LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	John & Cynthia Griffin
Address:	14 Primrose Lane Asheville, NC 28805
Phone:	828.242.4920
County:	Iredell
Location:	Bonanza Subdivision Lot 14
Source of Wastewater Flow:	3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	360
System Flow:	25.42

Design Specifications

Drainfield Size:	267
Loading Rate (gpd/ft.^{2}):	0.25
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	**25in. (Requires 4 - 6" of cover over drainfield)**
Trench Width:	24 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	167
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	29.06
Dosing Volume:	149.54
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	2.97
Elevation Head:	13.83
Total Dynamic Head:	21.62
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

Bonanza Subdivision Lot 14
LP PPBPS

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.25
TOTAL AREA TRENCH BOTTOM:	801
TOTAL LATERAL LENGTH:	267
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	240
SUPPLY LINE LENGTH:	167
TOTAL DYNAMIC HEAD:	21.62
MANIFOLD SIZE:	N/A
DOSING VOLUME:	149.54
PUMP TANK DRAW DOWN*:	7.1
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

Bonanza Subdivision Lot 14

Project #: 01-1792

LAYOUT FOR 3 BEDROOM HOME

March 19, 2014

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		0.0			100.00		
INSTR. 1			0.00				
HOUSE CNR					200.90		
P. TANK					196.80		
1	*ORANGE*				*205.63*	*50*	*50*
2	*BLUE*				*205.00*	*40*	*40*
3	*RED*				*204.72*	*45*	*45*
4	*BLUE*				*204.20*	*33*	*33*
5	*ORANGE*				*203.77*	*57*	*57*
6	*RED*				*203.26*	*42*	*42*
7	BLUE				202.60	35	35
8	ORANGE				201.86	39	34
9	RED				201.06	39	34
10	BLUE				200.39	38	34
11	RED				199.51	36	34
12	DARK PINK				198.86	33	33
13	ADDED				NA	32	32
					Total	**519**	**503**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*267*	*.225-0.25*	*MOD.*	*0.225-0.25*	*PPBPS*	*LOW PRESSURE*
Repair (Partial)	236	0.225-0.25	MOD.	0.225-0.25	ACCEPTED	PRESSURE MANIFOLD

Notes:

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings

**Lot recorded October 1963. Repair exempt. 5' Property Line Setback.

LP PPBPS TAPSHEET -BONANZA PARK LOT 14

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*ORANGE*	*205.63*	*50*	0.156	**0.41**	150	12
2	*BLUE*	*205.00*	*40*	0.156	**0.41**	120	9
3	*RED*	*204.72*	*45*	0.156	**0.41**	135	10
4	*BLUE*	*204.20*	*33*	0.156	**0.41**	99	8
5	*ORANGE*	*203.77*	*57*	0.156	**0.41**	171	13
6	*RED*	*203.26*	*42*	0.156	**0.41**	126	10
							62
	total	**feet =**	**267**	**gal/min =**	**25.42**		
			Des. Flow	**360**			
			Pump Run=	**5.88**			
			soil LTAR	**0.25**			
			LTAR +5%	**0.2625**			
			LTAR with mod.	**0.5**			
			LTAR with mod.. + 5%	**0.525**			

.156 equals 5/32 inch hole

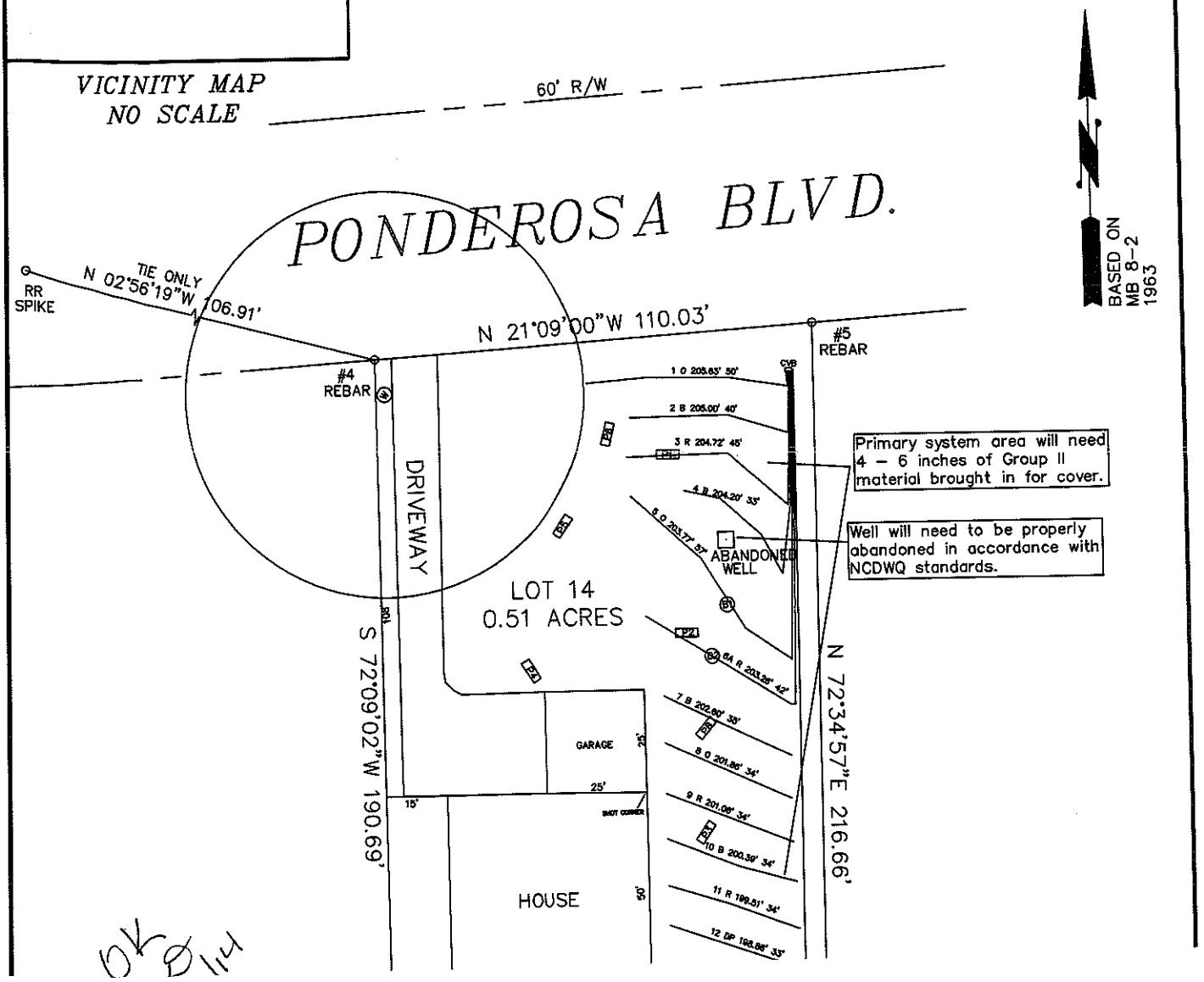
I, RUFUS JACKSON LOVE CERTIFY THAT THIS MAP WAS DRAWN FROM AN ACTUAL SURVEY UNDER MY DIRECT SUPERVISION, THAT THE RATIO OF PRECISION IS 1:10,000+ BEFORE ADJUSTMENTS; AND THAT THE ANGULAR ERROR WAS < 7.5 SECONDS PER TURN.

WITNESS MY HAND AND OFFICIAL SEAL THIS ____ DAY OF _____

N.C.P.L.S. L-2844
LICENSE NO.

PROFESSIONAL LAND SURVEYOR

VICINITY MAP
NO SCALE



BK B 14

CALCULATIONS

Location BONANZA PARK LOT 14

Project Number 01-1792

Lot No: 14

No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.250	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	167	ft.
Supply Line Volume	29.058	gal.
Required Feet of Line	240	ft.
Amount of Line from Layout	267	ft.
Gallons per Minute	25.42	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	62	
Dosing Volume	149.54	gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

Tank Draw Down	7.1	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	13.83	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	2.97	ft.
Total Dynamic Head (+15%)	21.62	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42

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

PROPERTY ID #: 4646 438991
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: John + Cynthia Griffin
ADDRESS: Bonanza Park - Lot 14
PROPOSED FACILITY: 3 PROPOSED DESIGN FLOW (.1949): 360gpd
LOCATION OF SITE: Ponderosa Rd-Mooresville
APPLICATION DATE 4/2/13
DATE EVALUATED: 2/4/13
PROPERTY SIZE: ±.5
PROPERTY RECORDED:

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

OK MF 3/20/14

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L/3%	0-10	B cl gr-wfsbk	Fr SS SP SEXP		49	PS	-	PS 0.25-.275
		10-37	Rc mmsbk	Fr SS SP SEXP					
		37-49	RYcl wmsbk	Fr SS SP SEXP	CS/AP Qz minerals Lithochromic				
		49-62	Var l mass	Fr SS SP SEXP	+cc incl				
2	L/3%	0-14	Bl-cl gr-wfsbk	Fr SS SP SEXP		65	-	-	PS-39 0.25-.225
		14-39	Rc mmsbk	Fr SS P SEXP	+f-c Fe[dep] 30"				
		39-65	Rcl wfsbk	Fr SS P SEXP	C Cha dep Chr 2' @ 39"				
3	L/5%	0-10	Bl-Cl wsbk-gr	Fr SS SP SEXP		62	-	-	PS-44 0.25
		10-19	BRc wmsbk	Fr SS SP SEXP					
		19-44	Rc wfsbk/mlk	F SS P SEXP	+F[Fe] dep few Feldspar Veins				
		44-62	RY-YRc wmsbk/mlk	F SS P SEXP	+F[Fe] dep C. 3rd Chr 2 @ 44"				
	L/3%	0-36	Fill						UN
		36-65	Dredge		+Chr 2's				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
vailable Space (.1945)	PS	Partial
/stem Type(s)	PPBPS	Accepted
te LTAR	0.25	0.225-.25

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: S. Ashley Rollans, LSS
OTHER(S) PRESENT:

MMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: 4646438991
DATE OF EVALUATION: March 2013
COUNTY: Iredell

MD 3/20/14

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
P5	L/6%	0-26	Fill			—	—	—	UN
		26-39	BR c-cl wfsbk	Fr SS SP SEXP	-c[Mn] -f[Fe]depl.				
		39-65	YBr gray Vwmsbk	Fr SS SP SEXP	-Chr 2:				
P6	L/5%	0-13	Fill			—	—	—	UN Unless Fill removed 6" min
		13-22	Bt-cl wmsbk	Fr SS SP SEXP					
		22-47	BRC wmsbk	FSP SEXP	-C[Mn]				
		47-67	YRC wmsbk	FSP SEXP	-f[Fe]depl Chr 2@ 48"				
P7	L/10%	0-23	Bt-cl wfsbk-gr	Fr SS SP SEXP		—	—	—	PS-48 0.25
		23-35	BRc wfsbk	Fr SP SEXP					
		35-48	RBC wmsbk	FSP SEXP	-f[Mn]				
		48-60	RY-YRC vwmsbk	FSS P SEXP	-FC[Fe]depl Chr 2@ 48"				
P8	L/5%	0-11	Bcl wfsbk	Fr SS SP SEXP		52	—	—	PS-40 0.25-.225
		11-40	RBC mmsbk/Abk	FSS SP SEXP	-fC[Fe]depl				
		40-52	RY C wmsbk/Abk	FSS P SEXP	-C[Fe] depl. Chr 2@ 40"				
B1	L/40%	0-10	Bc lgr. wsbk	fr SS SP		48	—	—	@.25-.275
		10-30	RBc wmsbk	Fr SS SP	-f.CSAP				
		30-48	RYa Vwfsbk	Fr SS SP	-CSAP				

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet)

Sheet 3 of 3

EPARTMENT OF ENVIRONMENT
ND NATURAL RESOURCES
IVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: 4646458991
DATE OF EVALUATION: 3/4/19
COUNTY: Iredell

OK MD 3/20/19

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B2	4/6%	0-4	Bsl gr	FrSSSP SEAP	f [Fe] dkpl 26" f [Fe] dkpl. f-c sap	40	—	—	PS 0.25-.275
		4-30	Rcwmsbk	" " " "					
		30-48	R½cl wfsbk	" " " "					

COMMENTS:

IREDELL COUNTY

PO Box 788
349 North Center St.
Statesville, NC 28677

APPLICATION NUMBER
177713
Issue Date: 03/13/2014

Permit Type: AUTHORIZATION CONSTRUCT

Parcel Number	Street Address	Jurisdiction
4646438991.000	156 PONDEROSA CIRCLE	MOORESVILLE

Owner Information	Applicant Information	Contractor Information
Owner: DENIS & MARIE GRAHAM	Applicant: DENIS & MARIE GRAHAM	Contractor: DENIS & MARIE GRAHAM
Address: 156 IREDELL CO, NC 28625	Address: 156 IREDELL CO, NC 28625	Address: 156 IREDELL CO, NC 28625
Phone:	Phone:	Phone: License Type License Number

Project Description

NEW SINGLE FAMILY - IREDELL

Scope of Work

FAST TRACK SEPTIC SYSTEM

Permit Details:

	AUTHORIZATION CONSTRUCT	Amount:	195.00
		Amount:	
		Amount:	
		Amount:	
		Amount:	
		Amount:	
		Amount:	

I hereby certify that all information in this application is correct and all work will comply with the state code and all other applicable state and local laws, ordinances and regulations. The respective department will be notified of any changes in the approved plans, a change of contractor, and/or specifications for the project permitted herein. This application becomes a permit only when validated and approved.

Date: 03/13/2014

Signature of Owner/Contractor

ANY PERMIT ISSUED EXPIRES SIX (6) MONTHS AFTER ISSUANCE IF NO INSPECTIONS HAVE BEEN MADE. ANY PERMIT ISSUED SHALL EXPIRE TWELVE (12) MONTHS AFTER LAST INSPECTION IF THE WORK IS DISCONTINUED.

Permit Number	7874	TOTAL FEES:	$ 195.00

Paid $195.00 3-13-14
Int. Relayout Fast Trk

IREDELL COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION

PAGE 1: *APPLICATION FORM*

Application For:
( ) New Well Permit ( ) Well Repair Permit ( ) Well Abandonment
(✓) Septic Improvement Permit (✓) Authorization to Construct ( ) Existing System Inspection ( ) Septic System Repair

THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS.

Page 2: *Site Plan Worksheet* form MUST accompany this application

The following optional attachments may also be submitted: ( ) Survey Plat, scaled no more than 1 inch = 60 feet
Place an (X) beside whichever is submitted if applicable ( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information:

Applicant Name: Dave Smith **Address:** 887 Mazeppa Road, Mooresville **Phone:** 704 663-4745

Owner Name: Steve John Griffin **Address:** 14 Primrose Lane **Phone:** 828-242-4930

Property Information:

Street Address: 14 Primrose Lane

Subdivision Name: Bonanza Park **Section/Phase:** _____ **Lot Number:** 14

Driving Directions: _____

Site Development Information: *(check or complete ALL that apply)*

(✓) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition

Maximum Number of Bedrooms: 3
Maximum Number of Occupants: _____
( ) Swimming Pool
( ) Other Addition/Structure: _____

(✓) Crawl Space Foundation
( ) Concrete Slab Foundation
( ) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development:
Type of Business: _____
Square Footage of Building: _____
Maximum Number of Employee: _____
Maximum Number of Seats/Beds/Other: _____

Water Supply:

( ) New Well ( ) Existing Well ( ) Community Well ( ) City Water ( ) Other Public Water

Desired Septic System Type: *(you may rank in order of preference)* **Year existing system installed:** _____

( ) No Preference ( ) Alternative ( ) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:

( ) Yes (✓) No Does the site contain any jurisdictional wetlands?
( ) Yes (✓) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (✓) No Is the site subject to approval by any other public agency?

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.

Signature: _____ 3/13/14
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

IREDELL COUNTY HEALTH DEPARTMENT

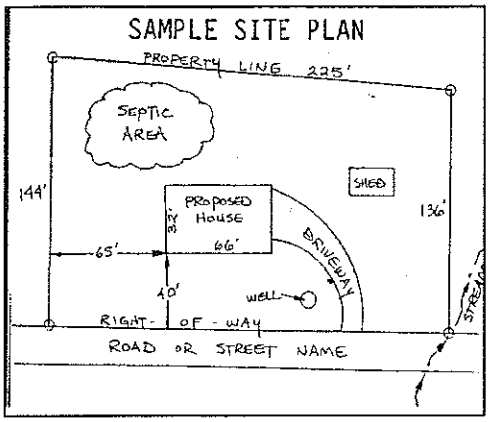
ENVIRONMENTAL HEALTH DIVISION

PAGE 2: ***SITE PLAN WORKSHEET***

SEE THE "SAMPLE SITE PLAN" BELOW. ***INCOMPLETE SITE PLANS WILL BE RETURNED TO YOU FOR COMPLETION AND MAY RESULT IN A DELAY IN THE ISSUANCE OF YOUR SEPTIC SYSTEM PERMIT!!!***

Place an (X) beside each item as you complete the site plan:

- ( ) Property Line measurements are clearly identified
- ( ) All proposed structures are indicated
- ( ) Front and side setbacks from property line
- ( ) Preferred driveway location and well location
- ( ) Area you prefer your septic system to be placed
- ( ) North arrow, or other sufficient indicator of direction



Circle N/A on the following if appropriate:

Location of septic systems and wells within 100' of your property	N/A
Location of easements and rights of ways on your property	N/A
Location of any designated wetlands on the property	N/A

USE THIS SPACE TO DRAW YOUR SITE PLAN

Show: proposed house or business footprint, wells, water lines, patios, pools and decks, and any other item that will occupy space on the site

See attached site plan

Signature: _____ 3/13/14

Property owner or owner's legal representative signature (SIGNATURE REQUIRED) — DATE

Acknowledgement Of Plans Submittal ONLY!

Date 10-11-13

Date 10/11/13

WELL ABANDONMENT RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2609

1. WELL CONTRACTOR:

NEILL PARDUE
Well Contractor (Individual) Name

AIR DRILLING, INC.
Well Contractor Company Name

STREET ADDRESS 176 COMMERCE BLVD

STATESVILLE | NC | 28625
City or Town | State | Zip Code

(704) - 872-7614
Area code - Phone number

2. WELL INFORMATION:

SITE WELL ID # (if applicable) _____

STATE WELL PERMIT # (if applicable) _____

COUNTY WELL PERMIT # (if applicable) _____

DWQ or OTHER PERMIT # (if applicable) _____

WELL USE (Check applicable use): ☐ Monitoring ☑ Residential

☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural

☐ Recovery ☐ Injection ☐ Irrigation

☐ Other (list use) _____

3. WELL LOCATION:

COUNTY IREDELL QUADRANGLE NAME _____

NEAREST TOWN: MOORESVILLE

156 PONDEROSA CL LOT 14

(Street/Road Name, Number, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☐ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other _____

(Check appropriate setting)

LATITUDE 35° 33. 597

LONGITUDE 80° 52. 007

May be in degrees, minutes, seconds, or in a decimal format

Latitude/longitude source: ☐ GPS ☐ Topographic map

(Location of well must be shown on a USGS topo map and attached to this form if not using GPS.)

4a. FACILITY- The name of the business where the well is located. Complete 4a and4b. (If a residential well, skip 4a; complete 4b, well owner information only.)

FACILITY ID #(if applicable) _____

NAME OF FACILITY _____

STREET ADDRESS _____

City or Town | State | Zip Code

4b. CONTACT PERSON/WELL OWNER:

NAME MARIE GRAHAM

STREET ADDRESS P.O. BOX 4706

Mooresville, NC 28117

5. WELL DETAILS:

a. Total Depth: 120 ft. Diameter: 2 in.

b. Water Level (Below Measuring Point): _____ ft.

Measuring point is _____ ft. above land surface.

6. CASING: Length Diameter

a. Casing Depth (if known): N/A ft. _____ in.

b. Casing Removed: N/A ft. _____ in.

7. DISINFECTION: HTH

(Amount of 65%-75% calcium hypochlorite used)

8. SEALING MATERIAL:

Neat Cement

Cement — lb.
Water — gal.

Sand Cement

Cement — lb.
Water — gal.

Bentonite

Bentonite lb.

Type: ☐ Slurry ☐ Pellets

Water _____ gal.

Other

Type material BENTONITE CHIPS

Amount 2

9. EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL:

MIXED AND POURED

10. WELL DIAGRAM: Draw a detailed sketch of the well on the back of this form showing total depth, depth and diameter of screens (if any) remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.

11. DATE WELL ABANDONED 6/26/13

I DO HEREBY CERTIFY THAT THIS WELL WAS ABANDONED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Neill Pardue 6/26/13

SIGNATURE OF CERTIFIED WELL CONTRACTOR **DATE**

_____

SIGNATURE OF PRIVATE WELL OWNER ABANDONING THE WELL **DATE**

(The private well owner must be an individual who personally abandons his/her residential well in accordance with 15A NCAC 2C .0113.)

NEILL PARDUE

PRINTED NAME OF PERSON ABANDONING THE WELL

Submit a copy to the owner and the original to the Division of Water Quality within 30 days.
Attn: Information Management, 1617 Mail Service Center – Raleigh, NC 27699-1617, Phone No. (919) 733-7015 ext 568.

Form GW-30
Rev. 5/06

STATE OF NORTH CAROLINA

INSPECTION AND MAINTENANCE AGREEMENT

THIS AGREEMENT is made and entered into this April 24th, 2014, by and between Marie Dins Graham (hereinafter the "Owner") and Rollans Soil & Environmental Services, PA (hereinafter the "Contractor").

WITNESSETH

WHEREAS, the Owner owns or controls the property upon which a ground absorption sewage treatment system (hereinafter "system" is installed, such system being designated a Type IV system under the rules for Sanitary Sewage collection, Treatment and Disposal found at 15A NC Admin. Code 18A.1900 et seq.; and

WHEREAS, 15A NC Admin Code 18A, 1961 requires a contract to be executed between the system owner and a management entity prior to the issuance of an Operation Permit and said system; and

WHEREAS, 15A NC Admin Code 18A, 1961 requires that a condition of the Operation Permit for said system be that a properly executed contract between the system owner and a management entity shall be in effect for as long as the system is in use; and

WHEREAS, the Contractor is a management entity of a type authorized by 15A NC Admin Code 18A.1961 to manage a Type IV system.

NOW THEREFORE, in consideration of the premises and of the mutual covenants and promises contained in this Agreement, it is hereby agreed by and between the Owner and the Contractor as stipulated below.

1. The Contractor's Obligations. The Contractor shall perform the following services on the Owner's system located at 156 Ponderosa Circle, Mooresville, NC 28117
   A. The Contractor shall inspect the system at least the frequency required in Table V (b) of 15A NC Admin. Code 18A.1961 (b) for a type IV system.
   B. The Contractor shall perform the maintenance procedures in accordance with the conditions of the Operation Permit.
   C. The Contractor shall report the results of its inspections to he local health department at the frequency specified in Table V (b) of 15A NC Admin. Code 18A.1961 (b) for a type IV system.
   D. If an inspection indicates the need for system repairs, the Contractor shall notify the local health department within 48 hours of the inspection.
   E. The Contractor shall notify the Owner of needed repairs that are outside of the scope of routine maintenance described in subparagraph (b) above. The Contractor shall perform necessary repairs to the system at the request of the Owner and shall be entitled to payment and therefore at the Contractor's normal charge for services and materials.
   F. The Contractor shall employ or shall contract with a certified operator(s) if required by Table V (b) of 15A NC Admin. Code 18A.1961 (b) for a type IV system.
   G. The Contractor shall respond to a request for a nonscheduled service or maintenance call within 24 hours after receipt of such request.
2. The Owner's Obligations.
   A. The Owner shall pay to the Contractor the sum of $ 300 per year for periodic inspections, routine maintenance procedures and periodic reports. The annual fee may be amended upon sixty (60) days advance notice to the Owner but may not be increased more than 20 percent per year. The owner shall pay to the Contractor his normal and customary fees for any work performed on the system as a result of nonscheduled service or maintenance calls. All fees are due and payable within thirty (30) days of billing. Payments due to the Contractor and unpaid by the Owner after thirty (30) days shall accrue interest from the due date until paid at a rate of 1 ½ percent per month.

B. Within 5 days or receipt of notice of needed repairs pursuant to paragraph 1.e. above, the Owner shall request the Contractor to complete needed repairs or shall provide to the Contractor evidence that the needed repairs were satisfactorily completed by another entity.

C. The Owner shall provide the Contractor with such access to the system as is reasonably necessary for the Contractor to comply with the terms of this Agreement.

3. Terms. This Agreement shall remain in effect until terminated.

A. Automatic Termination.
This agreement shall automatically terminate if the Operation Permit for the system is revoked and all appeals of the revocation are exhausted or time for making an appeal has passed.

B. Termination by Mutual Consent.
The Parties may mutually agree to terminate this Agreement by giving written notice or termination by mutual consent to the local health department thirty (30) days in advance of the date of termination.

C. Termination by Owner.
The Owner may terminate this agreement by giving notice to the Contractor and to the local health department thirty (30) days in advance of the date of termination.

D. Termination by Contractor.
(1) The Contractor may terminate the Agreement for cause by giving written notice of intent to terminate this Agreement to the Owner and to the local health department thirty (30) days in advance of the date of termination.
Cause shall be defined as:

(a) Failure to remit payment for any bill for services performed under and in accordance with the Agreement if said bill is not paid within thirty (30) days of receipt of termination is given but prior to the date of termination of this Agreement, the Agreement shall continue in effect; or

(b) Failure of the Owner to provide to the Contractor authorization to complete needed repairs or satisfactory evidence that needed repairs to the system were completed by another entity within 5 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above. If said authorization to complete needed repairs or evidence of completion said repairs is provided after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect; or

(c) Failure of the Owner to allow the Contractor such access to the system as is reasonably necessary in order for the Contractor to comply with the terms of this Agreement.

(2) The Contractor may not terminate this Agreement without cause, but may assign its rights and duties under this Agreement as provided in paragraph 4 below.

4. Assignments.

A. Assignment by the Owner. The Owner shall notify the Contractor of the name and addresses of any purchases of the property on which the system is located. The owner shall also notify any purchaser of the property on which the system is located of the existence of this Agreement and shall assign all rights and duties under this Agreement to said purchaser.

B. Assignment by the Contractor. The Contractor may assign its rights and duties under this agreement to another management entity, which is qualified pursuant to 15A NC Admin. Code 18A.1961, to manage a Type IV system upon thirty (30) days written notice to the Owner and to the local health department.

5. Use of Subcontractors. The Contractor may subcontract with such manufacturers, suppliers, and contractors, as it deems desirable to perform any of the Contractor's duties under this Agreement.

6. Representations. The Parties represent to each other that each has the power, authority, and legal right to enter into and perform its obligations as set forth in this Agreement.

7. Regulatory Amendments. References in this Agreement to sections of the Administrative Code shall include such rules as they may be amended in the future.

8. No Implied Waiver. The waiver by either Party of a default or breach by other Party of any provision of this Agreement shall not operate or be construed to operate as a waiver of any subsequent default or breach. The failure at any time of either Party to enforce any provision of this Agreement (a) shall not be construed to be a waiver of such provisions, or of any other provision; and (b) shall not in any way affect the validity of this Agreement, or any part of this Agreement, or the right of either Party thereafter to enforce each and every provision of this Agreement.

9. Notice. Every notice required under this Agreement shall be in writing and shall be deemed sufficiently given if delivered in person or sent by certified or registered mail, return receipt requested, postage prepaid to the Party to be notified and addressed as follows:

To the Owner * Marie & Dinis Graham
156 Ponderosa Circle, Mooresville NC 28117

To the Contractor Rollans Soil & Environmental Services, PA
P.O. Box 832 Mooresville NC 28115

To the Local Health Department * Iredell County Health Dept.
610 E. Center Avenue, Mooresville NC 28115

The date of any Notice shall be the date of personal delivery or the date shown on the return receipt as the date of delivery or attempted delivery, as the case may be. Changes in the respective addresses to which notice may be directed may be made from time to time by either Party by notice to the other party.

10. Place of Agreement. This Agreement and any question concerning its validity, construction or performance shall be governed by the laws of the State of North Carolina, notwithstanding the place of execution, or the order in which the signatures of the Parties are affixed.

11. Entire Agreement and Amendment. This Agreement supersedes all prior negotiations, agreements and understandings between the Parties with respect to the subject matter hereof and constitutes the entire Agreement between the Parties with respect to the subject matter hereof. To be effective, an amendment or modification to this agreement must be in writing and must be signed by the Parties.

12. Severability. In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal, or unenforceable in any respect, the Parties shall negotiate in good faith and agree to such amendments, modifications or supplements of or to this Agreement or such other appropriate actions as shall, to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected in this Agreement, and the other provisions of this Agreement shall, as so amended, modified, supplemented or otherwise affected by such action, remain in full force and effect.

IN TESTIMONY WHEREOF, the Parties hereto have executed this Agreement in duplicate originals, one of which is retained by each of the parties, the day and year first above written.

Maintenance operation contract with Rollans Soil & Env. Services PA certified operator) must run for minimum 12 month period. After 12 months, contract may be terminated by 30 days written notice by either party.

* _____ Owner

* _____ Contractor

(Attest)

_____

(Attest)