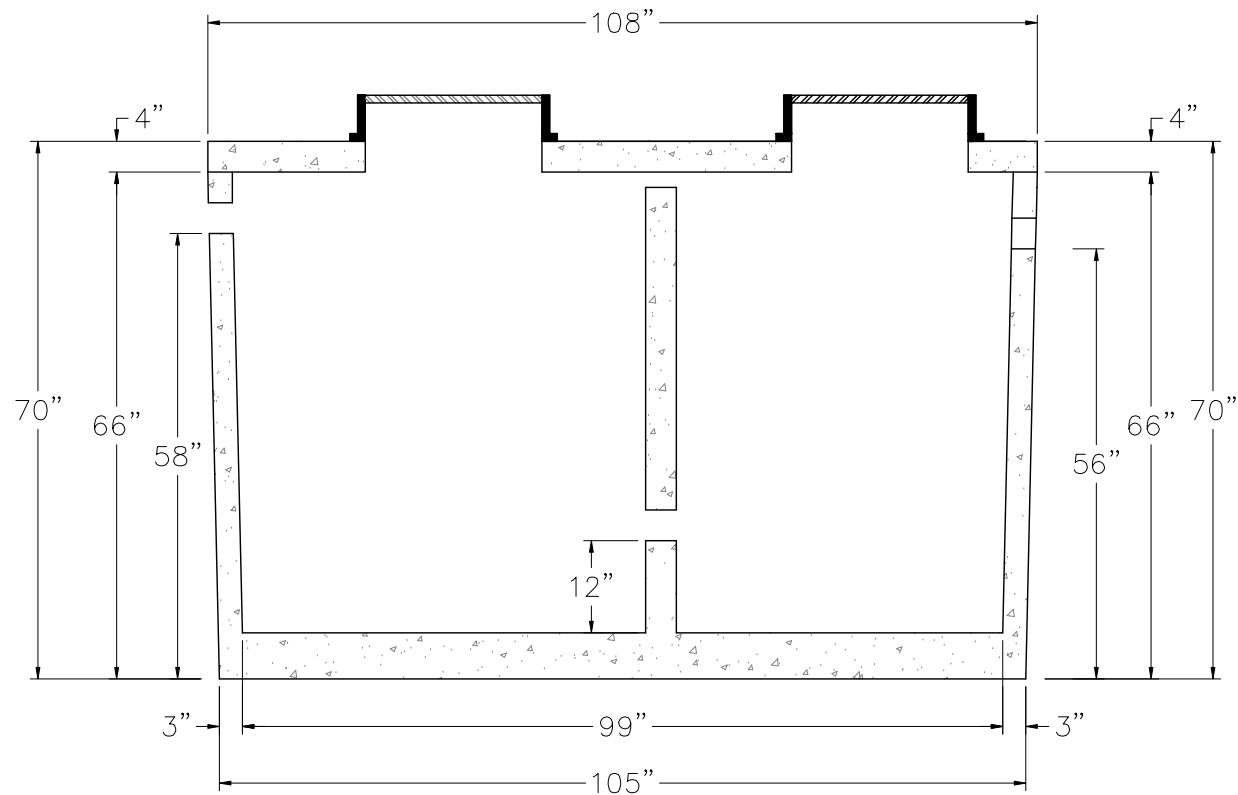
BRANTLEY TANK MODEL
1,250 ST 323
SHEET NUMBER
1 of 1



NOTES :

1. SEPTIC TANK, RISERS, SANITARY TEE, & EFFLUENT FILTER MUST BE PRODUCTS WITH APPROVAL TO BE USED IN NC BY NCDHHS.
2. SEPTIC TANK SHALL BE INSTALLED ACCORDING TO 15A NCAC 18E.0805 & 18E.1400.
3. SEPTIC TANK SHALL BE LEVEL ACCORDING TO 15A NCAC 18E.0805 (G).
4. SEPTIC TANK COMPARTMENTS MAY VARY FROM THE TANK DIAGRAM BUT SHALL MEET THE CONDITIONS IN 15A NCAC 18E.1402 (D)(11).
5. IF SEPTIC TANK LEAK TESTING IS PERFORMED AT A JOB SITE & VERIFIES THAT THE TANK, PIPE PENETRATIONS, & RISERS ARE WATER TIGHT THEN SOME REDUCED SETBACKS ARE ALLOWED FOR SOME SEPTIC COMPONENTS ACCORDING TO 18E.0601(D).
6. A GRAVEL BED UNDER THE SEPTIC TANK MAY BE NEEDED IF THE BOTTOM OF THE TANK HOLE HAS A ROUGH SURFACE.
7. SANITARY TEE & EFFLUENT FILTER MUST BE SIZED TO ACCOMMODATE THE DESIGN DAILY FLOW (DDF) IN GALLONS PER DAY (GPD).
8. SANITARY TEE & EFFLUENT FILTER CAN VARY FROM PRODUCTS STATED IN DIAGRAM AS LONG AS THE PRODUCTS HAVE APPROVAL TO BE USED IN NC BY NCDHHS.

JOB NO. 14267.S12	PROJECT NAME: PRESCOTT MANOR, LOT 93
PROJECT MGR: RP	
SCALE NTS	SHEET TITLE: SEPTIC TANK DIAGRAM
S&E EC Soil & Environmental Consultants, Inc. 8412 Falls Of Neuse Road • Raleigh, North Carolina 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467 www.SandEC.com	



1,200 PT 463
NTS

NON TRAFFIC BEARING

DAVID BRANTLEY & SONS
37 Pine Ridge Rd.
Zebulon, NC 27597
Office 252-478-3721
Fax 919-573-0443
1installer@gmail.com

PREPARED FOR : David Brantley & Sons
37 Pine Ridge Rd.
Zebulon, NC 27597

DATE : April 11, 2014

CONTACT:
CORY BRANTLEY

REVISION NO.
Original Submittal

Revision 1

Revision 2

Revision 3

Master Set

DATE
April 11, 2014

BRANTLEY TANK MODEL
1,200 PT 463

SHEET NUMBER
1 of 1

480 GPD

24 HOURS

19.65 GAL/IN

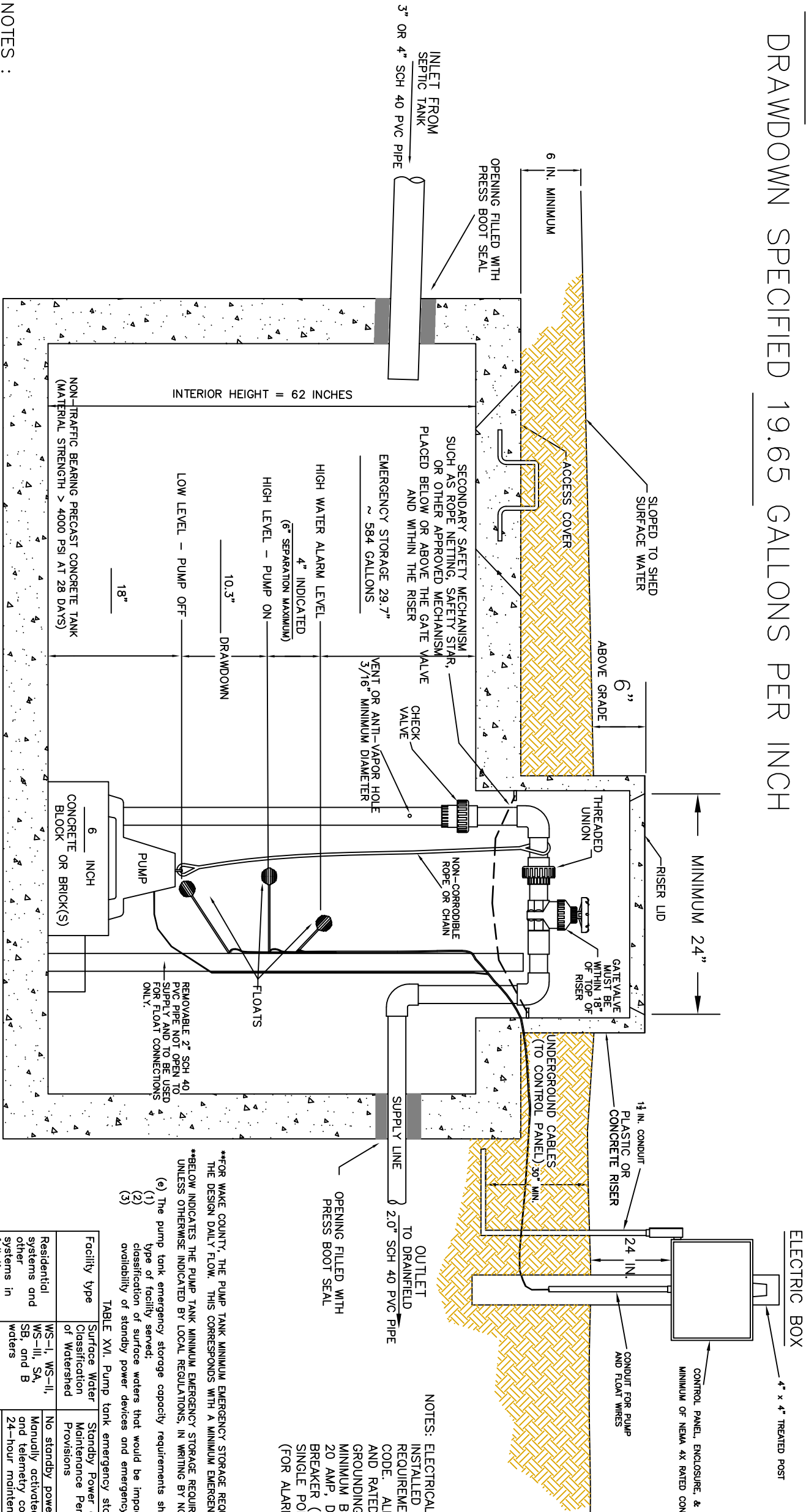
24.43 INCHES

$$\text{[DESIGN DAILY FLOW (GPD)} \times \text{(MINIMUM \# OF HOURS EMERGENCY STORAGE NEEDED FOR THIS SYSTEM} \div \text{24 HOURS)]} \div \text{TANK SPECIFIC DRAWDOWN (GALLONS PER INCH)} = \text{MINIMUM EMERGENCY STORAGE IN INCHES}$$

BETWEEN THE UPPER LIMIT/ACTIVATION LEVEL OF THE HIGH WATER ALARM AND THE INSIDE TOP OF THE PUMP TANK

1,200 GALLON BRANTLEY PT-463 NON-TRAFFIC BEARING PUMP TANK (OR EQUIVALENT)

DRAWDOWN SPECIFIED 19.65 GALLONS PER INCH



NOTES :

1. PUMP TANK & ASSOCIATED COMPONENTS SHALL BE INSTALLED ACCORDING TO REGULATIONS: 15A NCAC 18E.0802, 18E.0805, 18E.1102, 18E.1103, & 18E.1400.
2. PUMP TANK, RISER(S), PUMP, CONTROL PANEL, & ASSOCIATED COMPONENTS MUST BE PRODUCTS WITH APPROVAL TO BE USED IN NC BY NCDHHS.
3. A DIFFERENT EQUIVALENT PUMP TANK SIMILAR SIZE OR LARGER CAN BE USED AS LONG AS THE MINIMUM EMERGENCY STORAGE IS MET AND ALL 18E & LOCAL REGULATIONS ARE FOLLOWED.
4. PUMP TANK SHALL BE LEVEL ACCORDING TO 15A NCAC 18E.0805 (F).
5. A GRAVEL BED UNDER THE PUMP TANK MAY BE NEEDED IF THE BOTTOM OF THE TANK HOLE HAS A ROUGH SURFACE.
6. THE PUMP TANK EMERGENCY STORAGE CAPACITY REQUIREMENT FOR THIS SEPTIC SYSTEM SHALL MET OR EXCEED REQUIREMENTS PER 15A NCAC 18E.0802(E) AND LOCAL REGULATIONS.
7. THE SECONDARY SAFETY MECHANISM ON THE OUTLET END OF THE PUMP TANK MUST BE ACCESSIBLE FROM THE TOP OF THE RISER/GROUND SURFACE AND PLACED WITHIN THE RISER.
8. PUMP TANK OUTLET PIPE SHALL BE INSERTED THROUGH THE OUTLET PIPE PENETRATION BOOT, CREATING A WATERTIGHT JOINT (AS SHOWN IN DIAGRAM ABOVE), OR THROUGH A WATERTIGHT RUBBER GROMMET IN THE PUMP TANK RISER. EITHER OUTLET PIPE ROUTING WAY IS ACCEPTABLE.
9. THE PUMP TANK SHALL BE VENTED IF LOCATED MORE THAN 50 FEET FROM THE FACILITY.
10. IF SEPTIC TANK LEAK TESTING IS PERFORMED AT A JOB SITE & VERIFIES THAT THE TANK, PIPE PENETRATIONS, & RISERS ARE WATER TIGHT THEN SOME REDUCED SETBACKS ARE ALLOWED FOR SOME SEPTIC COMPONENTS ACCORDING TO 18E.0601(E).
11. THE CONTROL PANEL SHALL BE INSTALLED ON A TREATED POST A MINIMUM OF 24 INCHES TALL (AS SHOWN) OR MOUNTED A MINIMUM OF 24 INCHES TALL ON THE SIDE OF A STRUCTURE OR BUILDING WITHIN 50 FEET OF AND IN THE LINE OF SIGHT OF THE PUMP TANK. THE MANAGEMENT ENTITY AND LHD SHALL BE ABLE TO ACCESS THE CONTROL PANEL AND OPERATE THE PUMP(S) WHEN THE OWNER IS NOT PRESENT.
12. TELEMETRY SHALL BE DEMONSTRATED TO BE OPERATIONAL TO THE AUTHORIZED AGENT AND THE MANAGEMENT ENTITY PRIOR TO ISSUANCE OF THE OP OR ATO.

NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL CODE. ALL WIRING SHALL BE #12 MINIMUM AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP, SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

Facility type	Surface Water Classification of Watershed	Standby Power and Emergency Maintenance Personnel Provisions	Emergency Storage Capacity Period Requirement
Residential systems and other systems in full time use	WS-I, WS-II, WS-III, SA, SB, and B waters	No standby power	24 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	12 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
	All other surface waters or no surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
Non-residential systems not in full-time use and all other systems	All surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours

REVISIONS			
REV.	DESCRIPTION	DATE	APPR.
	PUMP TANK DIAGRAM	3/2024	

**S&
EC**

Soil & Environmental Consultants, Inc.

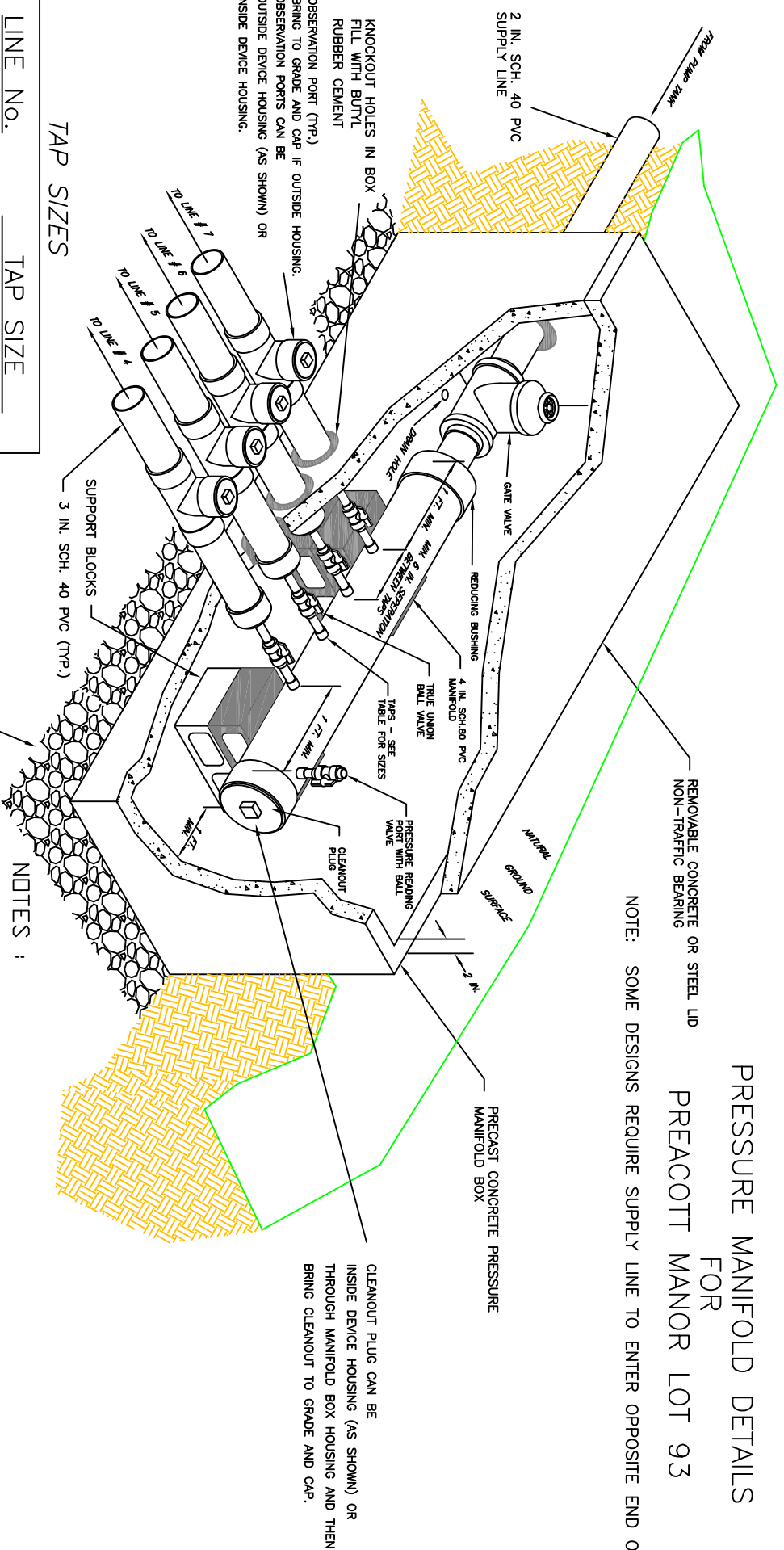
8412 Falls of Neuse Rd., Suite 104 • Raleigh, North Carolina 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467
www.SandEC.com

Project:	
PRESCOTT MANOR LOT 93	
Location:	Client:
WAKE CO., NC	VALENTI HOMES, LLC
Sheet Title:	
PUMP TANK DIAGRAM	

Project No.:
14267.S12
 Proj. Mgr.: | Drawn:
RP | **JM**
 Scale: **NOT TO**
SCALE (NTS)
 Sheet No.:
1 OF 1

PRESSURE MANIFOLD DETAILS FOR PREACOTT MANOR LOT 93

NOTE: SOME DESIGNS REQUIRE SUPPLY LINE TO ENTER OPPOSITE END OF MANIFOLD.



TAP SIZES

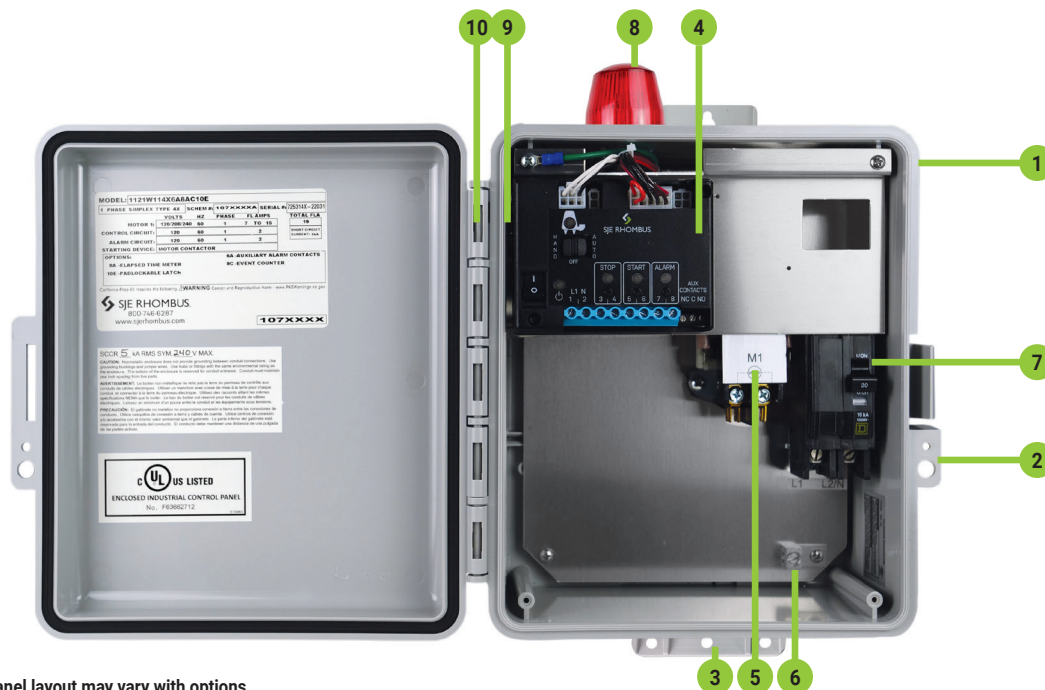
LINE NO.	TAP SIZE
4	1/2" SCH. 40
5	1/2" SCH. 40
6	1/2" SCH. 40
7	1/2" SCH. 40
PRESSURE HEAD 2 FEET	

NOTES :

1. PRESSURE MANIFOLD AND ASSOCIATED COMPONENTS SHALL BE BUILT & INSTALLED ACCORDING TO 15A NCAC 18E.1106 AND LOCAL/COUNTY REGULATIONS.
2. DEVICE HOUSING SHALL BE INSTALLED LEVEL ON A BED OF GRAVEL WITH A MINIMUM THICKNESS OF 2 INCHES. THE DEVICE HOUSING SHALL BE INSTALLED SUCH THAT THE DEVICE IS ACCESSIBLE FROM THE GROUND SURFACE.
3. DEVICE HOUSING SHALL HAVE A DRAIN HOLE IN THE BOTTOM.
4. GATE VALVE CAN BE PLACED INSIDE HOUSING (AS SHOWN) OR OUTSIDE DEVICE HOUSING & WITHIN ITS OWN VALVE/IRRIGATION BOX WITH ACCESS FROM THE GROUND SURFACE.
5. DEVICE HOUSING AND SET-UP CAN VARY ACROSS NORTH CAROLINA. IF THE INSTALLER HAS ANY QUESTIONS CONTACT THE LOCAL HEALTH DEPARTMENT AND/OR THE SEPTIC DESIGNER.

MODEL 112 CONTROL PANEL

Single Phase, Simplex Motor Contactor Control



Panel layout may vary with options.

This latest generation Model 112 control panel controls one 120, 208, or 240 VAC single phase pump in water and sewage installations. This panel includes a new innovative simplex controller for pump control and alarm; including float status LEDs, control/alarm power on/off switch with LED indicator, pump run LED, HOA switch, auxiliary contacts and more!

The Model 112 control panel features built in pump failure and float out of sequence detection. In addition, there are three user selectable field programmable options: alarm steady state or flashing; alarm auto reset or manual reset; and optional seal failure alarm beacon plus horn activation.

Simplex controller features include:

- Touch safe circuit board housing and low voltage 24 VDC float circuits
- Alarm (field programmable to flash)
- Alarm automatic reset (field programmable to manual alarm reset)
- Float out-of-sequence detection
- Pump contactor failure detection
- Controller protected by three auto resettable fuses (control, alarm, and pump 1)

Note: SJE Rhombus recommends separate pump and control/alarm power sources.

COMPONENTS

1. Enclosure measures 10 x 8 x 4 inches (25 x 20 x 10 cm) NEMA 4X (ultraviolet stabilized thermoplastic) for indoor or outdoor use
2. Integral padlockable latch for added safety
3. Integral mounting feet for indoor or outdoor use
4. Simplex controller provides pump and alarm control; elevated in the enclosure for easy access and field wiring
 - a. HOA switch for manual control of the pump
 - b. Pump run green LED indicator
 - c. Control power ON/OFF switch
 - d. Power ON green LED indicator
 - e. Float push-to-test buttons
 - f. Float status red LED indicators
 - g. Auxiliary alarm contacts Form C
 - h. Option: adjustable seal failure circuit and red LED indicator (must select option 5E when ordering)
5. Magnetic motor contactor
6. Ground lug
7. Circuit breaker
8. Red LED beacon provides 360° visual check of alarm condition - Note: NEMA 1 style utilizes a door mounted indicator in lieu of a beacon
9. Alarm horn provide audible warning of alarm condition (83 to 85 decibel rating) - Note: NEMA 1 style utilizes an internally mounted buzzer in lieu of horn (**Not shown**)
10. Exterior alarm test/normal/silence switch allows horn to be silenced in an alarm condition; alarm automatically resets once alarm condition has been cleared (**Not shown**)

Notes: Options, voltage, and amp range selected may change enclosure size and component layout.

Other options available.

Schematic/Wiring Diagram and Pump Specification Label are located inside the panel.



Model 112 - Single phase, simplex motor contactor control.

Part #	Pre-configured Panels for Easy Ordering
1071824	1121W114X6A10E
1071853	1121W124X6A10E
1071823	1121W114H6A10E17G
1071822	1121W124H6A10E17G
1071841	1121W114H6A8AC10E17G
1075046	1121W124H6A8AC10E17G

112 CONTROL PANEL	1 ALARM PACKAGE	W ENCLOSURE RATING	1 STARTING DEVICE	0 PUMP FULL LOAD AMPS	4 PUMP DISCONNECTS	L FLOAT SWITCH APPLICATION	6A10E OPTIONS (LISTED BELOW)
CONTROL PANEL	✓	112	Single Phase Simplex				Model 112 Base Price _____ (includes Alarm Package, Enclosure Rating, Starting Device and Pump Disconnect) Pump Full Load Amps _____ Total Options _____ Enclosure Upsize _____ TOTAL LIST PRICE _____
ALARM PACKAGE	✓	1	Alarm Package (includes test/normal/silence switch, fuse, red light, horn & float)				
ENCLOSURE RATING	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)				
STARTING DEVICE	✓	1	Magnetic Motor Contactor 120/208/240V				
PUMP FULL LOAD AMPS	✓	0	0 - 7 FLA				
		1	7 - 15 FLA				
		2	15 - 20 FLA				
		3	20 - 30 FLA (Enclosure Upsize Required)				
PUMP DISCONNECT	✓	4	Circuit Breaker 120/208/240V				
FLOAT SWITCH APPLICATION	✓	H	Floats - Pump Down (select Option 17G below - 3 floats by default when selected)				
		L	Floats - Pump Up (select Option 17G below - 3 floats by default when selected)				
		X	No Floats				

ENCLOSURE UPSIZE: If you selected three or more of the ♦ options or one ♦♦ option, add a one-time charge for enclosure upsize.

OPTIONS	DESCRIPTION
5A ♦	Thermal Cutout/Heat Sensor Auto Reset (for pumps with thermal switch leads)
5E	Seal Failure Circuit & Red Indicator (2 wire) (Normally Open)
✓ 6A ♦	Auxiliary Alarm Contact, Form C (included as standard)
✓ 8A ♦	Elapsed Time Meter
✓ 8C ♦	Event (Cycle) Counter
9_A ♦♦	Pump Overload - Specify Amperage after Number 9 Followed by Letter "A" Example: 912A = 12 amp pump
	0 - 25 FLA 25 - 30 FLA
✓ 10E	Lockable Latch - NEMA 4X (included as standard)
10F ♦	Lightning Arrestor
10K ♦	Anti-condensation Heater
14B ♦♦	Main Disconnect (rotary style, mounted through door, non-fused, padlockable in the OFF position, door interlock in the ON position (must select Circuit Breaker)
	0 - 20 FLA 20 - 30 FLA
✓ 15A	Control / Alarm Circuit Breaker

For additional control panel options, please contact Technical Support at techsupport@sjeinc.com.

OPTIONS	DESCRIPTION
17G	20' SJE MilliAmpMaster™ / Pipe Clamp (3 Floats) - Mechanical
19T	TOA (Test/Off/Automatic) Switch and Pump Run Light through Door Mounted
19U	HOA (Hand/Off/Automatic) Switch and Pump Run Light through Door Mounted
19X	Door Mounted Pump Run Indicator

SJE Rhombus recommends the SJE MilliAmpMaster™* control float switch to operate the 112 control panel. For alternative cord lengths or float switch options, select the "X" option (switch application) and select from the float kits below or see our control switch catalog pages to order and ship separately.

ITEMS LISTED BELOW SHIP SEPARATELY.

PART NUMBER	DESCRIPTION
1075005	3 Float Kit. 30' SJE MilliAmpMaster™ Pipe Clamp - Normally Open
1075006	3 Float Kit. 20' Sensor Float®, Mercury Pipe Clamp - Normally Open
1075007	3 Float Kit. 20' Sensor Float®Mini, Mercury Pipe Clamp - Normally Open

*Float Kit pricing and part numbers are only available when ordering with a 112 control panel.

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



TECHNICAL DATA SHEET

DOSE-MATE SERIES

Models 151, 152, 153 Effluent Pumps

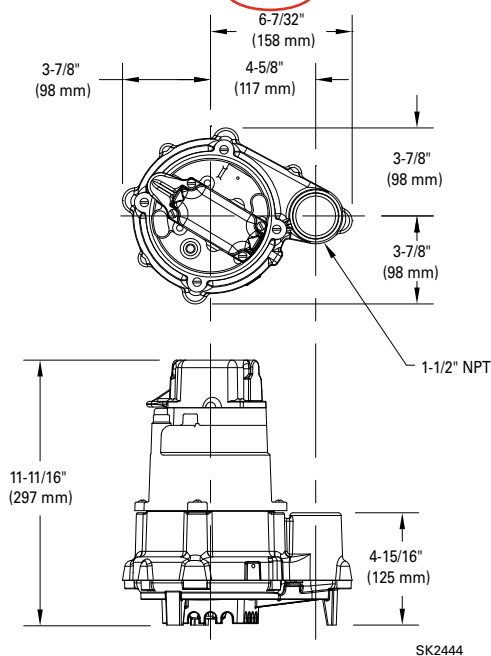
PRODUCT SPECIFICATIONS

MOTOR	Horse Power	1/3 (151), 4/10 (152), 1/2 (153)
	Voltage	115 or 230
	Phase	1 Ph
	Hertz	60 Hz
	RPM	3450
	Type	Permanent split capacitor
	Insulation	Class B
	Amps	3.0 - 10.5
PUMP	Operation	Automatic or nonautomatic
	Discharge Size	1-1/2" NPT
	Solids Handling	1/2" (12 mm), 3/4" (19 mm) spherical solids
	Cord Length	20' (6 m)
	Cord Type	UL listed power cord
	Max. Head	44' (13.4 m)
	Max. Flow Rate	77 GPM (291 LPM)
	Max. Operating Temp.	130 °F (54 °C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload
MATERIALS	Cap	Cast iron
	Motor Housing	Cast iron
	Pump Housing	Cast iron
	Base	Plastic or cast iron
	Upper Bearing	Sleeve bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon and ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Engineered thermoplastic
	Hardware	Stainless steel
	Motor Shaft	AISI 1215 steel
	Gasket	Neoprene

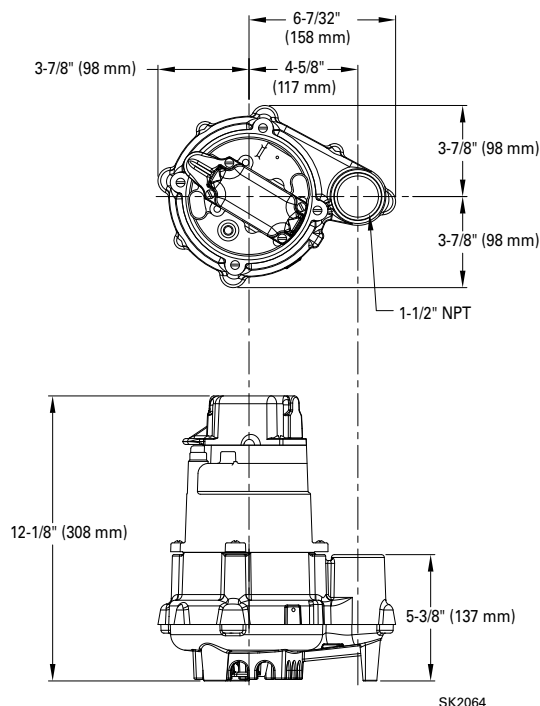
NOTE: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

NOTE: See model comparison chart for specific details.

MODEL 151



MODELS 152 & 153

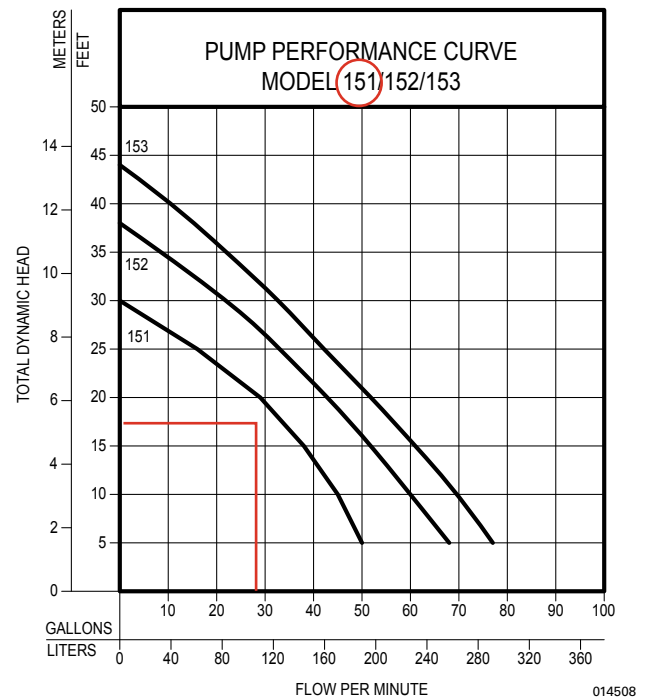


Tested to UL Standard UL778
and Certified to CSA
Standard CSA22.2 No. 108



TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODEL		151		152		153	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	50	189	69	261	77	291
10	3.0	45	170	61	231	70	265
15	4.6	38	144	53	201	61	231
20	6.1	29	110	44	167	52	197
25	7.6	16	61	34	129	42	159
30	9.1	--	--	23	87	33	125
35	10.7	--	--	--	--	22	85
40	12.2	--	--	--	--	11	42
Shut-off Head:		30 ft. (9.1m)		38 ft. (11.6m)		44 ft. (13.4m)	



Model	MODEL COMPARISON										
	Seal	Mode	Volts	Ph	Amps	HP	Hz	Lbs	Kg	Simplex	Duplex
N151	Single	Non	115	1	6.0	1/3	60	32	15	1	2 or 3
E151	Single	Non	230	1	3.0	1/3	60	32	15	1	2 or 3
BN151	Single	Auto	115	1	6.0	1/3	60	33	15	*	2 or 3
BE151	Single	Auto	230	1	3.0	1/3	60	33	15	*	2 or 3
N152	Single	Non	115	1	8.5	4/10	60	37	17	1	2 or 3
E152	Single	Non	230	1	4.3	4/10	60	37	17	1	2 or 3
BN152	Single	Auto	115	1	8.5	4/10	60	39	18	*	2 or 3
BE152	Single	Non	230	1	4.3	4/10	60	39	18	*	2 or 3
N153	Single	Non	115	1	10.5	1/2	60	37	17		
BN153	Single	Auto	115	1	10.5	1/2	60	39	18	*	2 or 3
E153	Single	Non	230	1	5.3	1/2	60	37	17	1	2 or 3
BE153	Single	Non	230	1	5.3	1/2	60	39	18	*	2 or 3

*BN and BE models include a 20' (6 m) piggyback variable level pump switch. Additional cord lengths are available in 25' (8 m) and 35' (11 m). 50' (15 m) cords are available for 230 V units only.

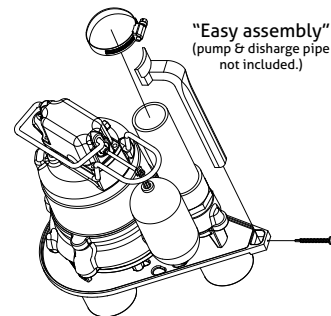
NOTE: Model 151 has a plastic base. Models 152 & 153 have a cast iron base.

SELECTION GUIDE

- For automatic, use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
- See FM1228 for correct model of simplex control panel.
- See FM0712 for correct model of duplex control panel.

OPTIONAL PUMP STAND P/N 10-2421

- Reduces potential clogging by debris
 - Replaces rocks or bricks under the pump
 - Made of durable, noncorrosive ABS
 - Raises pump 2" (5 cm) off bottom of basin
 - Provides the ability to raise intake by adding sections of 1½" or 2" (DN40 or DN50) PVC piping
 - Attaches securely to pump
 - Accommodates sump, dewatering and effluent applications
- NOTE: Make sure float is free from obstruction.



All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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502-778-2731 | 800-928-7867 | 3649 Cane Run Road | Louisville, KY 40211-1961 | zoellerpumps.com

The STF-110 series Effluent Filters

STF-110
4" dia.

It's Superior
Superior to slotted, uniform designs.

It's Flexible
Flexible bristle-design is easily installed.

It's Versatile
Versatile - residential, commercial and industrial applications.

STF-110-6W
6" dia.

It's Economical
Economical - a fraction of the cost of inferior designs.

It's Easy
Easy to service or replace.

It's The Best
The best passive effluent filtration for the most common debris.

STF-110-7R
7" dia.

It's Simple
Simply the only choice in effluent filters.

STF-110-8B
8" dia.

SIM/TECH
FILTER

simple solutions for technical problems
www.simtechfilter.com - 888-999-3290

STF-110 series Effluent Filers

STF-110-8B
STF-110-7R
STF-110-6W
STF-110

- **Superior filtration** of the most common solids found in today's wastewater systems
- **Versatile design** has applications for residential, commercial and industrial systems and fit many different types of tees and housings
- **Flexible bristle-design** is simple to install and service, even in systems with limited access
- **Self-locking bristles** hold the filter firmly in place with no need for receivers or canisters and eliminate filter float-up
- **Debris separation area** naturally sorts solids according to size and mass for longer filter life
- **Allows biological maturing** necessary in wastewater treatment systems
- **Durable** enough to be serviced and economical enough to be replaced
- **Economical solution** for protecting and servicing all types of wastewater systems at a fraction of the cost of inferior designs

Designed after our proven STF-110 effluent filter that currently protects residential septic systems all over the world, the latest additions to this series of filters were designed with more demanding residential, commercial and industrial systems with larger housings and pre-cast tanks with built in square baffles in mind.

We achieve superior filtration of the most common solids found in today's wastewater systems with our non-uniform bristle design. This design is much more efficient than uniform / slotted designs which can pass larger more harmful debris into the system.

The flexible self-locking bristles make it simple to install and service, even in systems with limited access. They also hold the filter firmly in place with no need for receivers or canisters and eliminate filter float-up.

The filters employs a debris separation space which naturally sorts solids according to size and mass. This makes the filter function more efficiently and greatly increases its life-span. It also allows for biological maturing which is necessary in all wastewater treatment systems.

The STF-110 series filters use triangular polypropylene bristles wound together with a 316 stainless-steel core. This makes them durable enough to be serviced and economical enough to be replaced. This provides an economical solution for protecting and servicing all types of wastewater systems at a fraction of the cost of inferior designs.

STF-130 changing sleeve is required to block effluent flow while servicing without the need to pump down the tank.

STF-110 in 4" sanitary Tee (cut-a-way view)



STF-110-7R in 4"-6" sanitary Tee (cut-a-way)

STF-110-7R in pre-cast septic tank with square baffle.

Solutions

We offer free CAD detail drawings in DXF format to cover our complete product line.

For the protection and performance of wastewater systems by

proudly made in the USA

SIM/TECH FILTER

www.gag-simtech.com
888-999-3290

US Patent # 6,811,692

Bristle Filter Instructions For STF-110 4" (Installation & Maintenance)

Instructions for installation in standard 4" outlet "Tee" of septic tank.

- Orient the filter so that the wire handle faces opposite the discharge outlet.
- Push filter into top of "Tee" until the 90 degree wire handle touches the top of the "Tee". The filter is now "installed", as shown in the picture to the right.
- The flexibility of the STF-110 bristle filter allows it to be used in just about any situation. If you need help with a custom installation please call Sim/Tech Filter toll free at 888-999-3290.



Installed Filter

Recommended maintenance schedule

For maximum protection, it is recommended that the filter be replaced annually. If not, it should be inspected at least once per year. The filter is capable of lasting three years under normal conditions. Such factors as garbage disposals, pets, laundry, etc. may cause the need for more frequent inspection or service.

Instructions for performing maintenance in standard 4" outlet "Tee" of septic tank.



STF-130
Maintenance
Sleeve

- Before removing filter, one of two options must be performed. These options need to be performed to prevent any outflow of unfiltered effluent from the tank while the filter is removed.

Option 1

Insert a STF-130 maintenance sleeve (sold separately) with the handle coupling on the same side of the "Tee" as the outlet hole. Push the sleeve into the "Tee" until the handle coupling hits the top of the "Tee". Do not remove the sleeve until a filter has been put back in the "Tee".

Option 2

Have the tank pumped down by a professional septic service company.

- After performing one of the options above, remove filter by pulling up on the filter handle.
- Place the used filter in the provided plastic bag for proper disposal.
- Install a new replacement filter as described in the installation instructions at the top of the page.
- If a maintenance sleeve was used (option 1), remove the sleeve from the outlet "Tee".



Maintenance
Sleeve partially
inserted into
"Tee"

U.S. Patent #
6,811,692

P.O. Box 129
Morrisville, NC 27560

Phone: 919-467-1239



**MACCONNELL
& ASSOCIATES, P.C**

501 Cascade Pointe Lane
Suite 103
Cary, NC 27513
Fax: 919-319-6510

May 19, 2025

Re: Valenti Homes
8201 Mary Clair Ln, Lot 93 Prescott Manor
Wake County, North Carolina
MacConnell & Associates Project Number: A88804.00

To Whom it May Concern:

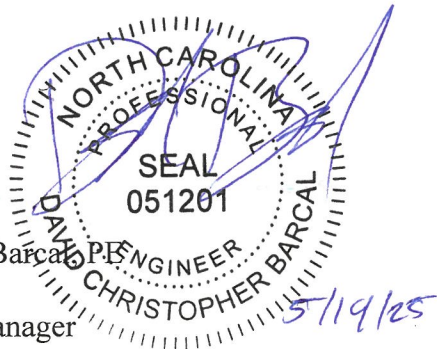
This letter is to certify that the provided tap chart/drainfield will satisfy the required size for the repair system. The drainfield product designed is Geoflow G-WFPC-16-2-24-PRO.

Thank you for your consideration of this certification. If you have any questions or require additional information, please contact me at (919) 467-1239.

Sincerely,

David C. Barcalo

Project Manager



8201 Mary Clair Ln, Prescott Manor Subdivision Lot 93
Project No.14267.S12

LINE #	FLAG COLOR	BS (ft)	HI (ft)	FS (ft)	ELEVATION (ft)	FLAGGED LINE LENGTH (ft)	DESIGN LINE LENGTH (ft)
TBM		10.60			100.00		
INSTR. 1			110.60				
AREA 1							
1	BLUE			5.70	104.90	14	
	NOT FLAGGED					20	
	NOT FLAGGED					24	
	NOT FLAGGED					33	
2	RED			6.10	104.50	40	
	NOT FLAGGED					40	
	NOT FLAGGED					44	
	NOT FLAGGED					53	
3	YELLOW			7.00	103.60	62	
	NOT FLAGGED					44	
	NOT FLAGGED					29	
	NOT FLAGGED					28	
4	ORANGE			7.90	102.70	32	
AREA 2							
	NOT FLAGGED					15	
5	PINK			4.45	106.15	25	
	NOT FLAGGED					24	
	NOT FLAGGED					30	
	NOT FLAGGED					40	
6	RED			5.00	105.60	44	
	NOT FLAGGED					44	
	NOT FLAGGED					44	
	NOT FLAGGED					44	
7	WHITE			6.00	104.60	42	
	NOT FLAGGED					40	
	NOT FLAGGED					37	
	NOT FLAGGED					33	
8	YELLOW			6.90	103.70	32	
	NOT FLAGGED					24	
	NOT FLAGGED					21	
	NOT FLAGGED					21	
9	PINK			7.45	103.15	21	
	NOT FLAGGED					21	
	NOT FLAGGED					20	
	NOT FLAGGED					18	
10	BLUE			8.70	101.90	12	
AREA 3							
11	ORANGE			9.95	100.65	11	
	NOT FLAGGED					15	
	NOT FLAGGED					18	
	NOT FLAGGED					20	
12	BLUE			10.35	100.25	25	
	NOT FLAGGED					27	
	NOT FLAGGED					28	
	NOT FLAGGED					31	
13	WHITE			11.15	99.45	35	
	NOT FLAGGED					35	
	NOT FLAGGED					36	
	NOT FLAGGED					37	
14	RED			11.60	99.00	38	
	NOT FLAGGED					39	
	NOT FLAGGED					41	
	NOT FLAGGED					42	
15	YELLOW			13.05	97.55	43	

AREA 1 Drip Total 463

AREA 2 Drip Total 652

AREA 3 Drip Total 521

Drip Total 1636

	LINE LENGTH (ft)	LTAR GPD/FT ²	SYSTEM TYPE	SOIL LTAR GPD/FT ²	SYSTEM	DISTRIBUTION	DESIGN FLOW (GPD)
System	240	0.300	PPBPS	0.300	HORIZONTAL	PRESSURE	360
					PPBPS	MANIFOLD	FLOW REDUCTION
Repair	1200	0.150		0.150	DRIP		360
	MINIMUM				TS-II		FLOW REDUCTION

Notes: **TBM ground @ existing pump tank (PT)
 **TBM is assumed to be 100.00'.
 **All measures in feet.
 **Nitrification lines are demonstrated on contour via colored pin flags.
 **BS, FS indicate rod readings.
 REPAIR DRIP LINES ON 8' CENTERS FLAGGED IN FIELD

Repair Drain Field - Zone 1				
Line #	Flag Length (LF)	Design Length (LF)	Lateral #	Total (LF)
NF	20	20	1	
NF	24	24	1	
NF	33	33	1	
2	40	40	1	
NF	40	40	1	
NF	44	44	1	201
NF	53	53	2	
3	62	62	2	
NF	44	44	2	
NF	29	29	2	
NF	28	28	2	
4	32	32	2	248
Zone 1 Total:				449

Repair Drain Field - Zone 2				
Line #	Flag Length (LF)	Design Length (LF)	Lateral #	Total (LF)
NF	30	30	1	
NF	40	40	1	
6	44	44	1	
NF	44	44	1	
NF	44	44	1	
NF	44	44	1	246
7	42	42	2	
NF	40	40	2	
NF	37	37	2	
NF	33	33	2	
8	32	32	2	
NF	24	24	2	208
Zone 2 Total:				454

Repair Drain Field - Zone 3				
Line #	Flag Length (LF)	Design Length (LF)	Lateral #	Total (LF)
NF	27	27	1	
NF	28	28	1	
NF	31	31	1	
13	35	35	1	
NF	35	35	1	
NF	36	36	1	192
NF	37	37	2	
14	38	38	2	
NF	39	39	2	
NF	41	41	2	
NF	42	42	2	
15	43	43	2	240
Zone 3 Total:				432

Repair Total:	1335
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MacConnell & Associates, P.C.

Project: Valenti Homes
Project Number: A88804.00
Facility Address: 8201 Mary Clair Ln, Lot93
County: Wake County, North Carolina
Subject: Repair System - Zone 1 - Field Design
Date: 05/19/25

General Information		
Disposal Type:	Subsurface	
Unadjusted Flowrate:	480	GPD
Flow Reduction:	25	%
Total Repair System Linear Footage:	1,335	ft
Zone 1 Linear Footage:	449	ft
Adjusted Flowrate:	121	GPD
Loading Rate (LTAR):	0.150	GPD/sq.ft.

Selected Products	
Dripline Product Selected:	G-WFPC-16-2-24-PRO
Headworks Selected:	DripFilterECO 1.5
Zone Valve Selected:	SVLVB-100

Field Layout and Flowrate		
Total Linear Feet for Zone:	449	ft
Longest Lateral Length:	248	ft
Total Laterals for Zone:	2	
Line Spacing:	2	ft
Total Area for Zone:	898	sq.ft.
Total Flowrate Per Soils LTAR:	135	GPD

Flowrate Information		
Drip Tube Inner Diameter:	0.55	in
Emitter Spacing:	2	ft
Flow Per Emitter:	0.6	GPH
Drip Tubing Flusing Velocity:	2	FPS
Flushing Flowrate Required:	1.48	GPM
Inlet Pressure Required for Flushing Velocity:	30	PSI
Total Emitters for Zone:	225	
Dosing Flowrate Required:	2.2	GPM
Flushing Flowrate Required:	3.0	GPM
Total Flowrate Required During Flushing Cycle:	5.2	GPM

MacConnell & Associates, P.C.

Project: Valenti Homes
Project Number: A88804.00
Facility Address: 8201 Mary Clair Ln, Lot93
County: Wake County, North Carolina
Subject: Repair System - Zone 2 - Field Design
Date: 05/19/25

General Information		
Disposal Type:	Subsurface	
Unadjusted Flowrate:	480	GPD
Flow Reduction:	25	%
Total Initial System Linear Footage:	1,335	ft
Zone 2 Linear Footage:	454	ft
Adjusted Flowrate:	122	GPD
Loading Rate (LTAR):	0.150	GPD/sq.ft.

Selected Products	
Dripline Product Selected:	G-WFPC-16-2-24-PRO
Headworks Selected:	DripFilterECO 1.5
Zone Valve Selected:	SVLVB-100

Field Layout and Flowrate		
Total Linear Feet for Zone:	454	ft
Longest Lateral Length:	246	ft
Total Laterals for Zone:	2	
Line Spacing:	2	ft
Total Area for Zone:	908	sq.ft.
Total Flowrate Per Soils LTAR:	136	GPD

Flowrate Information		
Drip Tube Inner Diameter:	0.55	in
Emitter Spacing:	2	ft
Flow Per Emitter:	0.6	GPH
Drip Tubing Flusing Velocity:	2	FPS
Flushing Flowrate Required:	1.48	GPM
Inlet Pressure Required for Flushing Velocity:	30	PSI
Total Emitters for Zone:	227	
Dosing Flowrate Required:	2.3	GPM
Flushing Flowrate Required:	3.0	GPM
Total Flowrate Required During Flushing Cycle:	5.2	GPM

MacConnell & Associates, P.C.

Project: Valenti Homes
Project Number: A88804.00
Facility Address: 8201 Mary Clair Ln, Lot93
County: Wake County, North Carolina
Subject: Repair System - Zone 3 - Field Design
Date: 05/19/25

General Information		
Disposal Type:	Subsurface	
Unadjusted Flowrate:	480	GPD
Flow Reduction:	25	%
Total Initial System Linear Footage:	1,335	ft
Zone 3 Linear Footage:	432	ft
Adjusted Flowrate:	116	GPD
Loading Rate (LTAR):	0.150	GPD/sq.ft.

Selected Products	
Dripline Product Selected:	G-WFPC-16-2-24-PRO
Headworks Selected:	DripFilterECO 1.5
Zone Valve Selected:	SVLVB-100

Field Layout and Flowrate		
Total Linear Feet for Zone:	432	ft
Longest Lateral Length:	240	ft
Total Laterals for Zone:	2	
Line Spacing:	2	ft
Total Area for Zone:	864	sq.ft.
Total Flowrate Per Soils LTAR:	130	GPD

Flowrate Information		
Drip Tube Inner Diameter:	0.55	in
Emitter Spacing:	2	ft
Flow Per Emitter:	0.6	GPH
Drip Tubing Flusing Velocity:	2	FPS
Flushing Flowrate Required:	1.48	GPM
Inlet Pressure Required for Flushing Velocity:	30	PSI
Total Emitters for Zone:	216	
Dosing Flowrate Required:	2.2	GPM
Flushing Flowrate Required:	3.0	GPM
Total Flowrate Required During Flushing Cycle:	5.1	GPM

MacConnell & Associates, P.C.

Project:	Valenti Homes
Project Number:	A88804.00
Facility Address:	8201 Mary Clair Ln, Lot 93 Prescott Manor
County:	Wake County, North Carolina
Subject:	Master Sheet - Repair System
Date:	05/19/25

Repair System - Design Characteristics							
Field Identification	Unadjusted Flowrate (GPD)	Adjusted Flowrate (GPD)	LTAR (GPD/sq.ft.)	Total Linear Footage (Feet)	Longest Lateral (Feet)	Total Area (sq.ft.)	Total Emitters
Zone 1	480	121	0.15	449	248	898	225
Zone 2	480	122	0.15	454	246	908	227
Zone 3	480	116	0.15	432	240	864	216
Total		360		1,335		2,670	668

Advanced Pretreatment Effluent Standards - 15A NCAC 18E .1201	
Parameter	TS-II
Carbonaceous Biochemical Oxygen Demand (CBOD)	≤ 10 (mg/l)
Total Suspended Solids (TSS)	≤ 10 (mg/l)
Total Ammonia Nitrogen (NH3)	≤ 10 (mg/l)
Total Nitrogen (TN) (TN is Total Kjeldahl Nitrogen plus Nitrate+Nitrite Nitrogen)	≤ 20 mg/l
Fecal Coliform	≤ 1,000 (colonies/100 ml)

