WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NOPERMIT(S)FOR CONSTRUCTION,LOCATION ORRELOCATION ACTIVITYSHALL BEISSUED UNTILAN 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-057877-2021 APPLICATION DATE: 04/19/2021 BLDG. PERMIT#: RBPR-057801-2021

PIN: 0781049463 RECORDED: Yes

TOWNSHIP: 18 - Swift Creek JURISDICTION: Wake County ZONING: R-40W

APPLICANT: Herring Homes
Brian Herring
1070 Lakeside DR
BUSINESS PHONE: (919) 300-4048
HOME PHONE:
MOBILE PHONE: (919) 650-8224

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

SITE ADDRESS: 2709 SANCTUARY WOODS LN

SUBDIVISION: SANCTUARY AT YATES MILL PH 2 LOT: 82 ACRES: 0.74

DIRECTIONS: Take W Martin St to US-401 S/US-70 E/S Dawson St
Continue on US-401 S/US-70 E. Take I-40 W, Tryon Rd and Yates Mill Pond Rd to Theys Rd in Swift Creek
Continue on Theys Rd. Drive to Milner Dr

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: BRANTLEY, CORY - 1036 - IV
PROPRIETARY SYSTEM: EZ1203HG - EZFlow EZ 1203H Geo PRETREATMENT SYSTEM:
SYSTEM TYPE INSTALLED: III B
OPERATION PERMIT:STATUS: Issued ISSUED BY: Adrienne Holloway ISSUED DATE: 09/30/2022

SEPTIC TANK: David Brantley & Sons - STB-323 - DATE OF MANUFACTURE: 09/22/2021 FILTER: GAG SIM/TECH - STF-110 1250 gallons
GREASE TRAP: DATE OF MANUFACTURE: FILTER:
DOSING PUMP TANK: Brantley - PT-2124 - 1312 gal - 21.5 gal/in DATE OF MANUFACTURE: 10/28/2021 FILTER:
CC1: 999,811 ETM1: 34 CC2: ETM2:
RECIRCULATION TANK: DATE OF MANUFACTURE:
CC1: ETM1: CC2: ETM2:

SEPTIC TANK ELEVATION: 8.41 GREASE TRAP ELEVATION: DOSING PUMP TANK ELEVATION: 8.59

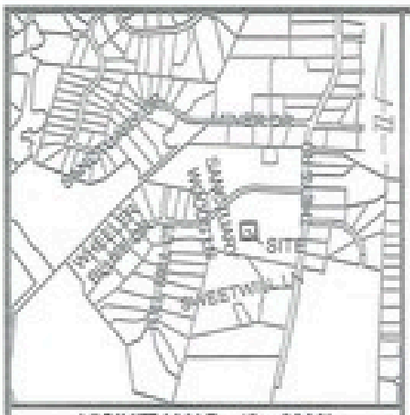
RECIRCULATION TANK ELEVATION: DISTRIBUTION DEVICE ELEVATION: 3

INSTALLED TRENCH DEPTH	INSTALLED AGGREGATE DEPTH	INSTALLED TRENCH LENGTH	INSTALLED TRENCH BOTTOM ELEVATION
24	12	50	5.5
24	12	50	6.67
24	12	50	6.91
24	12	50	6.83
24	12	50	7.75
24	12	50	8.08

ACTUAL PRESSURE HEAD: 2 ACTUAL FLOW RATE: 33 ACTUAL DOSE VOLUME: 172

SPECIFIC OPERATION REQUIREMENTS:
-System is sized for a 4 bedroom SFD, using 360 gallons per day (via flow reduction)
-Site serviced by community water.
-ASDSMS Book 18917, Page 00259-00260

ISSUED BY:  DATE: 09/30/2022



"I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION USING REFERENCES SHOWN HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK _____ PAGE _____ OR OTHER REFERENCE SOURCE _____; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56, 1600)."

THIS 23rd DAY OF December, 2020

SEAL L-4834
PROFESSIONAL LAND SURVEYOR

PLAN INFORMATION BLOCK

TYPICAL PLAN # _____

BUILDING DATA
FIRST FLOOR, FOOT PRINT (INCL. GARAGE AND OPT.) _____ SF TOTAL SF OF UNIT W/ ALL OPTIONS _____ SF
STORIES __ # BASEMENT ___(SLAB, CRAWL ____
INCL. OPTIONS: _____

"ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS."

IMPERVIOUS AREA

HOUSE/PORCH:	3,784 SF
COVERED PORCH:	291 SF
DRIVEWAY/SIDEWALKS:	1,318 SF
TOTAL:	5,376 SF (17.41%)

NOTE: IMPERVIOUS CALCULATIONS FOR AREA WITHIN LOT ONLY. (EXCLUDES R/W)

BUILDING SETBACKS R-40W

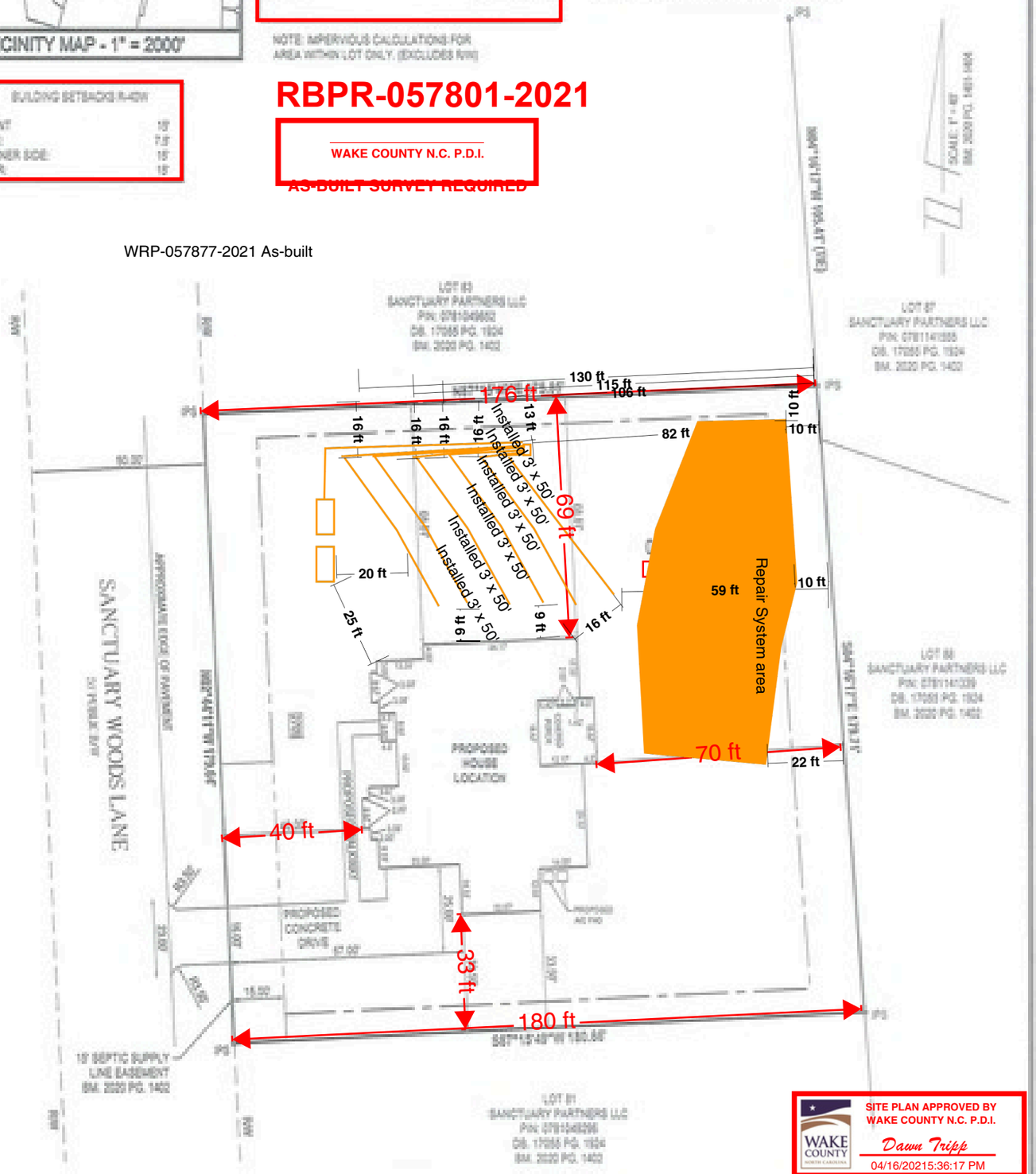
FRONT:	15'
SIDE:	7.5'
CORNER SIDE:	15'
REAR:	15'

RBPR-057801-2021

WAKE COUNTY N.C. P.D.I.

AS-BUILT SURVEY REQUIRED

WRP-057877-2021 As-built



SITE PLAN APPROVED BY WAKE COUNTY N.C. P.D.I.
Dawn Tripp
04/16/20215:36:17 PM

SCALE: 1" = 40'

0 20 40 80

1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBER 3720071100J DATED MAY 2, 2006

PIN	0781049483
LOT NUMBER	82
SUBDIVISION	SANCTUARY @ YATES MILL
BOOK OF MAPS	2020 PAGE 1401-1404
DEED BOOK	17055 PAGE 1924

NORTH CAROLINA PROFESSIONAL SEAL L-4834 LAND SURVEYOR ASHLEY L. PARKER

LEGEND
- EIP = EXISTING IRON PIPE
- IPS = IRON PIPE SET
- CP = CALCULATED POINT
- PK = PK NAIL
- R/W = RIGHT-OF-WAY
- XXXX DENOTES ADDRESS

PROPOSED HOUSE LOCATION
FOR
SANCTUARY @ YATES MILL
WAKE FOREST WAKE COUNTY NORTH CAROLINA

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
• 5510 CHAPEL HILL ROAD, SUITE 230 RALEIGH, NORTH CAROLINA 27607
• TELEPHONE: (919)851-4422 OR (800)284-1971 FAX: (919)851-8866
• CERTIFICATION NUMBERS: NC6813 (C-3119); NC6813 (C-4387)

DATE:	12-23-2020
SCALE:	1" = 40'
SURV'D BY:	-
DRAWN BY:	ROB

27729 SANCTUARY WOODS LN.
PROJECT NO. 20191

R:\2020\20191-The Sanctuary at Yates Mill\SURVEY\20191LDO\dwg\20191 LOT 82 PHL.dwg

Return to:
933 Old Knight Rd.
Knightdale, NC 27545
Herring Homes

WAKE COUNTY, NC 15
TAMMY L. BRUNNER
REGISTER OF DEEDS
PRESENTED & RECORDED ON
02/14/2022 09:34:28

BOOK:018917 PAGE:00259 - 00260

ALTERNATIVE SEWAGE DISPOSAL SYSTEM MAINTENANCE SCHEDULE

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

Owner/Grantor Herring Realty d/b/a Herring Homes **Deedbook and Page** BM2020-01402

PIN No. 0781049463 **Date Installed** 1-25-2022

Subdivision Name Sanctuary at Yates Mill **Lot No.** 82

System Designed by Central Carolina Soil Consulting **Installer** David Brantley & Sons

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 Disposal 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	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 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 adherance 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 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. **Adherance to permitted flow rate.**

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 of Property Owner

2/9/2022
Date

NORTH CAROLINA Johnston County. I, a Notary Public of the County and State aforesaid, certify that Thomas Brian Herring 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 February 2022.

My commission expires 7-21-2024 Notary Public Natalya T. Caddell

NATALEIGH T CARRGADOOM NOTARY PUBLIC JOHNSTON COUNTY, NC

WWDS 02/17

TEL 919 856 7400
FAX 919 856 7407

Environmental Services

Water Quality Division
336 Fayetteville St. □ P.O. Box 550 □ Raleigh, NC 27602

6/2/2021

REQUIREMENTS TO COMPLETE YOURENGINEERED FLOW REDUCTION SYSTEM

NAME:	Herring Homes
ADDRESS:	1070 Lakeside DR, Smithfield, NC 27577
Re:	Application for Engineered Flow Reduction System
SEPTIC PERMIT:	WRP-057877-2021
PIN:	0781 04 9463
Building Permit:	RBPR-057801-2021
Property Info:	SANCTUARY AT YATES MILL PH 2 LOT: 82 ACRES: 0.74

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 theStatenorlocal healthdepartment shallbeliablefor anydamagescausedby an engineered systemapprovedor permittedpursuant toSessionLaw 2014-120Section53."**

To complete your permit:

- **SystemInstallation** - 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 contain 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@wakegov.com if you have any questions.

Sincerely,

CORY LARSEN, PE
Environmental Consultant

*** CA PART A - D ***

WAKE COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER PERMIT

NOPERMIT(S)FOR CONSTRUCTION,LOCATION ORRELOCATION ACTIVITYSHALL BEISSUED UNTILAN 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-057877-2021 APPLICATION DATE: 04/19/2021 BLDG. PERMIT#: RBPR-057801-2021

PIN: 0781049463 RECORDED: Yes

TOWNSHIP: 18 - Swift Creek JURISDICTION: Wake County ZONING: R-40W

APPLICANT: Herring Homes
1070 Lakeside DR
Smithfield, NC 27577

BUSINESS PHONE: (919) 300-4048
HOME PHONE:
MOBILE PHONE: (919) 650-8224

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

SITE ADDRESS: 2709 SANCTUARY WOODS LN

SUBDIVISION: SANCTUARY AT YATES MILL PH 2 LOT: 82 ACRES: 0.74

DIRECTIONS: Take W Martin St to US-401 S/US-70 E/S Dawson St
Continue on US-401 S/US-70 E. Take I-40 W, Tryon Rd and Yates Mill Pond Rd to Theys Rd in Swift Creek
Continue on Theys Rd. Drive to Milner Dr

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: 06/02/2021

CA VALID FOR: Five Years DESIGN FLOW: 360 GALLONS BASEMENT: BASEMENT FIXTURES: No

SEPTIC TANK: 1200 GALLONS
DOSING PUMP TANK: 1200 GALLONS
GREASE TRAP:
RECIRCULATION PUMP TANK:

SEPTIC TANK FILTER: Yes
DOSING PUMP TANK FILTER:
GREASE TRAP FILTER:
RECIRCULATION PUMP TANK FILTER:

PROPOSED SYSTEM: 0.25 - 25% Reduction (Innovative or Accepted) EXISTING SYSTEM: No
DRAINFIELD SQ. FT: 900 AGGREGATE DEPTH: 12 MAX. TRENCH DEPTH: 24 INCHES
DISTRIBUTION DEVICE: PM - Pressure Manifold
TRENCH #: 6 TRENCH LENGTH: 50 FEET TRENCH WIDTH: 36 INCHES TOTAL TRENCH LENGTH: 300 FEET

CENTER SPACING: 9 FEET
PRETREATMENT:
SUBFIELDS #:
PUMP TDH: 15.85 FEET

MINIMUM SOIL COVER: 6 INCHES
APPROVAL #:
PUMP DESIGN FLOW: 32.88
ZONE VALVE: No

ASDMS REQUIRED: Yes
P.E. SIGN OFF/ASBUILT REQUIRED: Yes

LINE OF CREDIT REQUIRED: No

OPERATOR REQUIRED: No
TRIPARTY AGREEMENT REQUIRED: No

SPECIFIC CONSTRUCTION AUTHORIZATION REQUIREMENTS:
THIS PERMIT IS FOR FOUR (4) BEDROOM DWELLING WITH 360 GALLONS DAILY FLOW USING ENGINEERED FLOW REDUCTION. INITIAL SYSTEM IS AN EQUAL LINE LENGTH PRESSURE MANIFOLD SYSTEM PUMP TO 6 DRAINLINES WITH 24" TRENCH BOTTOM. REPAIR SYSTEM IS AN UNEQUAL LINE LENGTH PRESSURE MANIFOLD WITH 24" TRENCH BOTTOM. 1200 GALLON SEPTIC TANK AND 1200 GALLON PUMP TANK REQUIRED. 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 A 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 DESIGNER OR WAKE COUNTY ENVIRONMENTAL SERVICES PRIOR TO SYSTEM INSTALLATION.
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 4 BEDROOM OPERATION PERMIT. PLEASE CONTACT ENVIRONMENTAL SERVICES IF ANY QUESTIONS OR PROBLEMS ARISE PRIOR TO INSTALLATION.

Issued By: 

Date: 06/02/2021

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 a specific set of 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 surfaceto prevent surface andshallow groundwater from entering the septic tank and to provide access formaintenance. **Care must be taken not to damage or cover these risers so that water inflow / infiltration can be prevented and the tank can be accessed for maintenance.**
2. Insome installations,a pump tank - a concrete tank, very similarto the septic tank, whichcontains a pump along with the associatedcontrols / componentry.The pump tank and pump is designed to receive effluent from the septic tank, and pump the effluent 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 as a septic tank installer or Certified Subsurface System Operator. The latter 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 effluent into the soil and provide for the ultimate treatment and disposal of the effluent. 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, paint thinner, 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 and system, 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 to be necessary, the tank is to pumped, the filter cleaned and the filter reinstalled.

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. **Donotmake or allow repairs to your system unlessallnecessarypermitsare obtainedfrom Wake County Departmentof EnvironmentalServices.**
6. **Commercial additives forseptic 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 Department of Environmental Services,** 336 Fayetteville Street Mall, Raleigh, NC, Telephone (919) 856-7400. Additional information is also available on Wake County's Septic and Wastewater Management webpage.

BSM 3/9/21

WAKE COUNTY NORTH CAROLINA
Environmental Services

TEL 919 856 7400
FAX 919 743 4772

Water Quality Division
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

PRESSURE MANIFOLD SYSTEMS

A Pressure Manifold System is one of several types of septic systems approved for use in Wake County. The Pressure ManifoldSystem, 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:

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	Check and clean septic tank filter. Pump septage when 1/3 to ¼ 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 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.

A certified operator may be required.

ALTERNATIVE SEWAGE DISPOSALSYSTEM MAINTENANCE SCHEDULE

To Be Recorded In TheRegisterOfDeed'sOfficeInWakeCounty .

Owner/Grantor _____ **Deedbook and Page** _____

PIN No. _____ **Date Installed** _____

Subdivision Name _____ **LotNo.** _____

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 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 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 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 requried 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 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. **Adherance topermitted flowrate.**

This system is permitted under S.L. 2014-120 forengineer flow reduction untilizing 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 of Property Owner

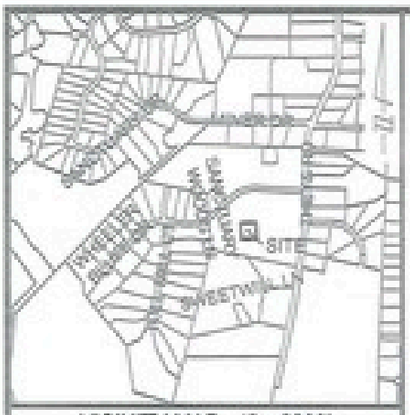
_____
Date

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 02/17

CA PART A



VICINITY MAP - 1" = 2000'

"I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION USING REFERENCES SHOWN HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK _____ PAGE _____ OR OTHER REFERENCE SOURCE _____; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY IS 10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56, 1600)."

THIS 23 DAY OF December

SEAL
PROFESSIONAL LAND SURVEYOR

PLAN INFORMATION BLOCK

TYPICAL PLAN #: _____

BUILDING DATA
FIRST FLOOR, FOOT PRINT (INCL. GARAGE AND OPT.): _____SF TOTAL SF OF UNIT W/ ALL OPTIONS _____SF
STORIES __# BASEMENT ___(SUB _CRAWL ____
INCL. OPTIONS: _____

"ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS."

IMPERVIOUS AREA

HOUSE/PORCH:	3,784 SF
COVERED PORCH:	261 SF
DRIVEWAY/SIDEWALKS:	1,315 SF
TOTAL:	5,376 SF (17.41%)

NOTE: IMPERVIOUS CALCULATIONS FOR AREA WITHIN LOT ONLY. (EXCLUDES R/W)

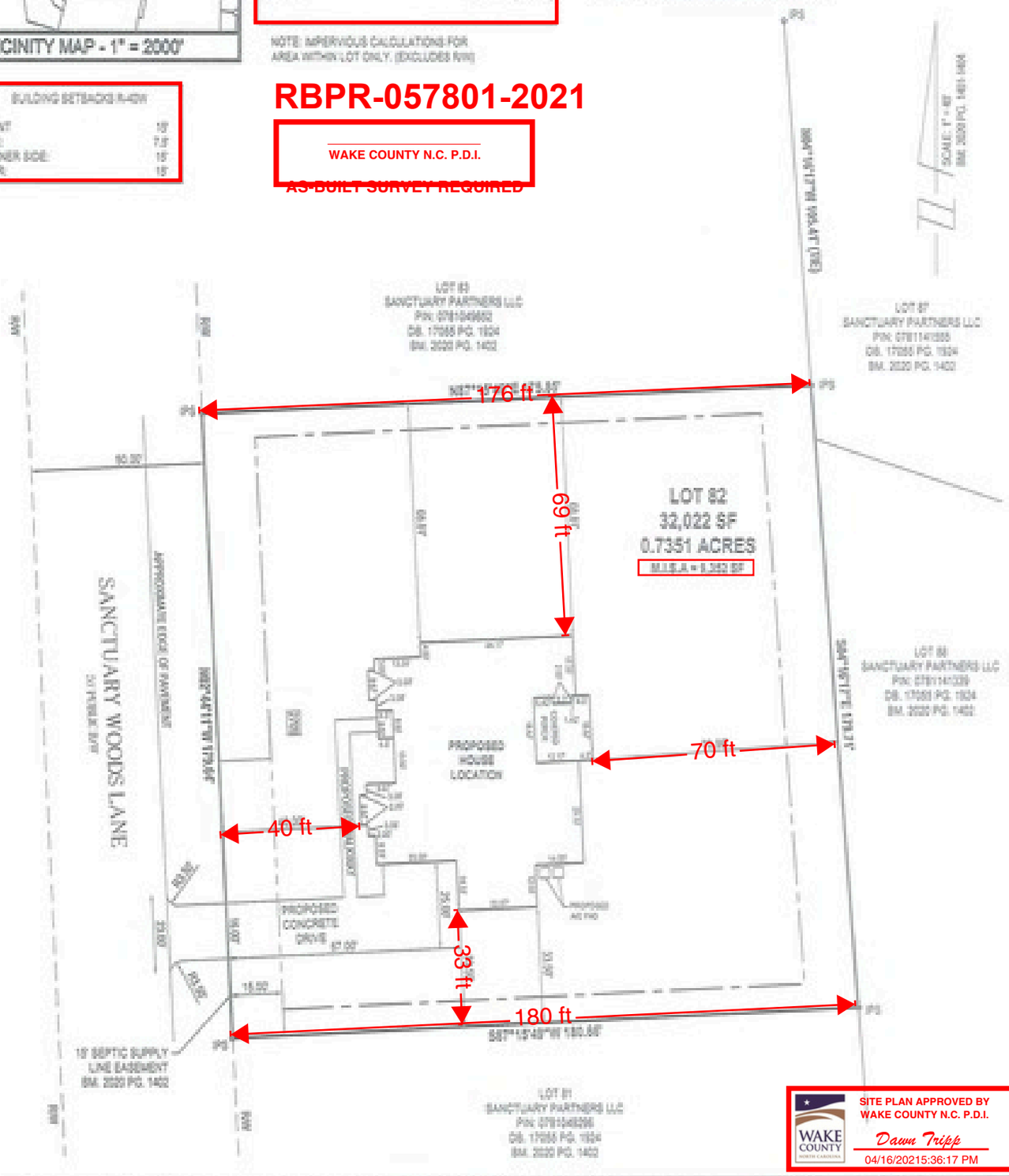
BUILDING SETBACKS R-40W

FRONT:	15'
SIDE:	7.5'
CORNER SIDE:	15'
REAR:	15'

RBPR-057801-2021

WAKE COUNTY N.C. P.D.I.

AS-BUILT SURVEY REQUIRED



SITE PLAN APPROVED BY WAKE COUNTY N.C. P.D.I.
Dawn Tripp
04/16/20215:36:17 PM

SCALE: 1" = 40'

0 20 40 80

1. AREAS BY COORDINATE GEOMETRY UNLESS SHOWN OTHERWISE.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
3. ALL STREETS ARE PUBLIC RIGHTS-OF-WAY UNLESS SHOWN OTHERWISE.
4. OTHER INSTRUMENTS OF RECORD MAY AFFECT THIS PROPERTY.
5. NO TITLE SEARCH PERFORMED FOR THIS SURVEY.
6. NO NCGS MONUMENT WITHIN 2,000 FEET OF PROPERTY.
7. NO FEMA FLOOD HAZARD AREAS PER FIRM NUMBER 3720071700J DATED MAY 2, 2006

PIN	0781049483
LOT NUMBER	82
SUBDIVISION	SANCTUARY @ YATES MILL
BOOK OF MAPS	2020 PAGE 1401-1404
DEED BOOK	17055 PAGE 1924

NORTH CAROLINA PROFESSIONAL SEAL L-4834 LAND SURVEYOR ASHLEY L. PARKER

LEGEND

- EIP = EXISTING IRON PIPE
- IPS = IRON PIPE SET
- CP = CALCULATED POINT
- PK = PK NAIL
- R/W = RIGHT-OF-WAY
- XXXX DENOTES ADDRESS

PROPOSED HOUSE LOCATION
FOR
SANCTUARY @ YATES MILL
WAKE FOREST WAKE COUNTY NORTH CAROLINA

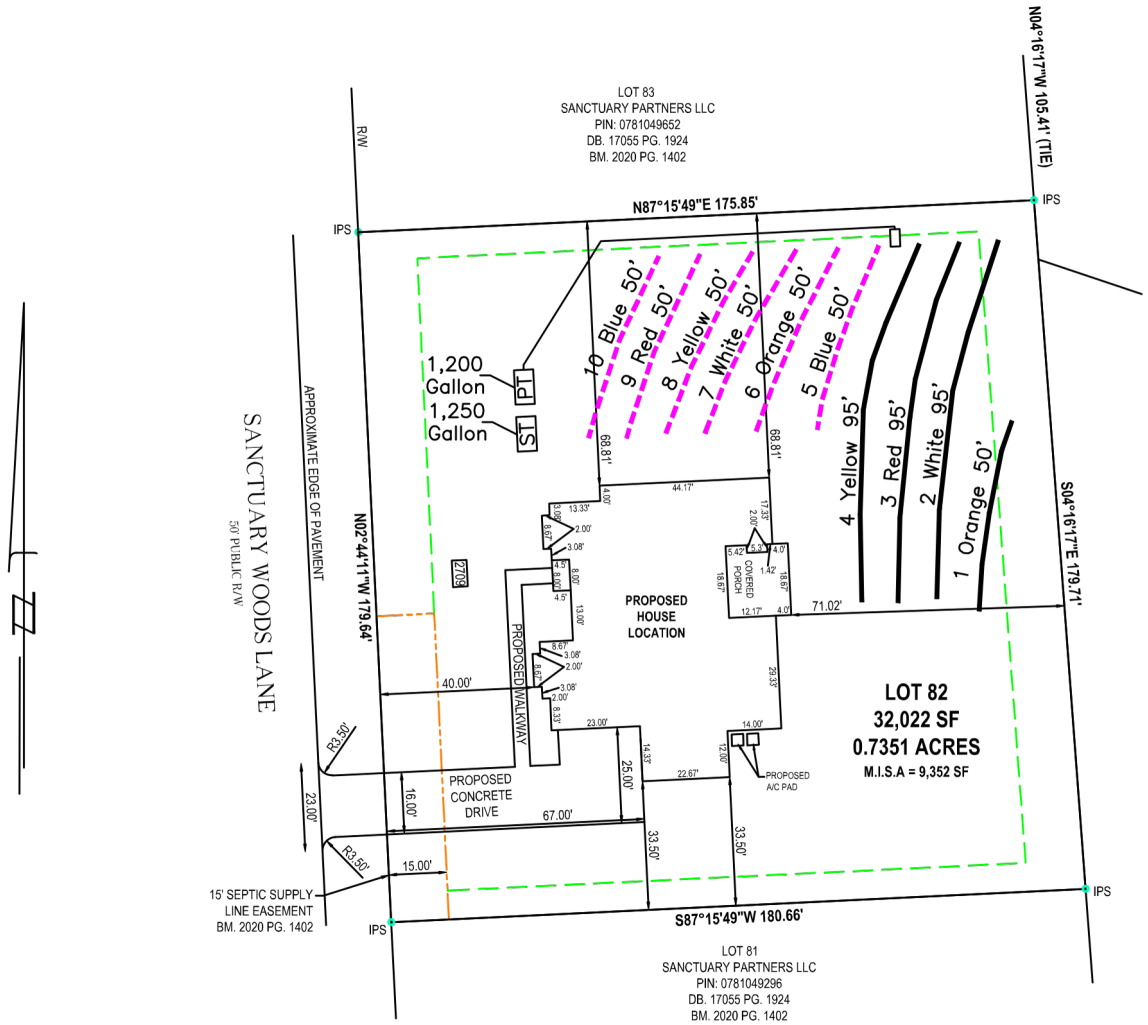
BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
• 8510 CHAPEL HILL ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27607
• TELEPHONE: (919)851-4422 OR (800)284-1971
FAX: (919)851-8866
• CORPORATION NUMBERS: NC6815 (C-4116); NC8LA (C-4307)

DATE:	12-23-2020
SCALE:	1" = 40'
SURV'D BY:	.
DRAWN BY:	ROB

3709 SANCTUARY WOODS LN.
PROJECT NO. 20191

R:\2020\20191-The Sanctuary at Yates Mill\SURVEY\20191LDO\dwg\20191 LOT 82 PHL.dwg

CA PART B



*Keep tanks and drain lines 10' from property lines.
*Not a survey.
*Not a guarantee of a septic permit.
*Keep supply lines >5' from property lines.
*Some lines are flagged longer in the field than lengths indicate.
*No grading septic area.

System: ------
Repair: ——

System: Pressure Manifold
Lines: 5–10, (300')
Accepted Status System
0.3 Soil LTAR

Repair: Pressure Manifold
Lines: 1–4, (335')
Accepted Status System
0.3 Soil LTAR

GRAPHIC SCALE
1" = 50'
50 0 50 100

Central Carolina Soil Consulting, PLLC
1900 South Main Street, Suite 110
Wake Forest, North Carolina 27587
Phone (919)569–6704 Fax (919)569–6703

4–Bedroom Septic Layout
90 gal/day per Engineered Flow–Reduction
Lot 82, Sanctuary Subdivision
Wake County, North Carolina

Job#	: 3572
Drawn By	: JR
Date	: 12/16/2020
Revision:	

CA PART C

Department of Environmental Services
Wake County

Approved by

Date : 06022021

Review of this document has been made only for conformance with the design concept of the project and approval shall not relieve the designer and/or contractor from responsibility for any errors therein or for furnishing the materials, and equipment of proper dimension, size, quantity, quality and all performance characteristic to meet the requirements and intent of the contract documents.

Pressure Manifold
Septic System Design

for

SanctuaryS/D, Lot 82
Wake County, North Carolina

Designed by:

James Rice
Central Carolina Soil Consulting, PLLC
Wake Forest, North Carolina

05/26/2021

Sanctuary S/D, Lot 82
Table of Contents

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Pressure Manifold and Trench Details---------- 16
Supply Line Hydraulic Profile ---------- 17

Sanctuary S/D, Lot 82
Contact Information

Client:
Attn:
Street Address:

Phone:
Fax:

Designer: Central Carolina Soil Consulting, PLLC
Attn: Jason Hall
Designed By: James Rice
Street Address: 1900 Main Street Suite 110
Wake Forest, NC 27587
Office Phone: 919-569-6704
Cell Phone: 910-740-3226
Fax: 919-569-5703
Email: jrice@centralcarolinasoil.com

SanctuaryS/D, Lot 82

Layout/Design Specifications

Facility Type:	Single Family Home
# of Bedrooms:	4
Daily Flow:	360gal/day per engineered flow reduction
L.T.A.R.:	0.3 gal/day/sq.ft
Trench Depth:	per WCDESin
Trench Width:	36in
Stone Depth:	EZ-FLOW in
Manifold Length:	54in
Manifold Diameter:	4in sch 80pvc
Supply Line Length:	118ft
Supply Line Diameter:	2in sch 40pvc
Supply Line Volume:	20.53gallons
Friction Loss + Fitting Loss:	4.65ft(supply line length + 70' for fittings in pump tank)
Design Head:	2ft
Elevation Head:	9.20ft
Total Head:	15.85ft
Dose Volume:	146.25gals
% of Pipe Vol.	.75
Drawdown:	7.44in @ 19.65 gal/in
Pump Run Time:	4.45Mins

Control Panel: SJE Rhombus Model112 control panel (or approved equivalent)

Pump: Zoeller M137 Flow-Mate (or approved equivalent)

Septic Tank Effluent Filter: Zoeller 170-0078 residential effluent filter (or approved equivalent)

Septic Tank:Brantley 1,250 Gallon ST 323

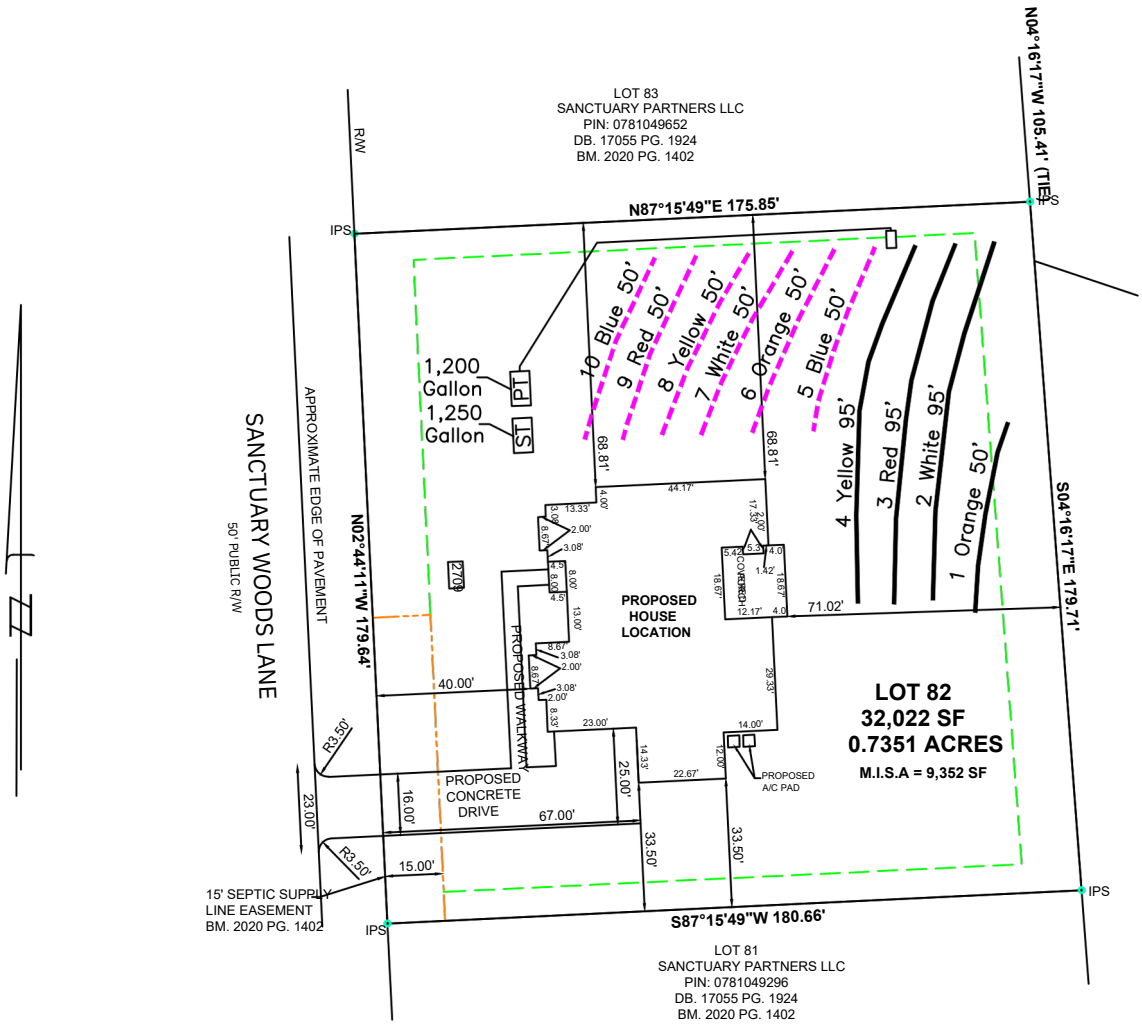
Pump Tank:Brantley 1,200 Gallon PT 463

Sanctuary, Lot 82
TAP CHART

Bench Mark		is = 100.00	LocationofBM					**Elevation Head**	9.20
Pump tank elev.		6.5	93.50	**Pump elev.**	88.10		**Manifold elev.**		97.30
line	**color**	**rod read**	**Elevation**	**length**	**hole size**	**flow/tap**	**gal/day**	**trench area**	**LINE LTAR**
5	Blue	3.70	96.30	50	1/2in SCH 80	5.48	60.00	150	
6	Orange	4.20	95.80	50	1/2in SCH 80	5.48	60.00	150	
7	White	5.00	95.00	50	1/2in SCH 80	5.48	60.00	150	0.4000
8	Yellow	5.70	94.30	50	1/2in SCH 80	5.48	60.00	150	0.4000
9	Red	6.30	93.70	50	1/2in SCH 80	5.48	60.00	150	0.4000
10	Blue	6.80	93.20	50	1/2in SCH 80	5.48	60.00	150	0.4000
									0.4000
									0.4000
		total	**feet =**	**300**	**gal/min =**	**32.88**		**LTAR =**	**0.3000**
								LTAR + %5	**0.3150**
% of Dose Vol.		75		**Des. Flow**	**360**			**(ltar W/ INOV)**	0.4000
Dose Volume		146.25		**Pump Run=**	10.95			**(ltar W/ INOV + 5%**	0.4200
Dose Pump Time		4.45		**Tank Gal/IN**	19.65				
Drawdown in Inches		7.44							

Sanctuary, Lot 82
Repair TAP CHART

Bench Mark		is = 100.00	LocationofBM					**Elevation Head**	11.70
Pump tank elev.		6.5	93.50	**Pump elev.**	88.10		**Manifold elev.**		99.80
line	**color**	**rod read**	**Elevation**	**length**	**hole size**	**flow/tap**	**gal/day**	**trench area**	**LINE LTAR**
1	Orange	1.20	98.80	50	1/2in SCH 80	5.48	55.14	150	
2	White	1.70	98.30	95	3/4in SCH 80	10.1	101.62	285	
3	Red	2.40	97.60	95	3/4in SCH 80	10.1	101.62	285	0.3676
4	Yellow	3.00	97.00	95	3/4in SCH 80	10.1	101.62	285	0.3566
									0.3566
									0.3566
		total	**feet =**	**335**	**gal/min =**	**35.78**		**LTAR =**	**0.3000**
								LTAR + %5	**0.3150**
% of Dose Vol.		75		**Des. Flow**	**360**			**(ltar W/ INOV)**	0.4000
Dose Volume		163.31		**Pump Run=**	10.06			**(ltar W/ INOV + 5%**	0.4200
Dose Pump Time		4.56		**Tank Gal/IN**	19.65				
Drawdown in Inches		8.31							



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