Supervisor/Administrative Professional Checklist

New Septic ☒ New Well ☐ Use Existing ☐ Alteration ☐ Modified Plot Plan ☐

New Septic Fees Paid:

IP ($250.00) VE 6/14/17 Initials/Date

CA ($200.00) CAS 10/6/17 Initials/Date

OP ($200.00) CAS 10/6/17 Initials/Date

(CA and OP fees need to be paid before a building permit can be issued)

New Well Fee Paid: $550.00 _____ Initials/Date

Use Existing Fee Paid: $100.00 _____ Initials/Date

Alteration Fee Paid: $300.00 (Total) $200 (If use existing was paid)_____ Initials/Date

Modified Plot Plan Fee Paid: $100.00 _____ Initials/Date

Floor plans need to be submitted and reviewed before CA can be issued. ☑ Reviewed ☑ JAM 10/6/2017

This site is served by septic and well. Verify each is complete before final hold is released. ☐

Septic file completed. ☐ _____ Well file completed. ☐ _____

Send permit for signature. ☑ Signature received. ☒ ABC

This septic system requires a certified operator contract before final hold is released. ☐

Certified operator contract is on file. ☐ _____

Groundwater & Wastewater Services: Septic Project File & D

Edit Response | Delete Response | Manage Permissions | Workflows | Alert Me

GWS File #:	14435
WASPS App #:	8990
Primary ES assigned to project:	Brad Hallman
Secondary ES assigned to project:	
Project Type:	New System
Site Evaluation Information: .1939(a)(1) - Topography and Landscape Position Recorded?	Yes
Site Evaluation Information: .1940(a-g) - Slope % Recorded?	Yes
Site Evaluation Information: .1939(a)(2) - Texture Class Recorded?	Yes
Site Evaluation Information: .1939(a)(2) - Structure Type Recorded?	Yes
Site Evaluation Information: .1939 (a)(2) - Consistence Recorded?	Yes
Site Evaluation Information: .1939(a)(2) - Mineralogy Recorded?	Yes
Site Evaluation Information: .1939(a)(3) - Soil Wetness Condition Recorded?	Yes
Site Evaluation Information: .1939(a)(4) - Soil Depth to Rock or Parent Material Recorded when Encountered?	Yes
Site Evaluation Information: .1939(a)(5) - Depth to Restrictive Horizons Recorded when Encountered?	Yes
Site Evaluation Information: .1939(a)(6) - Sufficient Available Space Recorded?	Yes
Site Evaluation Information: .1937(m) - Are the Profile Locations Shown?	Yes
Site Evaluation Information: .1939(a) - Are the S/PS Profiles in system & in repair area?	Yes
Site Evaluation Information: .1939(d), .1955, .1956, .1957 - LTAR	Yes
Improvement Permit/Construction Authorization: .1937(g), 130A-336(a) - Proposed System Type stated - Initial	Yes
Improvement Permit/Construction Authorization: .1945(b) - Proposed System Type stated - Repair	Yes
Improvement Permit/Construction Authorization: 130A-336(a)(3) - System location identifiable by setbacks - Initial	Yes
Improvement Permit/Construction Authorization: .1937(g), .1945(b) - System components shown - Initial	Yes
Information Permit/Construction Authorization: .1945(b) - Repair area shown	Yes
Improvement Permit/Construction Authorization: .1937(f)(g) - Does System design match facility, flow & WW characteristics?	Yes
Improvement Permit/Construction Authorization: .1937(f)(g) - Is System design consistent with soil/site conditions?	Yes
Improvement Permit/Construction Authorization: .1937(f)(g) - Is the System located in the approved area?	Yes
Improvement Permit/Construction Authorization: 130A-336(a) - Number of Bedrooms, employees, seats, etc. indicated?	Yes
Improvement Permit/Construction Authorization: .1937 (g) - Trench depth correct?	Yes
Improvement Permit/Construction Authorization: .1937(g) - Trench width correct?	Yes
Improvement Permit/Construction Authorization: .19379(g) - Trench length correct?	Yes
Improvement Permit/Construction Authorization: 130A-336(a)(1) - Proposed/existing well shown?	Yes

Improvement Permit/Construction Authorization: 130A-336(a)(1) - Property line lengths shown?	Yes
Improvement Permit/Construction Authorization: 130A-336(a) - Facility/appurtenance setbacks shown from fixed points?	Yes
Corrections/modifications needed?	No
Comments:	
IA issued date:	
OP Issued date:	5/2/18
Review performed by:	Jeremy Michael
Date performed:	7/10/2017

Created at 7/10/2017 10:52 AM by Michael, Jeremy
Last modified at 7/10/2017 10:52 AM by Michael, Jeremy

Close

FEE: 200.00

DATE: 10/9/2017

CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY

GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 14435

PERMIT NUMBER: 30008990

PARCEL NUMBER: 19908570

JOB LOCATION INFORMATION

ADDRESS: 13628 PINE HARBOR RD

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28278

ISSUED TO: LEO AND MARILYN MARKWAT

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 10/6/2017

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30008990, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. A PRE-CONSTRUCTION MEETING MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A LICENSED SEPTIC TANK CONTRACTOR WITH THE NORTH CAROLINA ONSITE WASTEWATER CONTRACTOR INSPECTOR CERTIFICATION BOARD.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, AND MAY BE ISSUED AT THE SAME TIME THE IMPROVEMENT PERMIT IS ISSUED.

Authorized Agent Signature Bradley M Hallman

14435 #8990 14 JUN '17 AM10:25

MECKLENBURG COUNTY
HEALTH DEPARTMENT

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. SEPTIC / TYPE APPLICATION: ○ N/A ☒ NEW SYSTEM ○ ALTERATION ○ REPAIR ○ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ○ N/A ○ NEW WELL ○ MAJOR REPAIR ○ ABANDONMENT

3. JOB LOCATION INFORMATION:
TAX PARCEL NUMBER: 141-085-70 19908570
STREET ADDRESS: 13628 Pine Harbor Rd.
CITY: Charlotte
STATE: NC ZIP: 28278
SUBDIVISION NAME: _____
LOT #: 4 LOT SIZE (acres): 1.13
TOWNSHIP:
☒ MECKLENBURG ○ CORNELIUS ○ HUNTERSVILLE
○ DAVIDSON ○ CHARLOTTE ○ PINEVILLE
○ MATTHEWS ○ MINT HILL

4. BUILDING INFORMATION:
BUILDING TYPE:
○ SINGLE MOBILE HOME ○ MODULAR HOME
○ DOUBLE WIDE ○ MULTIPLE FAMILY
☒ HOUSE ○ OTHER _____
HEATED SQUARE FOOTAGE: ~~2~~ 3 LM
NUMBER OF BEDROOMS: ~~2~~ 3
NUMBER OF OCCUPANTS: 2
FOUNDATION TYPE:
○ CONCRETE SLAB ☒ BASEMENT WITH PLUMBING
○ CRAWL SPACE ○ BASEMENT WITH NO PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION: ☐ N/A

NUMBER OF BEDROOMS TO BE ADDED: _____ NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

6. WATER SUPPLY: ○ MUNICIPAL ◉ PRIVATE WELL ○ PUBLIC WELL ○ SHARED WELL ○ OTHER _____

7. PROPOSED USE OF WELL: ◉ N/A ○ IRRIGATION ○ POTABLE (DRINKING WATER) ○ OTHER _____

8. PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE *(1-MOST DESIRED 5-LEAST DESIRED)*:

☒ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER _____

8A. RANK: ____ ____ ____ ____ ____

9. DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.

BURIED CABLES, LANDFILLS, STUMPHOLES	○ YES ◉ NO	GRADING/SOIL REMOVAL PERFORMED	○ YES ◉ NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	○ YES ◉ NO	JURISDICTIONAL WETLANDS	○ YES ◉ NO
WELLS, SPRINGS, OR WATER LINES	☒ YES ○ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	○ YES ◉ NO
EASEMENTS OR RIGHT-OF-WAYS	☒ YES ○ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	○ YES ◉ NO
CHEMICAL/PETROLEUM STORAGE TANKS	○ YES ◉ NO	KNOWN UNDERGROUND CONTAMINATION	○ YES ◉ NO
WASTE STORAGE	○ YES ◉ NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	○ YES ◉ NO

10. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____ ☒ UNKNOWN

11. WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? 1/16/17 ☐ N/A

12. PROPERTY OWNER:
NAME: Leo & Marilyn Markwat
ADDRESS: 12027 Windy Rock Way
CITY: Charlotte
STATE: NC ZIP: 28273
WORK PHONE: 704-375-8199
MOBILE PHONE: 704-451-7086
FAX: _____
E-MAIL: Jm1922markwat@carolina.rr.com

13. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:
NAME: Jon Palmer Building Co.
ADDRESS: _____
CITY: Charlotte
STATE: NC ZIP: _____
WORK PHONE: _____
MOBILE PHONE: 704-201-1468
FAX: _____
E-MAIL: jon@palmerbuildingco.com

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

LAM (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance.

_____ (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below. A PROPOSED PLOT PLAN is required to be submitted with each application.

Property Owner's or Owner's Legal Representative Signature

6.13.17
Date

OFFICE USE ONLY

○ SURVEY PLAT TO SCALE SUBMITTED ✓ SCALED SITE PLAN SUBMITTED ○ UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

WELL APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: _____

GWS FILE NUMBER ASSIGNED: _____

APPLICATION ID NUMBER ASSIGNED: _____

COMMENTS:

The well was installed 11/3/07 under permit #10002559 and these papers are attached.

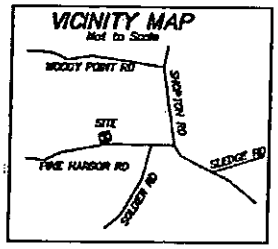
The new site plan is also attached.

The lot can be hard to find. The lot line is on Pine Harbor Rd, but you must take the private road where the address is marked in order to find the building site. It is marked with a stake & the address is painted on a board

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202. OFFICE: 704-336-5103, FAX: 704-336-6894

THIS IS TO CERTIFY THAT ON THE 6TH DAY OF JUNE 2017, AN ACTUAL SURVEY WAS MADE UNDER MY SUPERVISION OF THE PROPERTY SHOWN ON THIS PLAT, AND THAT THE BOUNDARY LINES AND THE IMPROVEMENTS, IF ANY, ARE AS SHOWN HEREON.

SIGNED _____
REGISTERED SURVEYOR



LINE TABLE		
LINE	LENGTH	BEARING
L1	23.02	N34°39'43"E
L2	14.31	N33°54'59"E

NOTE: IRON PINS AT ALL CORNERS UNLESS OTHERWISE NOTED.
THIS PROPERTY MAY BE SUBJECT TO ADDITIONAL RECORDED OR UNRECORDED EASEMENTS, RIGHTS-OF-WAY, OR RESTRICTIVE COVENANTS, OTHER THAN SHOWN.
THIS PROPERTY LIES WITHIN THE LOWER LAKE WYLIE WATERSHED CRITICAL AREA.
PID#19908570

IMPERVIOUS CALCULATIONS:
LOT AREA: 49,07 sq. ft.
49,107 sq. ft. X 24%=
11,785 sq. ft. OF ALLOWABLE IMPERVIOUS AREA
minus 4,042 sq. ft. OF EXISTING IMPERVIOUS AREA

7,743 sq. ft. OF BUILDABLE AREA REMAINING

THIS IS TO CERTIFY THAT THE SUBJECT PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON MAPS PREPARED BY THE F.E.M.A. AND FEDERAL INSURANCE ADMINISTRATION.

SITE PLAN
OF
#13628 PINE HARBOR ROAD
CHARLOTTE, MECKLENBURG CO. NORTH CAROLINA

CAROLINA SURVEYORS, INC
P.O. BOX 267
PINEVILLE, N.C. 28134
(704) 889-7601
FAX:(704) 889-7614

SCALE 1" = 50'

SURVEYED FOR LEO and MARILYN MARKWAT

MAP RECORDED IN BOOK 19 AT PAGE 149 DEED RECORDED BOOK 21740 PAGE 190

DRAWN BY JGM FIELD WORK DA/CU FIELD BOOK # IN-FILE

LDD/2007/DC/PINEHARBOR
DATA/2007/F/PINEHARBOR

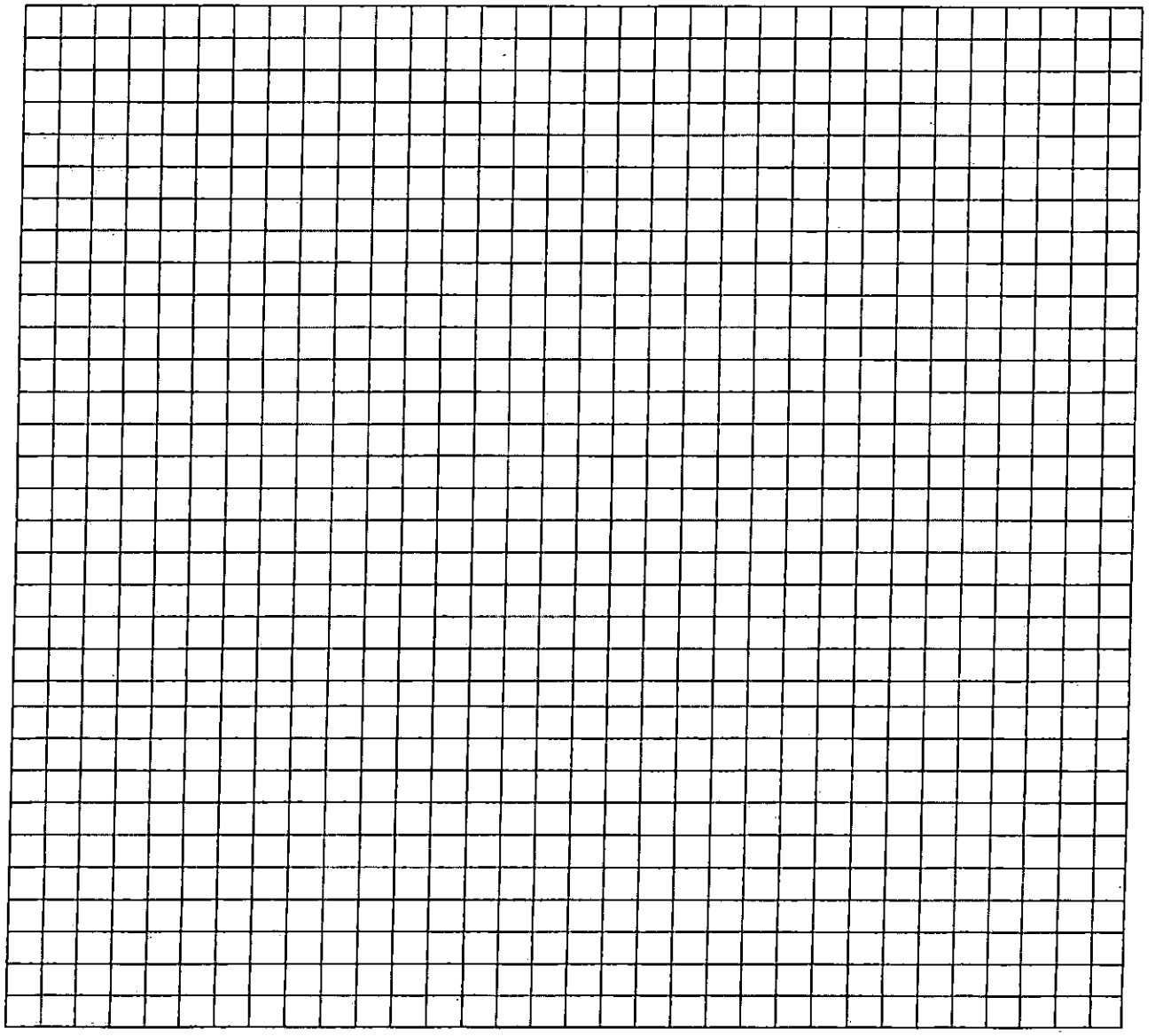
File #: _____

PROPOSED PLOT PLAN

A drawing showing the locations of the following items is required: existing and proposed property lines with dimensions, easements or right-of-ways, proposed building pad(s) or existing building footprint(s), all appurtenances (garage, driveway, deck, pool, etc.), location of existing or proposed well(s), location of existing or proposed sewer lines and sewage disposal systems, surface water bodies, and any aboveground or underground storage tanks. Provide names for all roads that adjoin the property.

Street Address: _____ Tax Parcel #: _____

Subdivision Name: _____ Lot #: _____



_____ _____

Property Owner's or Owner's Legal Representative Signature Date

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202. OFFICE: 704-336-5103, FAX: 704-336-6894

Revised on: 12/15/10

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: 199-085-70
Lot #: NA
File #: 14435
AppID: 8990

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Leo & Marilyn Markwat
Address: 12027 Windy Rock Way, Charlotte, NC 28273
Proposed Facility: 2 Bedroom House
Design Flow (.1949): 240 GPD
Location of Site: 13628 Pine Harbor Rd, Charlotte, NC 28278
Water Supply: [ ] Public [X] Individual [X] Well [ ] Spring [ ] Municipal
Evaluation Method: [X] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Jon Palmer Building Co.
Date Evaluated: 6/28/2017
Property Size: 1.13 ac
Property Recorded: Unknown

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	General Comments	Profile Class & LTAR	Maximum Trench Bottom Depth for 3' Wide Conventional Trench
Boring #1	LS 15%	0 - 4	gr CL	SS SP FR SEXP	>46"	42	NA	NA	saprolite inclusions 36 - 42"	PS IV 0.3	25"
		4 - 31	sbk C	S P FR SEXP							
		31 - 42	sbk CL	SS SP FR SEXP							
		42 - 46	Saprolite								
Boring #2	LS 15%	0 - 3	gr CL	SS SP FR SEXP	>48"	44	NA	NA	saprolite inclusions 19 - 44"	PS IV 0.3	27"
		3 - 19	sbk C	S P FR SEXP							
		19 - 30	sbk CL	SS SP FR SEXP							
		30 - 44	sbk SCL	SS SP FR SEXP							
		44 - 48	Saprolite								
Boring #3	LS 15%	0 - 2	gr CL	SS SP FR SEXP	>44"	38	NA	NA	saprolite inclusions 18 - 38"	PS IV 0.3	21"
		2 - 18	sbk C	S P FR SEXP							
		18 - 38	sbk CL	SS SP FR SEXP							
		38 - 44	Saprolite								
Boring #4	LS 6%	0 - 2	gr CL	SS SP FR SEXP	>50"	50	NA	NA		PS IV 0.3	36"
		2 - 40	sbk C	S P FR SEXP							
		40 - 50	sbk CL	SS SP FR SEXP							

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	IIIg	IIIb,e
Site LTAR (gpd/sq ft)	0.3	0.3

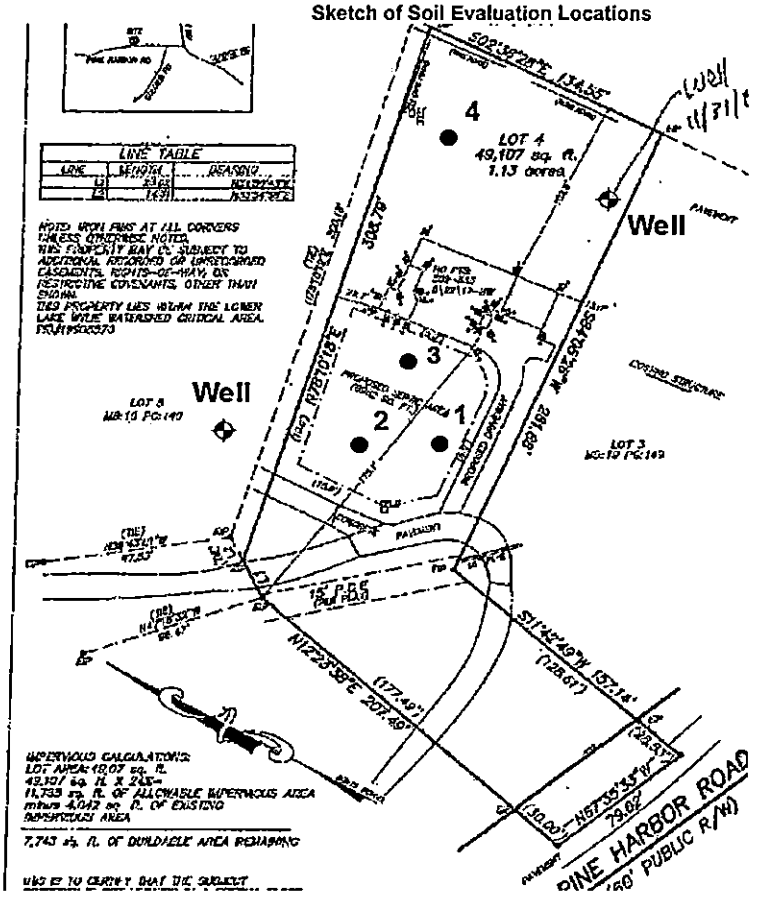
Other Factors (.1946): NA
Soil Evaluation By: Jacob Presley, LSS, REHS
Others Present:
Site Classification (.1948): PS
Site Evaluation By: April Burrgamer
Others Present:

COMMENTS:

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	sg-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		mass-Massive
LS-Linear Slope				cr-Crumb
FS-Foot Slope	II	SL-Sandy Loam	0.8 - 0.6	gr-Granular
NS-Nose Slope		L-Loam		sbk-Subangular Blocky
HS-Head Slope				abk-Angular Blocky
CC-Concave Slope	III	Si-Silt	0.6 - 0.3	pl-Platy
CV-Convex Slope		SiCL-Silty Clay Loam		pr-Prismatic
T-Terrace				Sap-Saprolite
FP-Flood Plain		CL-Clay Loam		**Structure Prefixes**
D-Drainage Way		SCL-Sandy Clay Loam		w-weak
				m-moderate
		SiL-Silt Loam		s-strong
				f-fine
	IV	SC-Sandy Clay	0.4 - 0.1	m-medium
		SiC-Silty Clay		c-coarse
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	SS-Slightly Sticky	SEXP-Slightly Expansive
FR-Friable	S-Sticky	EXP-Expansive
FI-Firm	VS-Very Sticky	
VFI-Very Firm	NP-Non-Plastic	**Classification**
EFI-Extremely Firm	SP-Slightly Plastic	US-Unsuitable
	P-Plastic	PS-Provisionally Suitable
	VP-Very Plastic	S-Suitable
		NA-Not Applicable

Sketch of Soil Evaluation Locations



Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 30008990 GWS File #: 14435 Tax Parcel #: 199-085-70

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 7/7/2022

Type of Installation: Residential - New System Lot Number: 4

Structure Type: HOUSE Size (ft^2): 0 # Bedrooms: 3 Max. Occup.: 6

Building Foundation: Basement With Plumbing Water Supply: Private Well

II. Initial System Type: Accepted **System Classification:** IIIg

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	N/A
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	900	Total Trench Length (ft):	300
Maximum Trench Depth (in):	21	Depth of Media (in):	12	Distribution Device:	Drop Boxes		

III. Repair System Type: PPBPS (gravity) **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	N/A
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	21	Depth of Media (in):	12	Distribution Device:	Pressure Manifold		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: April Bumgarner
Signature: April Bumgarner
Date Issued: 7/7/2017

Owner/Legal Agent: Leo Markwat
Print Name
Signature: Leo Markwat

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: 30008990 GWS File #: 14435

IV. Permit Conditions/Comments:

- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- The invert of the sewer pipe exiting the structrue should be kept as high as possible in order to achieve gravity flow to the drain field. A dosing tank will be required if gravity flow to the drain field can not be achieved.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.
- The septic system shall be located at least 10 feet from any foundation drain.

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

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- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: April Bumgarner
Signature: April Bumgarner
Date Issued: 7/7/2017

Owner/Legal Agent: Leo Markwart
Print Name
Signature: Leo Markwart

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30008990** GWS File #: **14435** Tax Parcel #: **199-085-70**

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be **NO** grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is **NOT** transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 7/7/2022

Type of Installation: Residential - New System Lot Number: 4

Structure Type: HOUSE Size (ft^2): 0 # Bedrooms: 3 Max. Occup.: 6

Building Foundation: Basement With Plumbing Water Supply: Private Well

II. Initial System Type: Accepted **System Classification:** IIIg

Initial System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	N/A
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	900	Total Trench Length (ft):	300
Maximum Trench Depth (in):	21	Depth of Media (in):	12	Distribution Device:	Drop Boxes		

III. Repair System Type: PPBPS (gravity) **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	360	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	N/A
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	600	Total Trench Length (ft):	200
Maximum Trench Depth (in):	21	Depth of Media (in):	12	Distribution Device:	Pressure Manifold		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: April Burngarner

Signature: April Burngarner

Date Issued: 7/7/2017

Owner/Legal Agent: _____
Print Name

Signature: _____

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30008990** GWS File #: **14435**

IV. Permit Conditions/Comments:

- This type of repair system requires the installation of a pump tank and all associated components. This type of system will require routine inspections by our office. The system owner is responsible for all fees associated with these inspections.
- This type of repair system requires periodic inspections by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- The invert of the sewer pipe exiting the structrue should be kept as high as possible in order to achieve gravity flow to the drain field. A dosing tank will be required if gravity flow to the drain field can not be achieved.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.
- The septic system shall be located at least 10 feet from any foundation drain.

The undersigned, an authorized agent of the STATE OF NORTH CAROLINA, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

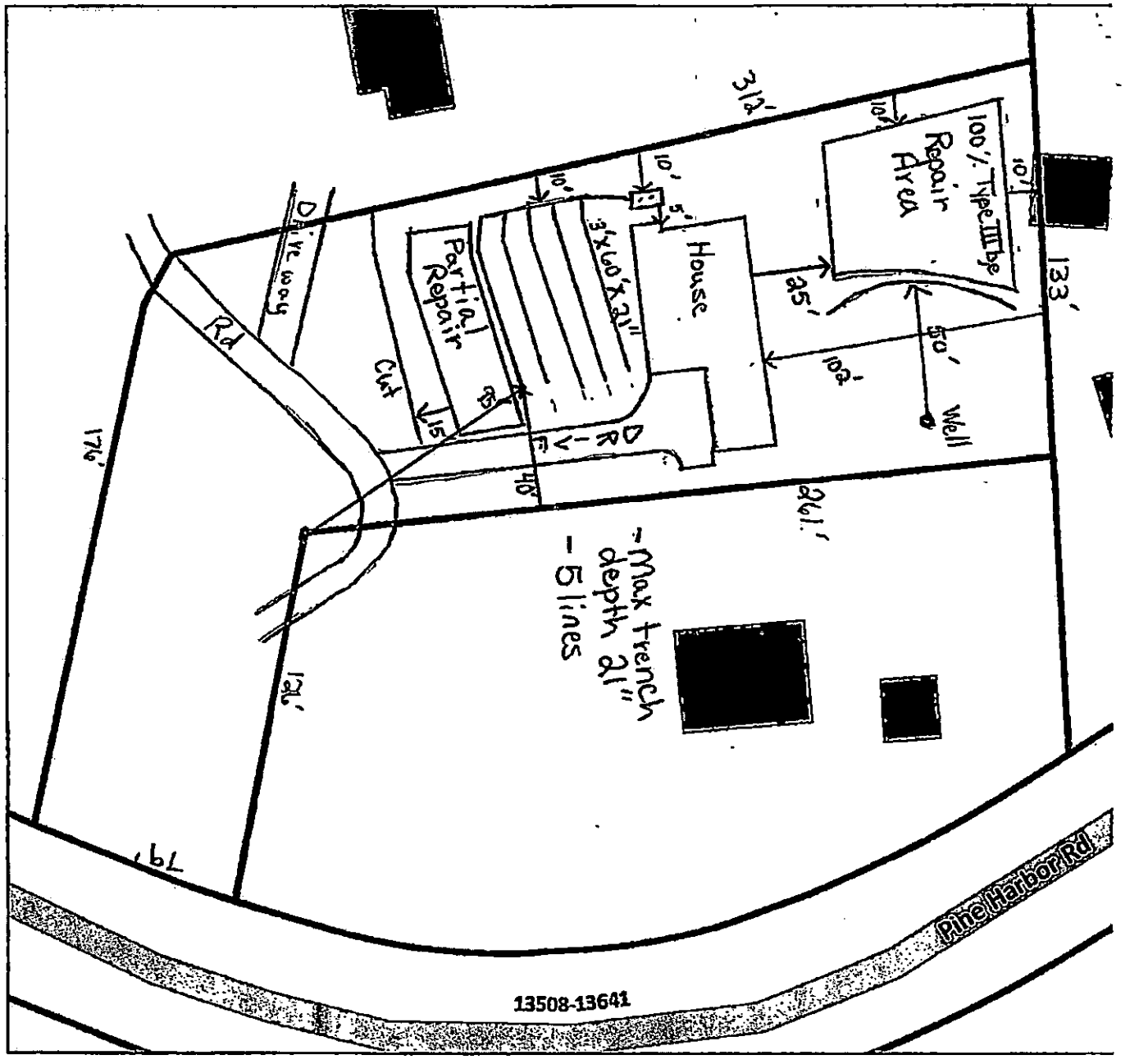
- No work shall be conducted on the septic system until a Pre-Construction meeting has been completed by the Department.
- The septic system installer shall be a licensed septic contractor with the North Carolina Wastewater Contractor Inspector Certification Board.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

Authorized Agent: April Bumgarner Owner/Legal Agent: _____
Print Name

Signature: April Bumgarner Signature: _____

Date Issued: 7/7/2017

On-site Wastewater Improvement Permit Diagram



Mecklenburg County Health Department
Environmental Health - Groundwater and Wastewater Services

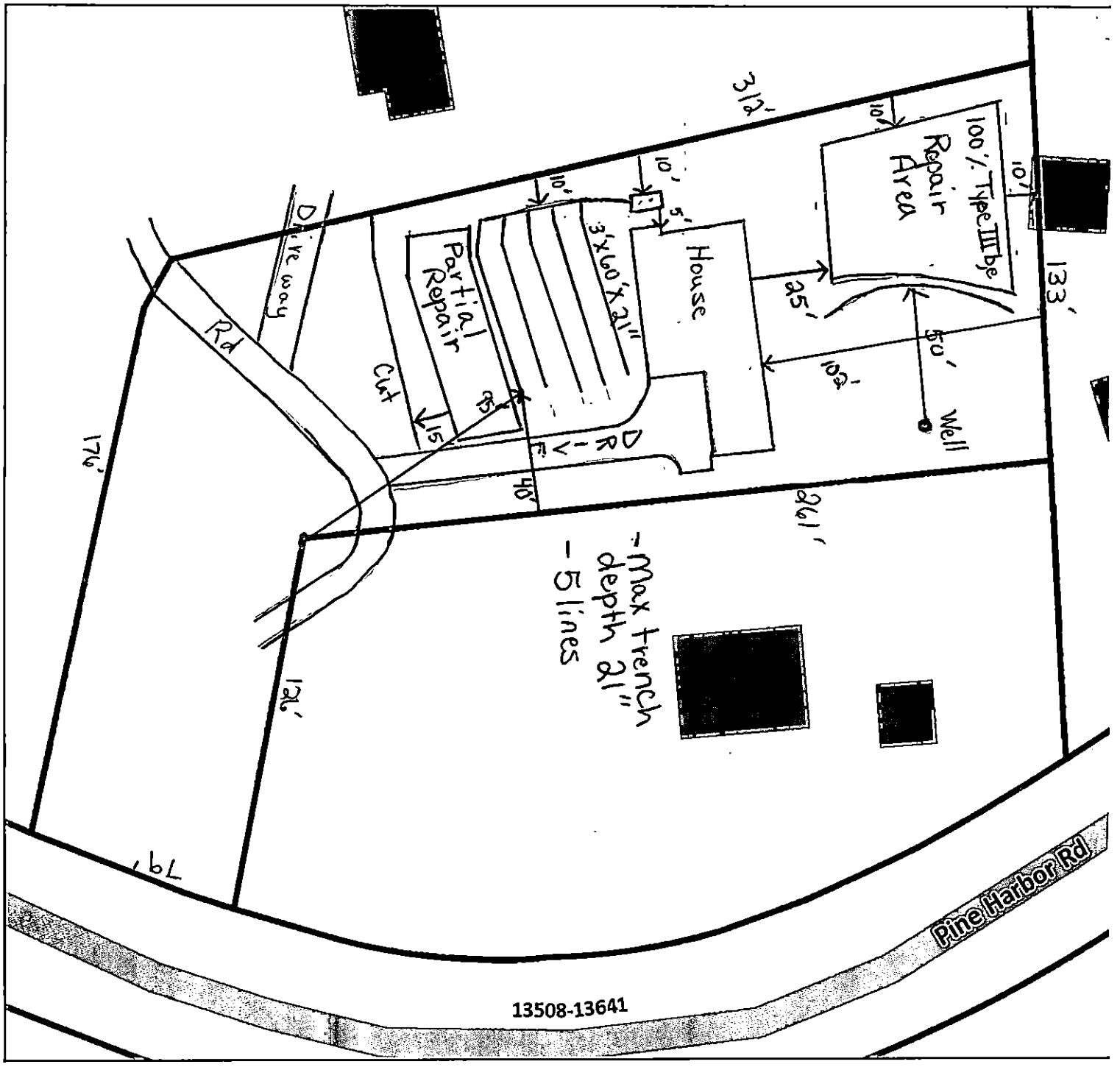
Permit #: 8990
PID #: 199-085-70
File #: 14435

Authorized Agent: April Bumgarner Date: 7-18-17

Owner/ Legal Agent: [signature] Date: 7-25-17

1 inch = 50 fee

On-site Wastewater Improvement Permit Diagram



Mecklenburg County Health Department
Environmental Health - Groundwater and Wastewater Services

Permit #: 8990
PID #: 199-085-70
File #: 14435

Authorized Agent: April Bumgarner Date: 7-18-17

Owner/ Legal Agent: _____ Date: _____

1 inch = 50 fee

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 06/14/17
Receipt #: 106293
Check / Auth #: VISA 09685C
Received By: ELLISLW

Amount: 250.00
Tendered: 250.00
Returned: 0.00

Account Information

Account #: 200000
Contractor: MARKWAT,LEO
Attn:
Address: 12027 WINDY ROCK WAY
Address:
City/State/Zip: CHARLOTTE, NC 28273

Item	Description	Permit#	Quantity	Unit Price	Total Price
0701	Improvment Permit App-Residen 13628 PINE HARBOR RD		1	250.00	250.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

Payment Receipt

Mecklenburg County POS

Environmental Health
700 N. Tryon Street
Charlotte, NC 28202
Phone: 704-336-5100

Enter Account # or Customer Name Here: LEO MARKWAT

Bill To:

LEO MARKWAT
12027 WINDY ROCK WAY

Charlotte, NC 28273

Single Payment

Transaction Date: 06/14/2017 11:23 AM Pacific Time
Pay Method: VISA **********8265
Approval #: 09685C
Trace Number: 2b7ca4e4-e051-4502-b483-71e6fb834640
Amount: $250.00

Payment Amount: $250.00

Total: $250.00

Thank you for your payment.

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

Septic System Pre-Construction Meeting Checklist

File # 14435 App # 8990 Tax Parcel # 199-085-70

Property Owner: Leo Markwat

Job Location Address: 13628 Pine Harbor Rd

City: Charlotte State: NC Zip Code: 28278

1. **Does System design match facility, flow & wastewater characteristics?**

   ☒ YES ☐ NO

   Comments:

2. **Is there sufficient available space for the septic systems initial and repair areas?**

   ☒ YES ☐ NO

   Comments:

3. **Can the septic system be installed per the permit conditions and drawing on file?**

   ☒ YES ☐ NO

   Comments:

* If "NO" is checked for any of the above the existing permit may need to be revoked.

Permission is hereby given to ☒ install ☐ alter ☐ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge meeting all of the construction requirements of 15A NCAC 18A .1900 which are in effect on the date of granting this approval. **System shall not be installed while soils are in wet condition.**

April Burngarner — 5-2-18

Authorized Agent **Date**

Washington EX

Others Present

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (980) 314-1680 Fax: (704) 336-6894

NC DHHS
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 14435 Permit #: 8990 Tax Parcel #: 199-085-70

Property Owner: Leo Markwat

Job Location Address: 13628 Pine Harbor Rd.

City: Charlotte State: NC Zip Code: 28278

Operation Permit Issuance Date: 5/2/18 Contractor Name: Washington Ex.

Permitted Design Flow: 360' GPD Liquid Capacity of Dosing Tank: N/A gallons (11-15-17)

Liquid Capacity of Septic Tank: 1000 gallons Manufacture: JOS JTB 97 Effluent Pump Model: N/A

Drainfield Installation ☐ N/A

Trench Depth: 21' inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 300 feet

# of Lines: 5 @ 60 feet

Depth of Media: 12" inches (Type) III g Quick 4

Depth of Cover: 12' inches

Distribution Device: D-Box (End to End)

Bed Installation *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: 5 @ 60' feet

Depth of Media: 12" inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☐ Municipal ☒ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 10' feet

Distance from Property Line: 16' feet

Distance from Water Supply Source: 100' feet

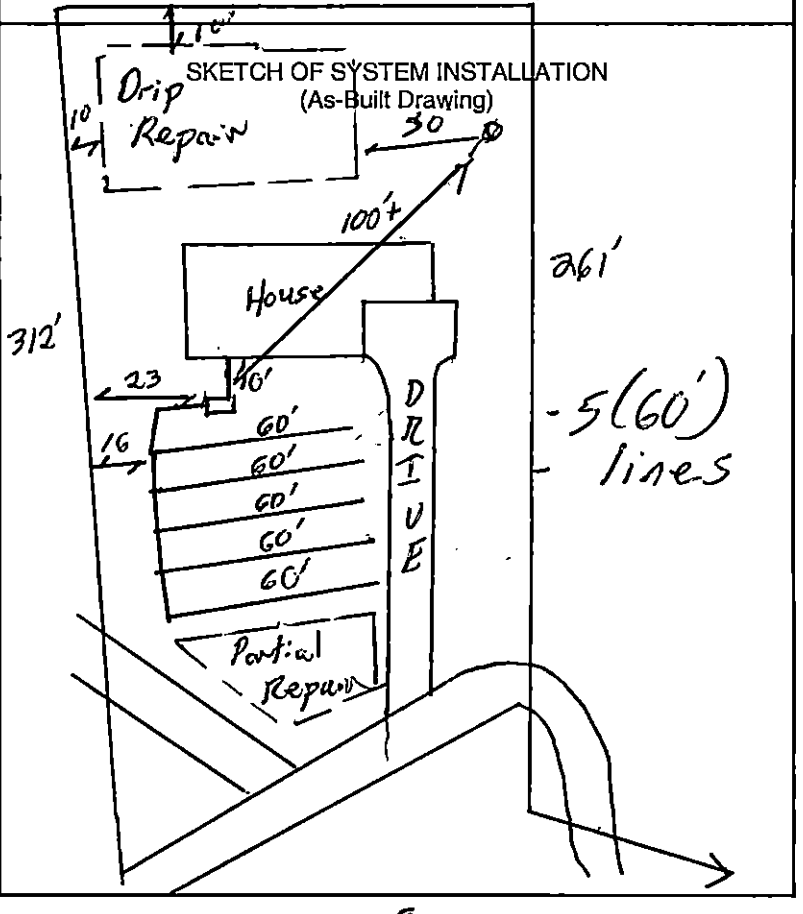
Inspection Dates

Tank(s) Inspected: 5/2/18

Excavation Inspected: 5/2/18

Pump & Controls Inspected: N/A

SKETCH OF SYSTEM INSTALLATION (As-Built Drawing)



The undersigned has inspected the Septic Tank System described above, and certifies it has been ☒ installed ☐ altered ☐ repaired ☐ as detailed in the plot above ☑ in accordance with the permit issued and meets the provisions of 15A NCAC 18A. 1900, "Laws and Rules for Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. The issuance of this Operation Permit does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1900 in addition to those listed below under "Comments." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the Suspension or Revocation of this permit.

Comments: System Classification & Type: Quick 4 / 6 / NA / N/A

DHHS Authorized Agent: Bradley W. Hallman Signature: _____

2 14 (3) 15

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #14435 Permit #: 8990 Tax Parcel #: 199-085-70

Property Owner: Leo Markwat

Job Location Address: 13628 Pine Harbor Rd.

City: Charlotte State: NC Zip Code: 28278

OPERATION PERMIT CONDITIONS:

I. Performance: System shall perform in accordance with 15A NCAC 18A .1961.

II. Monitoring: System shall be monitored as required by 15A NCAC 18A .1961.

III. Maintenance: Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

IV. Operation: System shall be operated in accordance with 15A NCAC 18A .1961.

System Classification: III

*Operation Permits for Type V and VI systems expire five (5) years from the date of issuance (in accordance with Table V(a)). The system owner must contact GWS six (6) months prior to expiration for permit renewal.

Subsurface system operator required: Yes ☐ No ☒

☐ This type of system requires the system owner to maintain a contract with a certified operator to perform system inspection, maintenance, and reporting as required in 15A NCAC 18A .1961. and Table V(a). The system owner is responsible for all fees associated with these services.

☒ System does not require inspection by GWS on a routine frequency.

☐ System requires inspection by GWS once every five (5) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every three (3) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every twelve (12) months. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every six (6) months. The system owner is responsible for all fees associated with the inspection.

V. Other: _____

_____

_____

_____

DENR Authorized Agent: Bradley W. Hallman Date: 5/2/18

Signature: _____

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	10/06/17	**Amount:**	200.00
Receipt #:	107669	**Tendered:**	200.00
Check / Auth #:	VISA 03114C	**Returned:**	0.00
Received By:	ABDUSAI		

Account Information

Account #: 200000
Contractor: MARKWAT, LEO
Attn:
Address: 12027 WINDY ROCK WY
Address:
City/State/Zip: CHARLOTTE, NC 28273

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Septic Construction Authorizat 13628 PINE HARBOR RD		1	200.00	200.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	10/06/17	**Amount:**	200.00
Receipt #:	107668	**Tendered:**	200.00
Check / Auth #:	VISA 03114C	**Returned:**	0.00
Received By:	ABDUSAI		

Account Information

Account #: 200000
Contractor: MARKWAT, LEA
Attn:
Address: 712027 WINDY ROCK WY
Address:
City/State/Zip: CHARLOTTE, NC 28273

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Septic Operational Permit 13628 PINE HARBOR RD		1	200.00	200.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance

Payment Receipt

Mecklenburg County POS

Environmental Health
700 N. Tryon Street
Charlotte, NC 28202
Phone: 704-336-5100

Enter Account # or Customer Name Here: LEO MARKWAT

Bill To:

LEO MARKWAT
12027 WINDY ROCK WY

Charlotte, NC 28273

Single Payment

Transaction Date: 10/06/2017 6:31 AM Pacific Time
Pay Method: VISA **********8265
Approval #: 03114C
Trace Number: bfad162c-b37c-4140-915f-3ac75ff8589c
Amount: $400.00

Payment Amount: $400.00

Total: $400.00

Thank you for your payment.