IREDELL COUNTY HEALTH DEPARTMENT

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # 236504

SEPTIC IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4676607844

APPLICANT/OWNER: Brawley Woods LLC/Nest Homes APPLICANT ADDRESS: 114 Morlake Dr Suite 103 Mooresville, NC

SITE ADDRESS: 144 Brawley Woods Ln. Mooresville, NC 28115 PHONE: 980-500-1239 ALT. PHONE 704-746-5046

SITE DIRECTIONS: NC 3S → Lon Williford → Ron Linwood → L on Brawley Woods → lot on R SAP CONTROLLED: ☐ YES ☑ NO

SUBDIVISION: Brawley Woods SECTION: 2 LOT # 17 LOT AREA: 1.07ac DESIGN FLOW: 480gpd L.T.A.R.: .3 (.3 repair)

Septic Tank 1000 (gal) STB 825 Date 8-20-18
Pump Tank (gal) PT Date
Pump Make Model Serial #
Nitrification Fields 1 # Lines 3 Linear Ft 400'
Trench Width 36" Trench Bottom Depth(Low side) 25"/30" highside Gravel Depth —

☑ New System ☐ Repair ☐ Expansion System Type: I II III IV V VI
System Description: 25% reduction
Repair System Description: 25% reduction
Maintenance Agreement Required: ☐ YES ☑ NO
☑ GRAVITY ☐ PRESSURE

☑ Residence ☐ Business ☐ Other ☐ Slab ☐ Basement w/plumbing ☐ Basement w/o plumbing
No. Bedrooms 4 No. Persons 8 No. Employees
☑ Crawl Space

Water Supply: ☑ Private ☐ Public ☐ Community

Comments / Conditions:

INITIAL SITE SKETCH

See attached site plan by Soil + Forestry Services of the Carolinas, PA

AS BUILT SKETCH

Installed as shown

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** *with plat valid without expiration.* ☑ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☑ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Date:

IMPROVEMENT PERMIT by: Kayla Wilson Date: 6-22-18

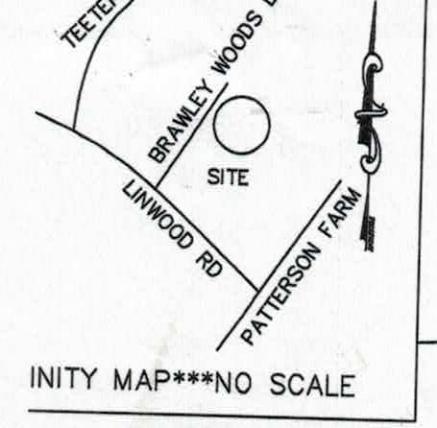
AUTHORIZATION TO CONSTRUCT by: Kayla Wilson Date: 6-26-18

Installed by: Kevin w/ Rowan Septic

OPERATION PERMIT by: Kayla Wilson Date: 10-4-18

Existing System Inspected by: Date:

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inpsector to confirm your inspection time.



INITY MAP***NO SCALE

1" = 50'

N38°09'53"E
42.81'

S49°40'40"W
83.36'

35' REAR SETBACK

LOT 17
1.07 AC.

15' SIDE SETBACK

15' SIDE SETBACK

350.23

S49°23'49"E

N48°47'14"W

S48°47'14"E
356.79'

350.97

LOT 16

LOT 18

8 Y 146'

7 O 189'

6 R 184'

5 P 160'

4 B 130' (128')

3 Y 118' (116')

2 O 87'

1 R 78'

154'

19'

deck

ST

37.9

38.0

PROPOSED
HOUSE 38'

MARQUETTE
ELEV. A

65'

35' FRONT
SETBACK

50.0

PROPOSED
DRIVE

S38°11'24"W
109.53

S48°25'51"W
126.00'

BRAWLEY WOODS LANE
(50' PUBLIC R\W)

APPROVED JUN 22 2018
KW

LEGEND

P.P. = POWER POLE
POWER TRANS.
EXISTING IRON FOUND
#4 REBAR SET
RIGHT-OF-WAY
COMPUTED POINT

NOTES

1) THIS PROPERTY MAY BE SUBJ TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) UNDERGROUND POWER
4) NO GRID MONUMENT FOUND W 2000 FEET.

Soil & Forestry Services of the Carolinas, PA.

P.O. Box 832 Mooresville, NC 28115 Phone: (704) 658-1723 Fax: (704) 278-0989

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
Email: rollans.ashley@yahoo.com

Attached is a proposed design for a gravity Accepted System for a 4 bedroom single family residence on Lot 17, Brawley Woods Subdivision (PIN 4676607844), Iredell County, North Carolina.

Contents:

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9/12/18

June 12, 2018
Project #: 18-0056
Design By: Soil & Forestry Services of the Carolinas, PA

INFORMATION FOR THE INSTALLER:

The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.

- Tanks shall be approved by NC DHHS, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as a gravity Accepted System (25% Reduction) installation.
- Repair is specified as a gravity Accepted System (25% Reduction) installation.
-

GRAVITY ACCEPTED SYSTEM FOR WASTEWATER TREATMENT

Applicant: Soil & Forestry Services

Address: P.O. Box 832
Mooresville, NC 28115

Phone: 704.746.5046

County: Iredell

Location: 144 Brawley Woods Lane
Mooresville, NC 28115

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Gallons Per Day Flow: 480

System Flow: N/A

Design Specifications

Drainfield Size: 400

Loading Rate (gpd/ft.^{2}): 0.3

Depth of Gravel in Trench: N/A

Gravel Size: N/A

Max.Trench Depth: 30 in. Repair Trench Bottom 30 in.

Trench Width: 36 in.

Septic Tank Size: 1000

Estimated Supply Line Length: 5

Supply Line Diameter: 4 in. SCH 40 PVC

Supply Line Volume: 3.27

Dosing Volume: N/A

Supply Manifold: N/A

Supply Manifold Length: N/A

Supply Manifold Volume: N/A

Recommended Float Controls: N/A

Recommended Control Panel: N/A

Pressure Head: N/A

Friction Head: N/A

Elevation Head: N/A

Total Dynamic Head: N/A

APPROVED JUN 2 2 2018
KW

Threaded Union: N/A

Gate Valves: N/A

Check Valves: N/A

Anti-Siphon Hole: N/A

Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

144 Brawley Woods Lane

ACCEPTED SYSTEM

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	5
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1000

Layout Specifications - 144 Brawley Woods Lane

Project #: 18-0056

LAYOUT FOR 4 BEDROOM HOME

June 12, 2018

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
1	RED					78	78
2	ORANGE					87	87
3	***YELLOW***					*118*	*116*
4	***BLUE***					*130*	*128*
5	***PINK***					*160*	*156*
6	RED					184	184
7	ORANGE					189	189
8	YELLOW					146	146
					Total	1092	1084

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*400*	*0.300*	*ACCEPT.*	*0.300*	*25% RED*	*GRAVITY*
Repair	684	0.300	ACCEPT.	0.300	25% RED	GRAVITY

Notes: **All measures in feet

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

****HOUSE LOCATED VIA SURVEYOR.**

CALCULATIONS

Location 144 Brawley Woods Lane
Mooresville NC,28115
Project Number 18-0056

Lot No: 17 Brawley Woods

No. of Bedrooms 4

Design Flow 480 $^{gal}/_{day}$

LTAR 0.300 $^{gal}/_{ft^2\ day}$

PPBPS? (YES OR NO) NO

Supply Line Length 5 ft.

Supply Line Volume 3.265 gal.

Required Feet of Line 400 ft.
Amount of Line from Layout 400 ft.

Gallons per Minute N/A $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Septic Tank Size 1000 gal.

Panel Volume N/A gal.
# of Panels N/A
Dosing Volume N/A gal.

Tank Draw Down N/A

Pump Run Time

Elevation Head N/A ft.
Pressure Head N/A ft.
Friction Factor N/A ft./100 ft. *(From the interpolater.)*
Friction Head N/A ft.

Total Dynamic Head (+15%) N/A 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

APPROVED JUN 22 2018
KW

PROPERTY ID #: 4670017844
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: Brawley Woods, LLC
ADDRESS: 114 Morlake Dr Suite 103 Mooresville NC 28117
APPLICATION DATE: June 2018
PROPOSED FACILITY: 4BR
PROPOSED DESIGN FLOW (.1949): 480 gpd
DATE EVALUATED: 6/11/18
LOCATION OF SITE: 144 Brawley Woods Lane, Mooresville NC 28115
PROPERTY SIZE: 1.07ac
PROPERTY RECORDED: Y/S
WATER SUPPLY: ☑ Private ☐ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☑ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B1	L/6%	0-8	B sl wfgr	Frsssp SEKP		48	-	-	PS 0.3
		8-14	RBcl wfsbk	" " " "					
		14-48	BRcwmsbk	" " " "					
B2	L/12%	0-6	B l wfgr	Frsssp SEKP		18	-	-	PS 0.3
		6-33	RCwmsbk	" " " "					
		33-48	RBcl wfsbk	" " " "	- f.sap				
B3	L/20%	0-4	B l wfgr	Frsssp SEKP		48	-	-	PS 0.3
		4-12	RBcl wmsbk	" " " "					
		12-27	Rcwmsbk	" " " "					
		27-48	RBcl wmsbk	" " " "	- Csap				
B4	L/7%	0-6	B l mfgr	Frsssp SEKP		48	-	-	PS 0.3
		6-12	RBcl wfsbk	" " " "					
		12-36	BRcwmsbk	" " " "					
		36-48	Rcwmsbk	" " " "					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	Accepted	Accepted
Site LTAR	0.3	0.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: S. Ashley Rollans; J. Wendell Overby
OTHER(S) PRESENT:

COMMENTS:

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

Sheet 1 of 1
PROPERTY ID #: 4676607844
COUNTY: Iredell

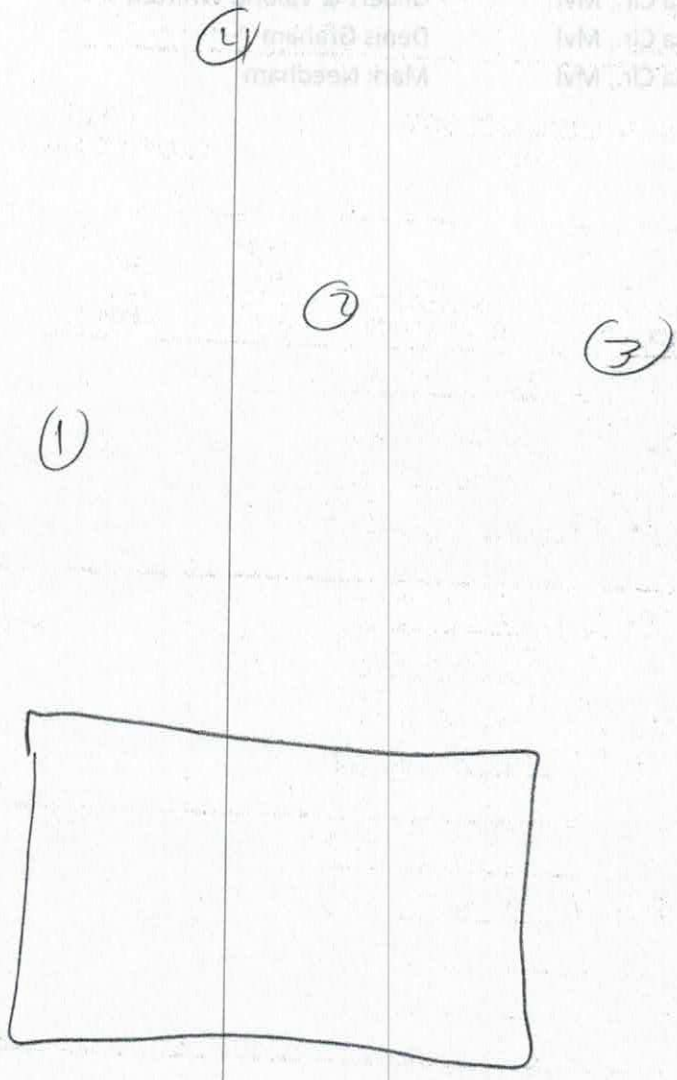
SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: Brawley Woods LLC
ADDRESS: 1414 Brawley Woods Ln.
PROPOSED FACILITY: SFR
PROPOSED DESIGN FLOW (.1949): 480gpd
LOCATION OF SITE: NC 35 → L on Williford → R on Linwood → L on Brawley Woods → 1st on R
APPLICATION DATE: 6-12-18
DATE EVALUATED: 6-22-18
PROPERTY SIZE: 1.07ac
PROPERTY RECORDED: YES
WATER SUPPLY: ☒ Private ☐ Public ☑ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☑ Sewage ☐ Industrial Process ☐ Mixed

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	8% LS	0-12	WSBK SCL	Fi,SS,SP,SE	—	72	SO-72 few SAP inc		PS .3
		12-35	SBK C	Fr,SS,SP,SE					
		35-50	ABK C	Fi,SS,SP,SE					
		50-72	WABK CL	Fr-Fi,SS,SP,SE					
2	10% LS	0-11	WSBK SCL	Fr,SS,SP,SE	—	61	40-61 few SAP inc		PS .3
		11-31	SBK C	Fr,SS,SP,SE					
		31-40	ABK C	Fi,SS,SP,SE					
		40-61	WSBK CL	Fr,SS,SP,SE					
3	12% LS	0-37	ABK C	Fr-Fi,SS,SP,SE	—	64	37-64 few SAP inc.		PS .3
		37-64	WABK CL	Fr-Fi,SS,SP,SE					
4	19% LS	0-8	WSBK SCL	Fr,SS,SP,SE	—	61	33-61 few-com SAP inc		PS .3
		8-22	SBK C	Fr,SS,SP,SE					
		22-33	ABK C	Fi,SS,SP,SE					
		33-61	WSBK CL	Fr,SS,SP,SE					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	III	III
Site LTAR	.3	.3

OTHER FACTORS (.1946): PS
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Kayla Wilson
OTHER(S) PRESENT:


4
2
3
1

Call Ashley prior to visit

PD: $350.00

IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

APPLICATION FORM

Application For: ( ) New Well Permit ( ) Well Repair Permit ( ) Well Abandonment
(X) 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: (X) 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: (PRINT CLEARLY)

Applicant Name: Nest Homes c/o Soil & Forestry Svcs **Address:** 236 Raceway Drive Suite 7 Mooresville **Zip:** 28117

Applicant Email: ashleyrollans@gmail.com **Phone:** 980-500-1239 **Alt. Phone:** 704 746 5046

Owner Name: Brawley Woods LLC **Address:** 114 Morlake Dr Suite 103 Mooresville **Zip:** 28117

Owner Email: _____ **Phone:** _____ **Alt. Phone:** _____

Property Information:

Street Address: 144 Brawley woods ln

Subdivision Name: Brawley Woods **Section/Phase:** P2 **Lot Number:** 17

Driving Directions: _____

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

(X) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition
( ) Repair to failing septic system ___ Tank ___ Drain lines Describe Problem: _____

Maximum Number of Bedrooms: 4
Maximum Number of Occupants: 8
( ) Swimming Pool
( ) Other Addition/Structure: _____

CHECK FOUNDATION TYPE
(X) Crawl Space Foundation
( ) Concrete Slab Foundation
( ) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development: Type of Business: _____
Square Footage of Building: _____ Max. Number of Employees: _____ Max. Number of Seats/Beds/Other: _____

Water Supply: ( ) Replacement Well – Reason: _____
( ) Multi-connection Well Number of Houses: _____ Number of Persons: _____

(X) 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 (X) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:
( ) Yes (X) No Does the site contain any jurisdictional wetlands?
( ) Yes (X) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (X) 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: _____ 6/12/18
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

Public Health
Prevent. Promote. Protect.
Iredell County Health Department

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative:

Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship

In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:

Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form.

If there are multiple property owners, then all property owners must sign the form that designates a legal representative.

By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

I, Nick Maxwell, Manager of Brawley Woods LLC, am the legal owner(s) of the property located at 144 Brawley Woods Lane Mooresville NC 28115, identified as PIN (Parcel Identification Number) 4676607844, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Samuel Ashley Rollans Rollans Soil & Environmental Services, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

Signature of Owner(s) Date 6/13/18

Manager Brawley Woods, LLC

Signature of Witness Date 6/13/18

Please return this signed form to the appropriate office:

Mooresville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
adrienne.shea@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677