Supervisor/Administrative Professional Checklist

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

New Septic Fees Paid

IP ($250.00) _____ Initials/Date

CA ($200.00) _____ Initials/Date

OP ($200.00) _____ 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) LE 1/24/16 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

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. ☒ DBC

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

GWS File #:	6494A
WASPS App #:	8717
Primary ES assigned to project:	Brad Hallman
Secondary ES assigned to project:	
Project Type:	Alteration
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:	
Review performed by:	Jeremy Micahael
Date performed:	6/20/2017

Created at 6/20/2017 10:16 AM by Michael, Jeremy
Last modified at 6/20/2017 10:16 AM by Michael, Jeremy

Close

MECKLENBURG COUNTY
HEALTH DEPARTMENT

6494A #8717

24 JAN '17 AM11:03

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: 21721206
STREET ADDRESS: 15650 Sprucewood Rd
CITY: Charlotte
STATE: NC ZIP: 28278
SUBDIVISION NAME: _____
LOT #: _____ LOT SIZE (acres): _____
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: 3348
NUMBER OF BEDROOMS: 2
NUMBER OF OCCUPANTS: 6

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: 1 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?** 8/30/76 ☐ UNKNOWN

11. **WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?** _____ ☒ N/A

12. **PROPERTY OWNER:**

NAME: Nicholas J Castanas Family Trust
ADDRESS: 45 Old Post Road (Andrea Piccone, Trustee)
CITY: Lake Wylie
STATE: SC ZIP: 29710
WORK PHONE: _____
MOBILE PHONE: 856-305-0724
FAX: _____
E-MAIL: andreaalder@yahoo.com

13. **OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:**

NAME: Drew Choate
ADDRESS: _____
CITY: _____
STATE: _____ ZIP: _____
WORK PHONE: _____
MOBILE PHONE: 803-242-4700
FAX: _____
E-MAIL: Drew@IWMan.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.

AP (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.

TEE — 1/18/12

Property Owner's or Owner's Legal Representative Signature — 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:

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

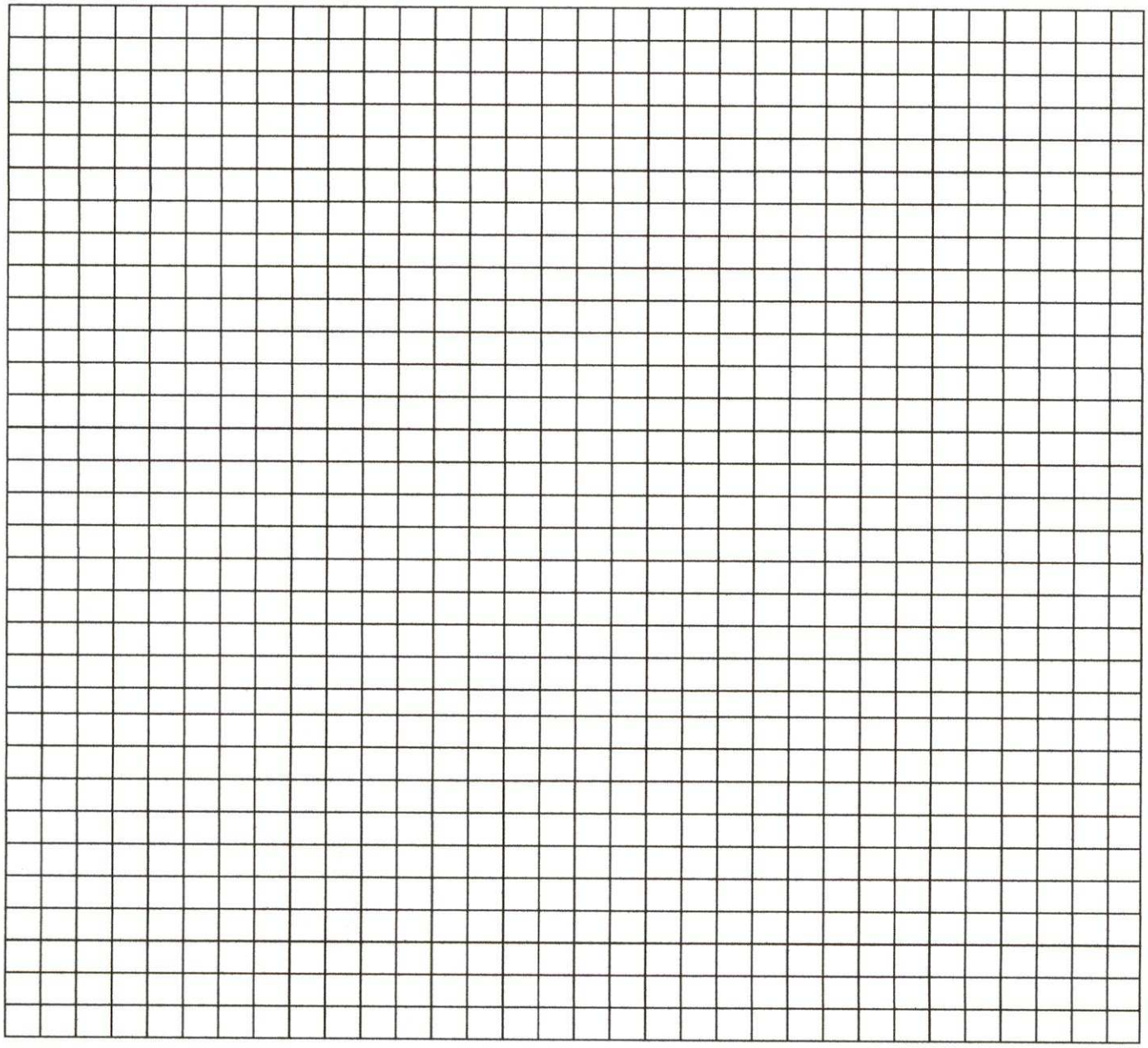
File #: _____

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

Property ID: 217-212-06
Lot #: NA
File #: 6494A
AppID: 8717

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Nicholas J Castanas Family Trust
Address: 45 Old Post Rd, Lake Wylie, SC 29710
Proposed Facility: 4 Bedroom House
Design Flow (.1949): 480 GPD
Location of Site: 15650 Sprucewood Rd, Charlotte, NC 28278
Water Supply: [ ] Public [X] Individual [X] Well [ ] Spring [ ] Municipal
Evaluation Method: [X] Auger Boring [X] Pit [ ] Cut
Type of Wastewater: [X] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Drew Choate
Date Evaluated: 6/1/2017
Property Size: 1.78 ac
Property Recorded: 8/30/76

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
Pit #1	LS 20%	0 - 13	gr SL	SS SP FR SEXP	>75"	50	PS	NA		PS IV 0.275	36"
		13 - 50	sbk C	S P FI SEXP							
		50 - 75	mass L	SS SP FR SEXP							
Pit #2	LS 22%	0 - 18	gr SL	SS SP FR SEXP	>65"	65	NA	NA	saprolite inclusions 48 - 65"	PS IV 0.275	36"
		18 - 28	gr/sbk SCL	S SP FR SEXP							
		28 - 56	sbk C	S P FI SEXP							
		56 - 65	sbk SCL	SS SP FR SEXP							
Pit #3	LS 22%	0 - 24	gr SL	SS SP FR SEXP	>68"	41	PS	NA		PS IV 0.3	36"
		24 - 41	sbk/abk C	S P FI SEXP							
		41 - 68	mass L	SS SP FR SEXP							
Pit #4	LS 22%	0 - 10	gr SL	SS SP FR SEXP	2 chroma at 30"	42	NA	NA		PS IV Drip 0.1	NA
		10 - 42	sbk/abk SC	S P FI SEXP							
Pit #5	LS 22%	0 - 10	gr SL	SS SP FR SEXP	2 chroma at 24"	30	US	NA		PS IV Drip 0.1	NA
		10 - 30	sbk/abk SC	S P FI SEXP							
		30 - 48	mass SL	SS SP VFI EXP							
Pit #6	LS 22%	0 - 11	gr SL	SS SP FR SEXP	2 chroma at 38"	48	NA	NA		PS IV Drip 0.1	NA
		11 - 48	sbk/abk SCL	S P FI SEXP							

Description	Initial System	Repair System
Available Space (.1945)	PS	PS.
System Type(s)	IVa	Va
Site LTAR (gpd/sq ft)	**0.275***	**0.1 Drip**

***Only valid for area of pits 1, 2, 3, & 7.**

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

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
CONTINUED

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
Pit #7	LS 20%	0 - 21	gr SL	SS SP FR SEXP	>67"	38	PS	NA		**PS IV 0.275**	**36"**
		21 - 38	sbk SCL	S SP FR SEXP							
		38 - 67	mass L	SS SP FR SEXP							
Pit #8	LS 20%	0 - 12	gr SL	SS SP FR SEXP	>70"	47	PS	NA		**PS IV 0.275**	**28" due to well**
		12 - 47	sbk SCL	S SP FR SEXP							
		47 - 70	mass SL	SS SP FI SEXP							
Pit #9	LS 22%	0 - 20	gr SL	SS SP FR SEXP	>48"	36	PS	NA		**PS IV 0.275**	**16" due to well**
		20 - 36	sbk C	S P FI SEXP							
		36 - 48	mass L	SS SP FR SEXP							
Pit #10	LS 22%	0 - 14	Fill		>50"	50	NA	NA		**PS IV 0.275**	**30" due to well**
		14 - 26	gr LS	SS SP FR SEXP							
		26 - 50	sbk C	S P FI SEXP							

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		

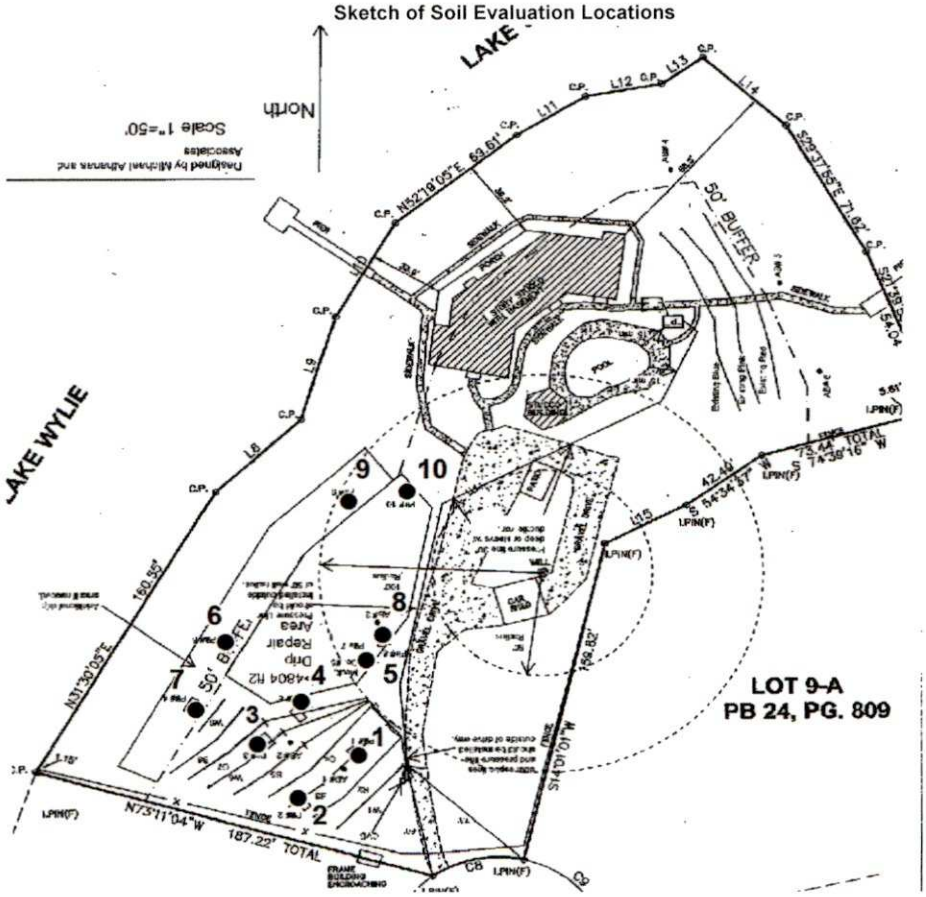
Consistence
Moist
VFR-Very Friable
FR-Friable
FI-Firm
VFI-Very Firm
EFI-Extremely Firm

Consistence
Wet
SS-Slightly Sticky
S-Sticky
VS-Very Sticky
NP-Non-Plastic
SP-Slightly Plastic
P-Plastic
VP-Very Plastic

Mineralogy
SEXP-Slightly Expansive
EXP-Expansive

Classification
US-Unsuitable
PS-Provisionally Suitable
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 #: **30008717** GWS File #: **6494A** Tax Parcel #: **217-212-06**

- 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):** 6/20/2022

Type of Installation: Residential - Alteration Lot Number: 0

Structure Type: HOUSE Size (ft^2): 3348 # Bedrooms: 4 Max. Occup.: 8

Building Foundation: Basement Without Plumbing Water Supply: Private Well

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	873	Total Trench Length (ft):	291
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: Drip Irrigation **System Classification:** Va

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.125	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	1	Trench Spacing (ft):	2	Absorption Area (ft^2):	3840	Total Trench Length (ft):	3840
Maximum Trench Depth (in):	12	Depth of Media (in):	N/A	Distribution Device:	Headworks (Drip Irr.		

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: Brad Hallman Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 6/20/2017

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 #: **30008717** GWS File #: **6494A**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- 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 the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- 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.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. from all private wells (saprolite system).
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- All components of the septic system must be located a minimum distance from the normal pool elevation or mean high water mark for the nearby body of water. See plot plan for minimum setback requirements.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The supply pipe shall be installed with a minimum of 30" of compacted cover over the pipe or properly sleeved under areas that are subject to vehicular traffic.
- 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 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: Brad Hallman

Signature: 

Date Issued: 6/20/2017

Owner/Legal Agent: _____
Print Name

Signature: _____

Page 2 of 2

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 #: **30008717** GWS File #: **6494A** Tax Parcel #: **217-212-06**

- 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):** 6/20/2022

Type of Installation: Residential - Alteration Lot Number: 0

Structure Type: HOUSE Size (ft^2): 3348 # Bedrooms: 4 Max. Occup.: 8

Building Foundation: Basement Without Plumbing Water Supply: Private Well

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	873	Total Trench Length (ft):	291
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: Drip Irrigation **System Classification:** Va

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.125	Septic Tank Size (gal):	1000	Pump Tank Size (gal):	1000
Trench Width (ft):	1	Trench Spacing (ft):	2	Absorption Area (ft^2):	3840	Total Trench Length (ft):	3840
Maximum Trench Depth (in):	12	Depth of Media (in):	N/A	Distribution Device:	Headworks (Drip Irr.		

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: Brad Hallman Owner/Legal Agent: Andrew Aaron Boone, TTEE

Print Name

Signature: Signature: TTEE

Date Issued: 6/20/2017

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 #: **30008717** GWS File #: **6494A**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- 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 the property owner to obtain a contract with a Certified Operator to perform routine inspections and maintenance on the system.
- 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.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. from all private wells (saprolite system).
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- All components of the septic system must be located a minimum distance from the normal pool elevation or mean high water mark for the nearby body of water. See plot plan for minimum setback requirements.
- Upon completion of the project the system designer shall provide Groundwater & Wastewater Services with a letter certifying that the system was installed in accordance with the approved design.
- The supply pipe shall be installed with a minimum of 30" of compacted cover over the pipe or properly sleeved under areas that are subject to vehicular traffic.
- 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 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: Brad Hallman

Signature:

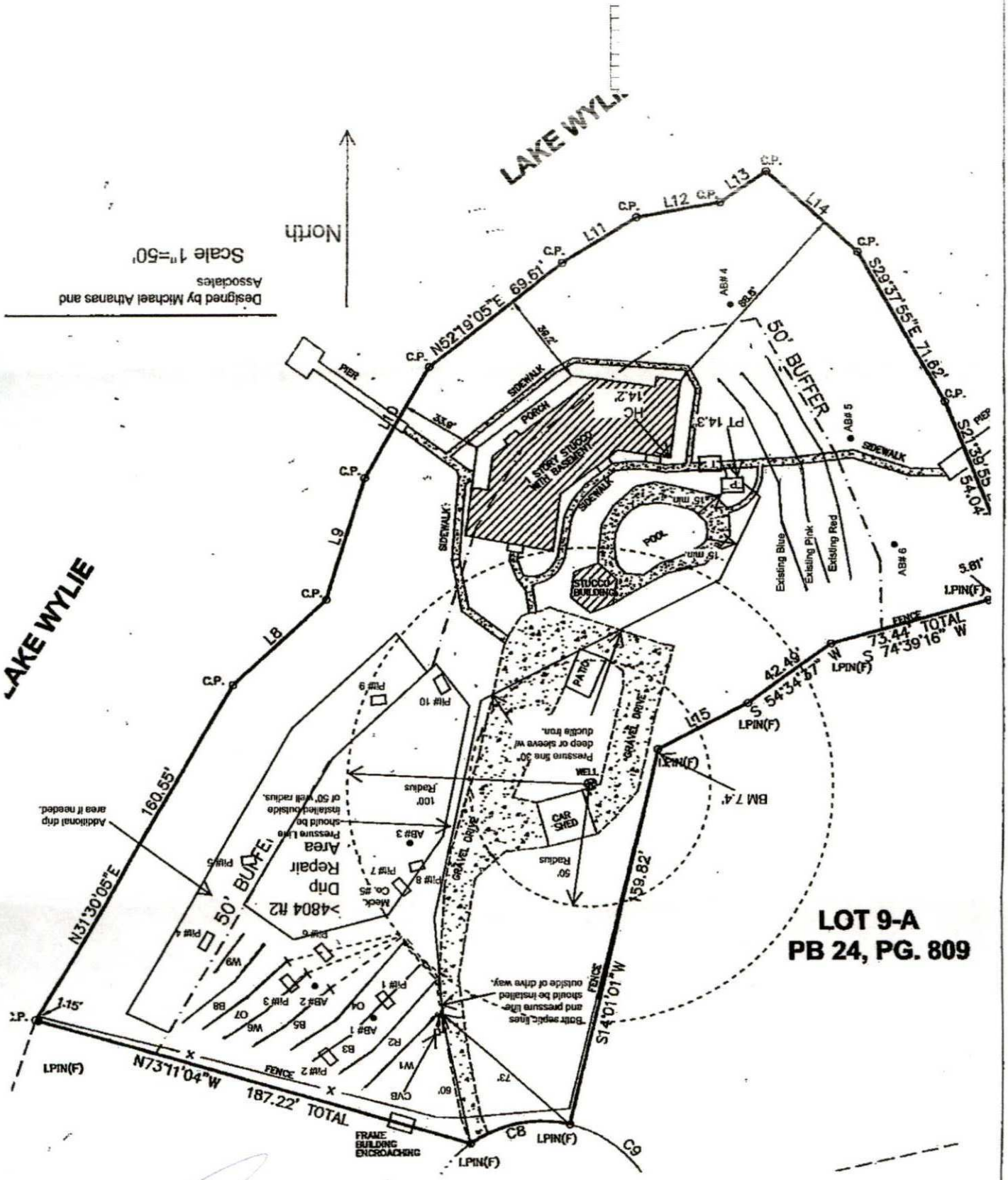
Date Issued: 6/20/2017

Owner/Legal Agent: Andrea Ahlon Piccone TIEE

Print Name

Signature: TIEE

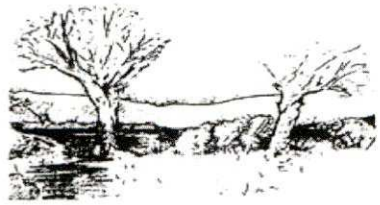
Page 2 of 2


LAKE WYLIE
North
Scale 1"=50'
Designed by Michael Athanas and Associates
N5219'05"E 69.61'
S29°37'55"E 71.62'
S21°39'55"E 54.04'
50' BUFFER
1 STORY STUCCO WITH BASEMENT
PORCH
SIDEWALK
PIER
POOL
STUCCO BUILDING
PATIO
GRAVEL DRIVE
CAR SHED
FENCE
Existing Blue
Existing Pink
Existing Red
AB# 4
AB# 5
AB# 6
N31°30'05"E 160.55'
S14°01'01"W 159.82'
S 54°34'57" W 42.49'
S 74°39'16" W 73.44' TOTAL
N73°11'04"W 187.22' TOTAL
BM 7.4'
LOT 9-A
PB 24, PG. 809

X Signature

LAKE WYLIE
LAKE WYLIE
North
Scale 1"=50'
Designed by Michael Athanas and Associates
C.P.
L8
L9
L10
L11
L12
L13
L14
L15
N31°30'05"E 160.55'
N52°19'05"E 69.61'
S29°37'55"E 71.62'
S21°39'55"E 54.04'
S 54°34'57" W 42.49'
S 74°39'16" W 73.44' TOTAL
S14°01'01"W 159.82'
N73°11'04"W 187.22' TOTAL
1.15'
5.81'
I.PIN(F)
FENCE
50' BUFFER
50' BUFFER
>4804 ft2
Drip Repair Area
Additional drip area if needed.
Pressure Line should be installed outside of 50' well radius.
100' Radius
50' Radius
Pressure line 30" deep or sleeve w/ ductile iron.
Bolt septic lines and pressure lifter should be installed outside of drive way.
WELL
CAR SHED
GRAVEL DRIVE
PATIO
POOL
15' min.
STUCCO BUILDING
1 STORY STUCCO WITH BASEMENT
SIDEWALK
PORCH
PIER
HC
PT 14.3'
14.2'
AB# 1
AB# 2
AB# 3
AB# 4
AB# 5
AB# 6
88.6'
39.2'
33.8'
Existing Blue
Existing Pink
Existing Red
Pl# 1
Pl# 2
Pl# 3
Pl# 4
Pl# 5
Pl# 6
Pl# 7
Pl# 8
Pl# 9
Pl# 10
Mech. Co. #5
W1
W6
W7
W9
B3
B5
B8
O4
R2
CVB
60'
73'
BM 7.4'
FRAME BUILDING ENCROACHING
C8
C9
LOT 9-A
PB 24, PG. 809

X Signature



MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
561 Ennis Rd.
Weddington, NC 28173
(704) 576-3887

Reference: Data Sheet for Lot 9B; 15650 Sprucewood Road; Parcel ID#: 21721206 Mecklenburg Co., NC

House Footprint: Existing
Building Setback: 20' Front, 5' Side, 50' Rear
Water Source: Existing Private Well
Number of Bedrooms: 4/480 GPD
Proposed LTAR: 0.275 gpd/ft2
Suggested System Type: PPBPS
Proposed Repair LTAR: 0.125 gpd/ft2 for drip area located outside of the buffer plus existing system
Suggested Repair System Type: Drip located outside of buffer plus existing system
Distribution: LP-CVB
Flow per Orifice: .59
Hole Size & Material: 3/16"
Number of Panels: 66
System Flow: 38.94 gal/min
Dosing Volume: 237.6 gal/dose
Pump Run Time: 6.10 min
Total Linear Footage: 295'
Trench Bottom Square Footage: 885 ft2
Elevation Head: 17.5'
Friction Head: 11.77'
Pressure Head: 2'
Total Dynamic Head: 31.27'
Supply Line Length: 300'
Septic/Pump Tank Size: 1000 gallon septic tank and 1000 gallon pump tank
Proposed Trench Bottom: 36"

GWS Septic System Design Review
GWS File #: 6494A
Design Review: ☐ Approved ☐ Disapproved
Field Review: Burk ✓ ☐
*Projects are completed and in accordance with all applicable rules and regulations ☐ Corrections above

Line	Actual Length	Design Length	# of Panels	Elevation
White 1	**45'**	**40'**	**9**	**1.8'**
Red 2	**57'**	**40'**	**9**	**3.8'**
Blue 3	**61'**	**40'**	**9**	**6.3'**
Orange 4	**66'**	**45'**	**10**	**8.5'**
Blue 5	**40'**	**40'**	**9**	**10.9'**
White 6	**45'**	**45'**	**10**	**13.2'**
Orange 7	**45'**	**45'**	**10**	**15'**
Blue 8	45'			17.3'
White 9	20'			19.6'

Initial System: 295' PPBPS **Repair System:** >4804ft2 Drip plus existing system.

Comments:

The purpose of this evaluation is to permit the property for a 4 bedroom system. There is an existing house with a 2 bedroom existing system. MA&A is proposing to abandoned the existing system and use it as part of the repair. There will be a new 4 bedroom panel block system installed in the area indicated on the site plan. The existing system and the drip area indicated on the site plan will be the required repair.

- A new 1000 gallon pump tank should be installed in the area indicated on the site plan. The pump tank should be installed a minimum of 15' from the water's edge of the pool.
- The pressure line from the pump tank to the septic area should be installed outside of the 50' buffer and the driveway as shown on the site plan. The area where the pressure line goes under the existing drive should be 30" deep or sleeved in ductile iron. It should also be a minimum of 15' from the water's edge of the pool.
- Additional drip repair area can be located between the 50' well radius and the 100' well radius. This area is located by pits 7-10. Additional soil evaluations were done in the 50' buffer below the existing system. This can also be used as repair if necessary.

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

PROPERTY ID #: 15650 Sprucewood Road; Lot 9B; PID#21721206
COUNTY: Mecklenburg

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Nicholas J. Castanas Family Trust
ADDRESS: 15650 Sprucewood Road; Charlotte, NC 28278
PROPOSED FACILITY: 4-Bedroom Residence PROPOSED DESIGN FLOW (.1949): 480 GPD
LOCATION OF SITE: Lot 9B; 15650 Sprucewood Road

APPLICATION DATE:
DATE EVALUATED: 6/2017
PROPERTY SIZE:1.78 Acres
PROPERTY RECORDED:3/6/1992

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

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
AB 1	LS 22-23%	0"-16"	Br LS GR	NS NP VFR NEXP		48"	Few to common saprolite inclusions 26"-48"	None	0.3
		16"-26"	RBr SCL WSBK	SS SP FR SEXP					
		26"-48"	R C SBK	SS SP FR SEXP					
AB 2	LS 22-23%	0"-23"	Br SL GR	NS NP VFR NEXP		48"		None	0.3
		23"-36"	R SCL WSBK	SS SP FR SEXP					
		36"-48"	RBr C SBK	SS SP FR SEXP					
AB 3	LS 22-23%	0"-16"	Br LS GR	NS NP VFR NEXP		40"	PS	None	0.3+
		16"-30"	R SCL WSBK	SS SP FR SEXP					
		30"-40"	R C SBK	SS SP FR SEXP					
		40"-48"	V SL Saprolite M	NS NP VFR NEXP					
AB 4	LS 22-23%	0"-14"	Br SL GR	NS NP VFR NEXP		24"		None	0.1+ Drip
		14"-24"	R C SBK	SS SP FR SEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	885 ft2	Existing System and >4804ft2
System Type(s)	PPBPS	Drip
Site LTAR	0.275	0.125

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):

EVALUATED BY: Michael Athanas and Associates
OTHER(S) PRESENT:

COMMENTS:

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4
CV (Convex Slope)		LS (Loamy Sand)		
D (Drainage Way)				
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3
FP (Flood Plain)		L (Loam)		
FS (Foot Slope)				
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15
L (Linear Slope)		SiCL (Silty Clay Loam)		
N (Nose Slope)		CL (Clay Loam)		
R (Ridge)		SCL (Sandy Clay Loam)		
S (Shoulder Slope)		SiL (Silt Loam)		
T (Terrace)				
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05
		SiC (Silty Clay)		
		C (Clay)		
		O (Organic)	None	None

MINERALOGY/ CONSISTENCE	STRUCTURE
NEXP (Non-expansive)	G (Single Grain)
SEXP (Slightly Expansive)	M (Massive)
EXP (Expansive)	CR (Crumb)
	GR (Granular)
	SBK (Subangular Blocky)
	ABK (Angular Blocky)
	PL (Platy)
	PR (Prismatic)

MOIST	WET
VFR (Very Friable)	NS (Non-sticky)
FR (Friable)	SS (Slightly Sticky)
FI (Firm)	S (Sticky)
VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
EFI (Extremely Firm)	NP (Non-plastic)
	SP (Slightly Plastic)
	P (Plastic)
	VP (Very Plastic)

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

NOTES

HORIZON DEPTH — In inches below natural soil surface

DEPTH OF FILL — In inches from land surface

RESTRICTIVE HORIZON — Thickness and depth from land surface

SAPROLITE — S(suitable) or U(unsuitable)

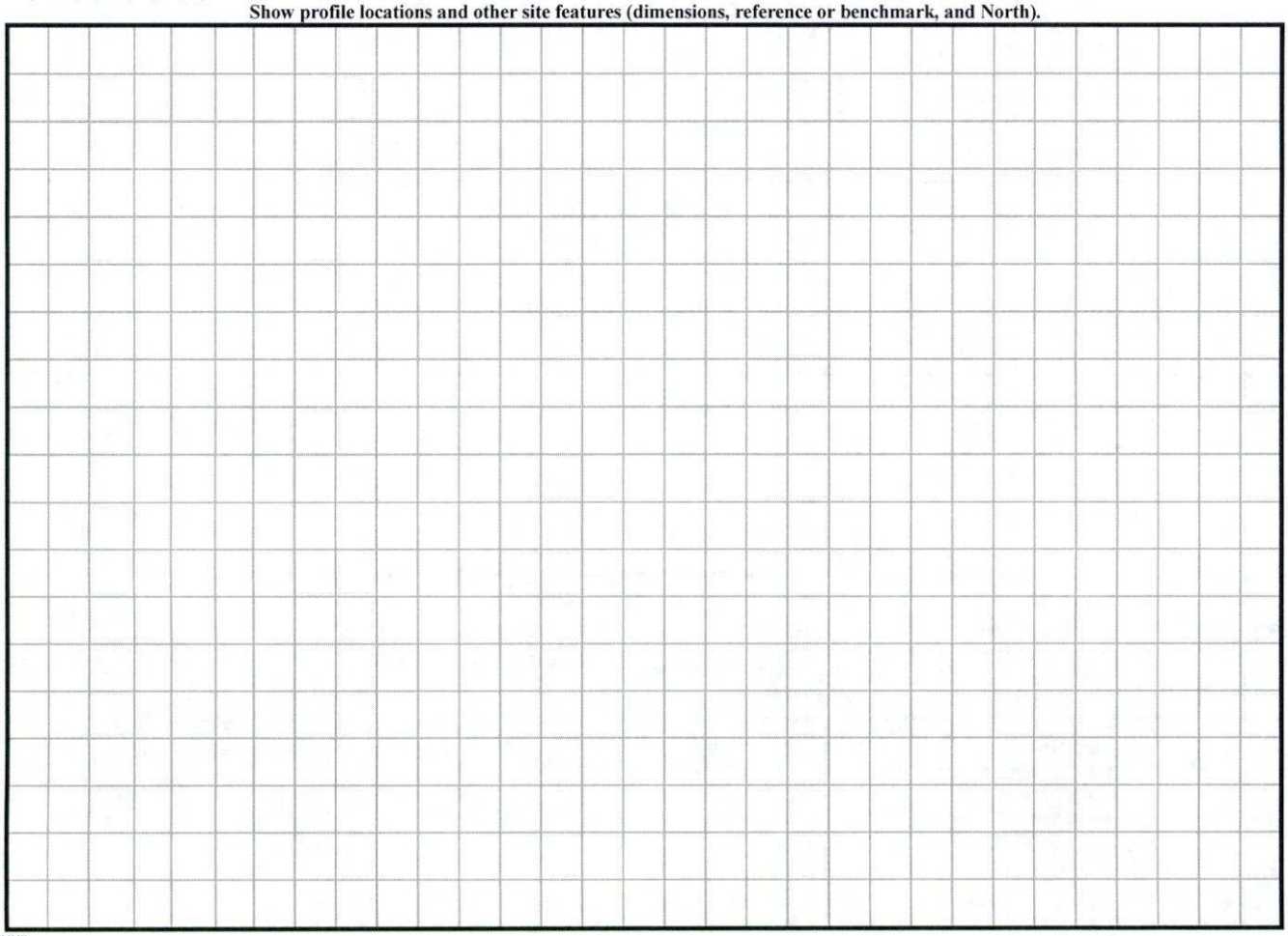
SOIL WETNESS — Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

CLASSIFICATION — S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

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

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



DENR (######)

Review (#####)

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: 15650 Sprucewood Road; Lot 9B; PID#21721206
DATE OF EVALUATION: 6/2017
COUNTY: Mecklenburg

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
Pit 6	LS 22-23%	0"-11"	Br LS GR	NS NP VFR NEXP	Chr. 2 at 30"	30"		None	0.1+ Drip
		11"-30"	RBr SCL WSBK	SS SP FR SEXP					
Pit 7	LS 22-23%	0"-12"	Br LS GR	NS NP VFR NEXP	Chr. 2 at 24"	24"		None	0.1+ Drip
		12"-24"	RBr SCL WSBK	SS SP FR SEXP					
Pit 8	LS 22-23%	0"-12"	Br SL GR	NS NP VFR NEXP		47"	PS	None	0.3+
		12"-47"	R SCL WSBK	SS SP FI/FR SEXP					
		47"-70"	V SL Saprolite M	NS NP VFR NEXP					
Pit 9	LS 22-23%	0"-20"	Br LS GR	NS NP VFR NEXP		36"		None	0.3
		20"-36"	RY C WSBK	SS SP FR SEXP					
		36"-48"	V L Saprolite M	NS NP VFR NEXP					
Pit 10	LS 22-23%	0"-14"	Fill			50"	Few to common saprolite inclusions 26"-50"	None	0.25
		14"-26"	Br LS GR	NS NP VFR NEXP					
		26"-50"	R C WSBK	SS SP FR SEXP					

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: 15650 Sprucewood Road; Lot 9B; PID#21721206
DATE OF EVALUATION: 6/2017
COUNTY: Mecklenburg

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
AB 5	LS 22-23%	0"-5"	Br LS GR	NS NP VFR NEXP		26"		None	0.1+ Drip
		5"-21"	RBr SCL WSBK	SS SP FR SEXP					
		21"-26"	R C SBK	SS SP FR SEXP					
AB 6	LS 22-23%	0"-15"	Br LS/SL GR	NS NP VFR NEXP		24"		None	0.1+ Drip
		15"-21"	Br SCL WSBK	SS SP FR SEXP					
		21"-24"	R C SBK	SS SP FR SEXP					
Pit 1	LS 22-23%	0"-13"	Br SL GR	NS NP VFR NEXP		50"	Few to common saprolite inclusions 13"-50" PS	None	0.25
		13"-50"	R C WSBK	SS SP FI/FR SEXP					
		50"-75"	V L Saprolite M	NS NP VFR NEXP					
Pit 2	LS 22-23%	0"-18"	Br LS GR	NS NP VFR NEXP		65"		None	0.3
		18"-28"	Br SCL WSBK	SS SP FR SEXP					
		28"-65"	R C SBK	SS SP FR SEXP					
Pit 3	LS 22-23%	0"-24"	Br SL GR	NS NP VFR NEXP		41"	PS	None	0.3
		24"-41"	R C SBK	SS SP FR SEXP					
		41"-65"	V L/SL Saprolite M	NS NP VFR NEXP					
Pit 4	LS 22-23%	0"-21"	Br LS GR	NS NP VFR NEXP		38"	PS	None	0.1+ Drip
		21"-38"	RBr SCL WSBK	SS SP FR SEXP					
		38"-60"	V L Saprolite M	NS NP VFR NEXP					
Pit 5	LS 22-23%	0"-11"	Br LS GR	NS NP VFR NEXP	Chr. 2 at 38"	38"		None	0.1+ Drip
		11"-38"	RBr SCL WSBK	SS SP FR SEXP					

COMMENTS: