IREDELL COUNTY HEALTH DEPARTMENT

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # 22327-1

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

PIN # 4676-60-3551

APPLICANT: IQ Custom Cont. / CS & SC APPLICANT ADDRESS: PO Box 1703 Mooresville NC 28115

SITE ADDRESS: 118 Brawley Woods Ln. - Mrsvl 28115 PHONE: 704 202 5791 ALT. PHONE:

SITE DIRECTIONS: HWY 152, TR Linwood, past Teeter, TL on Brawley Woods Dr (New), 3rd lot on R

SUBDIVISION: Brawley Woods SECTION: 2 LOT # 21 LOT AREA: 1.094 acres DESIGN FLOW: 480 gpd L.T.A.R.: 0.25

Septic Tank 1000 (gal) STB 875 Date 9-20-18

Pump Tank (gal) PT Date

Pump Make Model Serial #

Nitrification Fields # Lines 5 Linear Ft: 480 ft

Trench Width 36" Max. Trench Bottom Depth 36" lowside Gravel Depth

[X] New System [ ] Repair [ ] Expansion System Type: I II (III) IV V VI

System Description: 25% red

Repair System Description: DPBPS

Maintenance Agreement Required: [ ] YES [X] NO

[X] GRAVITY [ ] PRESSURE

[X] Residence No. Bedrooms 4

[ ] Business No. Persons 8

[ ] Other No. Employees

[X] Slab [ ] Crawl Space

[ ] Basement w/plumbing [ ] Basement w/o plumbing

Water Supply: [X] Private [ ] Public [ ] Community

Comments / Conditions:

INITIAL SITE SKETCH

SEE PLAN FROM CS & SC

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**

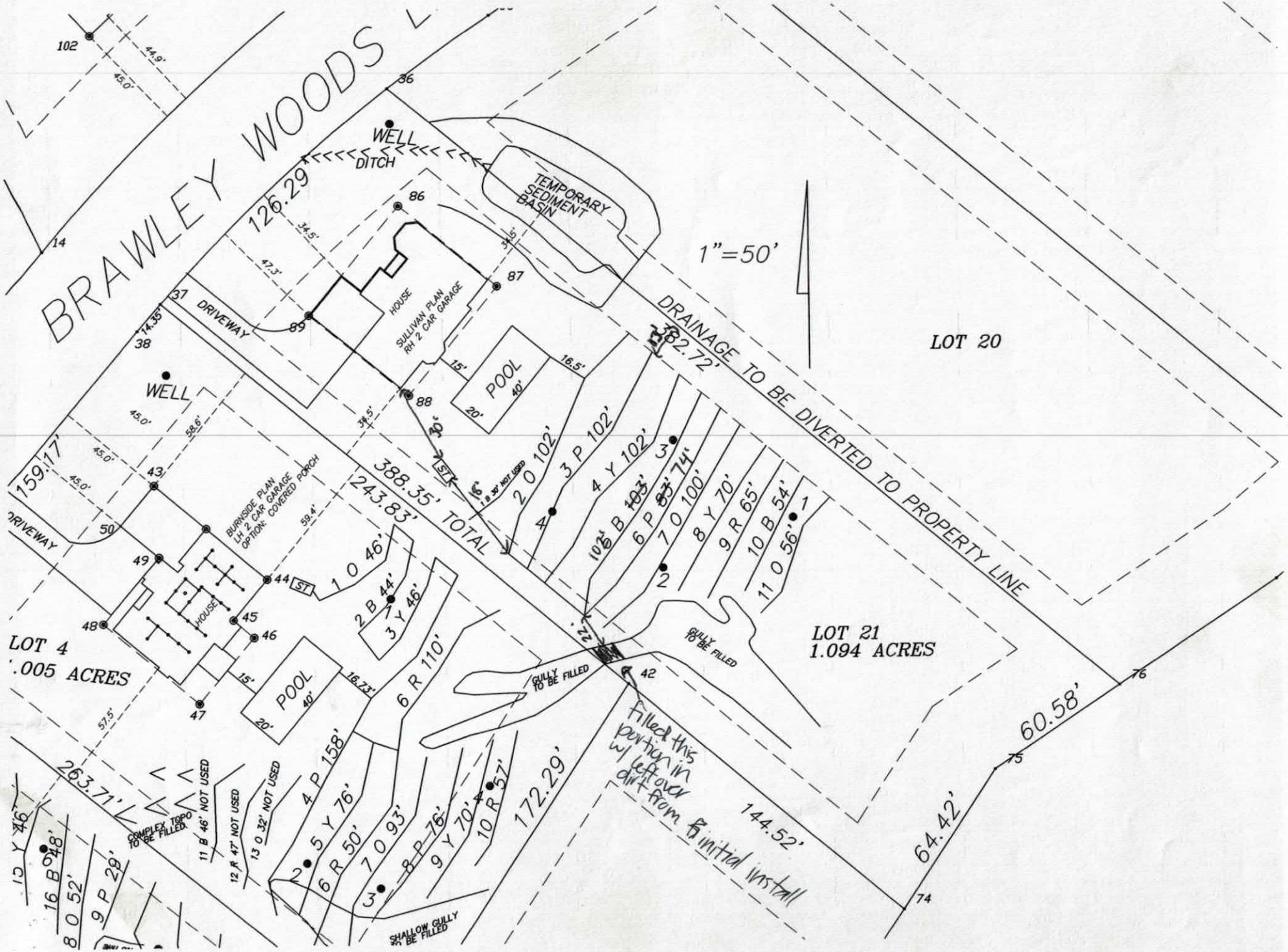
[ ] **IMPROVEMENT PERMIT** *with plat valid without expiration.* [X] **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* [X] **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Date: 2-24-17 Installed by: Kevin w/ Rowan Septic

IMPROVEMENT PERMIT by: Date: 1-3-17 OPERATION PERMIT by: Kayla Watson Date: 10-30-18

AUTHORIZATION TO CONSTRUCT by: Date: 2-13-17 Existing System Inspected by: Date:

Health Dept. Copy - WHITE Applicant (Final Approval) - YELLOW Applicant (Conditional Approval) - PINK


BRAWLEY WOODS L
1"=50'
WELL
DITCH
TEMPORARY SEDIMENT BASIN
126.29'
HOUSE
SULLIVAN PLAN RH 2 CAR GARAGE
DRIVEWAY
POOL
40'
20'
15'
16.5'
WELL
DRAINAGE TO BE DIVERTED TO PROPERTY LINE
LOT 20
382.72'
2 O 102'
3 P 102'
4 Y 102'
6 P 74'
7 O 100'
8 Y 70'
9 R 65'
10 B 54'
11 O 56'
388.35' TOTAL
243.83'
159.17'
BURNSIDE PLAN LH 2 CAR GARAGE OPTION COVERED PORCH
1 O 46'
2 B 44'
3 Y 46'
6 R 110'
LOT 4
.005 ACRES
LOT 21
1.094 ACRES
GULLY TO BE FILLED
SHALLOW GULLY TO BE FILLED
COMPLEX TOPO TO BE FILLED
4 P 158'
5 Y 76'
6 R 50'
7 O 93'
8 P 76'
9 Y 70'
10 R 57'
172.29'
144.52'
64.42'
60.58'
263.71'
filled this portion in w/ left over dirt from initial install

Carolina Soil & Septic Consulting, PLLC

P.O. Box 1703, Mooresville, NC 28115

Phone: (704) 202-5791 Email: adrianpruett@yahoo.com

NC Licensed Soil Scientist, SC Professional Soil Classifier,
Certified Septic System Operator, Licensed Septic Installer,
Certified Septic Inspector

**Proposed Design for a 25% Reduction Septic System
using Gravity distribution for a 4 bedroom single family residence
on Lot 21 of Brawley Woods Subdivision, in
Mooresville, Iredell County, North Carolina.**

Contents: **Page**

Information for the Installer---------- 1

Design Information
Design Specifications---------- 2
Layout Specifications---------- 3

Site Plan/System Plan---------- 4

Dosing Calculations---------- 5

Soil Profile Descriptions---------- 6

November 14, 2016
Job #: 2016-068
Design By: Adrian L. Pruett



INFORMATION FOR INSTALLER:

- The permit should be read very carefully prior to submitting bid. 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.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- The installer is responsible for final grades and returning that grade to original, with exception of added structural features.
- The supply trench shall be compacted to eliminate any 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 has no more than 1/4"fall in 10 feet with no high or low areas within. If high or low areas do exist after trench excavation, high areas should be removed rather than filling in low areas. Do not over excavate trenches! Any fine grading should be completed by hand with a rake and shovel, leaving no loose material.
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral to prevent unwanted lateral water movement.
- Elevations at pin flag locations should be checked by the installer prior to beginning trenches to insure accuracy.
- If septic tank risers are used they should be a minimum of 6" above finished grade or within 6" of final grade if buried.
- Design precludes use of foundation drains on the residence.
- System is specified as an Accepted 25% Reduction Gravity installation.
- Repair is specified as Low Pressure PPBPS installation.
- Trench width is specified as 36" wide, rake and lime all trench sidewalls
- **If grading for slab foundation is utilized do not grade/create greater than 2 ft of elevation difference within 15 ft of any component of the septic or repair. If back filling do not backfill over any initial or repair septic line.**

OWNER INFORMATION

Owner:	Brawley Woods LLC
Address:	114 Morlake Dr., Suite 103 Mooresville, NC 28117
Client:	IQ Custom Construction
Address:	840 Edmiston Rd Mt. Ulla, NC 28125
Contact:	Bobby Robinson
Phone:	980-297-2329
County:	Iredell
Location:	BRAWLEY WOODS SUBDIVISION, LOT 21
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	NA

25% GRAVITY DESIGN INFORMATION

Drainfield Design Flow (gpd):	480
Loading/Soil Application Rate (gpd/ft.^{2}):	0.250
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Total Lateral Length From Layout:	480
Total Lateral Length Required:	480
Trench Depth:	36 in. Lowside
Trench Width:	36 in.
TOTAL AREA TRENCH BOTTOM:	1440
Trench Spacing on Center:	9 ft.
Repair Trench Width:	9 ft.
Repair Trench Depth:	32 in. Lowside
Septic Tank Size:	1000 gal.
Estimated Supply Line Length:	39
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	14.04
Dosing Volume:	NA
Supply Manifold:	SERIAL DISTRIBUTION
Additional Comments:	Soil suitability was performed by CS&SC

BRAWLEY WOODS SUBDIVISION, LOT 21
FIELD LAYOUT SPECIFICATIONS

LAYOUT FOR 4 BEDROOM RESIDENCE

LINE #	FLAG COLOR	FS	ELEVATION	FLAGGED LINE LENGTH	############## DESIGN LINE LENGTH
TBM			NA		
HOUSE CRN		NA	NA		
P. TANK		NA	NA		
1	BLUE	NA	NA	30	NOT USED
2	***ORANGE***	***NA***	***NA***	***102***	***100***
3	***PINK***	***NA***	***NA***	***102***	***100***
4	***YELLOW***	***NA***	***NA***	***102***	***100***
5	***BLUE***	***NA***	***NA***	***103***	***100***
6	***PINK***	***NA***	***NA***	***83***	***80***
7	ORANGE	NA	NA	100	100
8	YELLOW	NA	NA	70	70
9	RED	NA	NA	65	65
10	BLUE	NA	NA	54	54
11	ORANGE	NA	NA	56	56
			Total	**867**	**825**

	LINE LENGTH	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
System	***480***	***ACCEPT.***	***0.250***	***25% RED.***	***GRAVITY***
Repair	345	*MOD.*	0.250	PPBPS	LOW PRESSURE

Notes: ** TBM Is Not Required.
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags

Comments: **Medium/large gully along right property line to be filled.**
Drainage from temporary sediment basin to be diverted down lot 21/20 property line.
Proposed house staked by surveyor.
Pool flagged in double yellow pin flags.
Iredell County has CS&SC's permission to change septic tank location and distribution type

DOSING CALCULATIONS

Location BRAWLEY WOODS
Lot No: 21
Address:

No. of Bedrooms	4
Design Flow	480 $^{gal}/_{day}$
LTAR	0.250 $^{gal}/_{ft^2\ day}$
25% RED. Expansion? (YES OR NO)	YES
Supply Line Length	39 ft.
Supply Line Volume	14.04 gal.
Required Feet of 25% RED. Line	480 ft.
Amount of Line from Layout	480 ft.
Gallons per Minute	NA $^{gal}/_{min}$
Septic Tank Capacity	1000 gal.
Minimum Septic Tank Capacity	1000 gal.
Lateral Line Volume	313.44 gal.

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

Sheet 1 of 1
PROPERTY ID #:
COUNTY: Iredell

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

OWNER: Brawley Woods LLC — APPLICATION DATE
ADDRESS: 114 Morlake Dr. Mooresville NC 28117 — DATE EVALUATED: 11-9-16
PROPOSED FACILITY: 4 Brm — PROPOSED DESIGN FLOW (.1949): 480 gpd — PROPERTY SIZE: 1.094 ac
LOCATION OF SITE: Brawley Woods Ln, Mooresville Brawley Woods Lot 21 — PROPERTY RECORDED: NO
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
B 1	LSS 5%	0-12	RB scl gr	FrSSSPSExP	few Mn	36"	PS	—	PS .25
		12-29	RCmFSBk/ABk	FrSSSPSExP	few/com YB, few/com Y		minerals		
		29-36	RCLWFSBk/ABk	FrSSSPSExP	few clay films, few cap, few YB, com RCL mott. few RC veins				
		36-48	VarSLSapR	FrSSSPSExP					
B 2	LSS 5%	0-10	BRCLWFSBk	FrSSSPSExP	few Mn	48"	—	—	PS .25
		10-28	RCMFABk/SBk	FrSSSPSExP	few yellow minerals, few YB				
		28-48	YRCLWFSBk	FrSSSPSExP	few/com cap				
B 3	LSS 6%	0-12	RB SCLWFSBk	FrSSSPSExP	few YB @ 12-20 few/com yellow mineral/cap	48"	—	—	PS .25 >20" .3 >20"
		12-32	RCMFABk	FrSPSExP					
		32-48	YRCLWFSBk	FrSSSPSExP	com cap				
B 4	LSS 10%	0-15	RCMFABk	FrSPSExP	few/com Y cap	48"	—	—	PS .3 >15"
		15-24	RCLWFSBk	FrSSSPSExP	few/com cap				
		24-48	YRCLWFSBk	FrSSSPSExP	com cap				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	Gravity 25%	LP PPBPS
Site LTAR	0.25	0.25

OTHER FACTORS (.1946): None
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: CS & SC
OTHER(S) PRESENT: None

COMMENTS:

RECEIVED NOV 17 2016

IREDELL COUNTY HEALTH DEPARTMENT *ENVIRONMENTAL HEALTH DIVISION*

(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)

#223221

1. APPLICATION FOR: ✓ **Improvement Permit** ___ **Authorization To Construct** ___ **Existing System Inspection**

Paid $350.00

2. 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 check ( ) beside whichever is submitted if applicable ✓ **Custom Site Plan, Scaled no more than 1 Inch = 60 Feet**

3. Applicant Information:

Applicant Name	Mailing Address	Home Phone #	Alternate Phone #
IG Custom Const./CS&SC	PO Box 1703, Mooresville NC 28115	704-202-5791	
Owner Name	**Mailing Address**	**Home Phone #**	**Alternate Phone #**
Brawley Woods LLC	114 Barkley Dr, Suite 103, Mooresville NC 28117		

4. Property Information:

Street Address	Subdivision Name	Section/Phase and Lot Number
118 Brawley Woods Ln	Brawley Woods	21

Driving Directions: Hwy 152/main st, TR on Linwood, past Teeter, TL on Brawley Woods Dr (new Rd), Third lot on R

5. RESIDENTIAL Site Development Information: *(Check or Complete ALL that apply)*

- (✓) New, Single Family Residence
- ( ) New, Multi-Family Residence
- ( ) Expansion of Existing Septic System
- ( ) Repair To Failing Septic System due to _____
- ( ) Other _____

Maximum Number of Bedrooms 4
Maximum Number of Occupants 8
If Expansion, Current Number of Bedrooms ___

- ( ) Crawl Space Foundation?
- (✓) Concrete Slab Foundation?
- ( ) Basement w/Plumbing?
- ( ) Basement w/out Plumbing?

IF Non-Residential Site Development:
Type of Business _____
Square Footage of Building _____
Maximum Number of Employees _____
Maximum Number of Seats _____

6. Proposed Water Supply:

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

7. Desired Septic System Type: *(You may rank in order of preference, if any)* ( ) **EXISTING SYSTEM installed** _____ *Year*

(✓) Alternative ( ) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other_____

8. Please Answer The Following ( ) Yes (✓) No Does the site contain any jurisdictional wetlands?
To The Best of Your Ability: ( ) Yes (✓) No Is any non-domestic sewage (i.e. industry) 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.

9. Signature: _____ 11-15-16
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

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, Brantley Woods, LLC by Joel Patterson, am the legal owner(s) of the property located at Linwood Road, Mooresville, identified as PIN (Parcel Identification Number) LOT 21 located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Adrian Pruett, Carolina Soil & Septic Consulting, 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.

Brantley Woods LLC by Joel Patterson, Member — 10/28/16
Signature of Owner(s) Date

Signature of Witness — 10/28/16
Signature of Witness Date

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

IREDELL COUNTY HEALTH DEPARTMENT *ENVIRONMENTAL HEALTH DIVISION*:

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…**

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

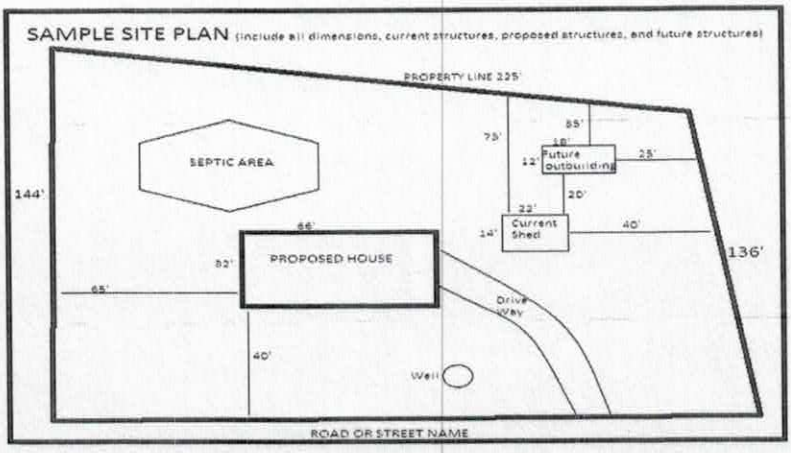
__✓__ **Front and side setbacks from property line…** __✓__ **Preferred driveway location and configuration, preferred well location…**

__✓__ **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

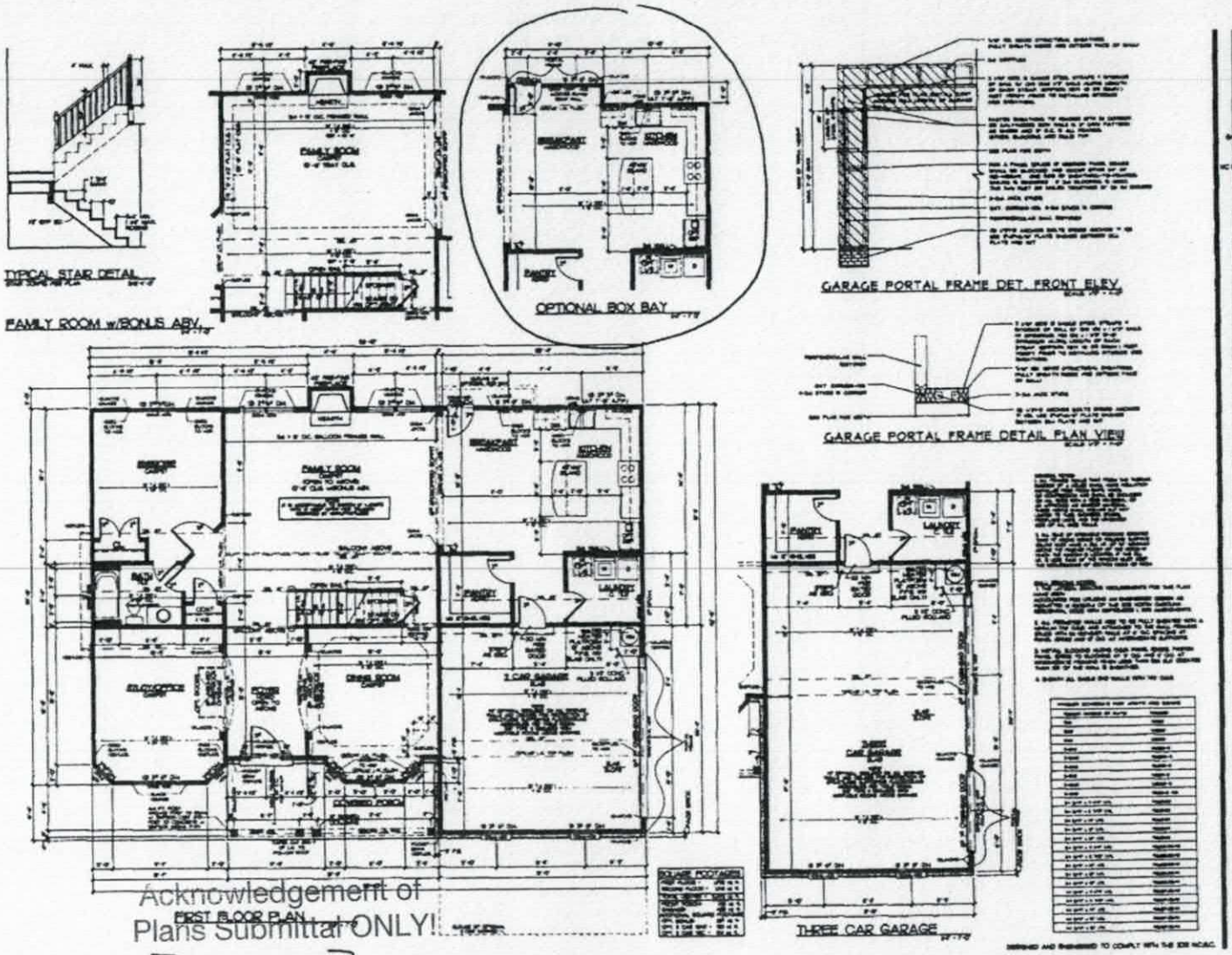
See Site Plan

Signature: _____

REQUIRED **property owner or owner's legal representative signature.**

11-15-16

DATE

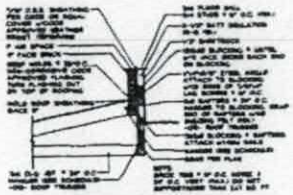


Acknowledgement of Plans Submittal ONLY!

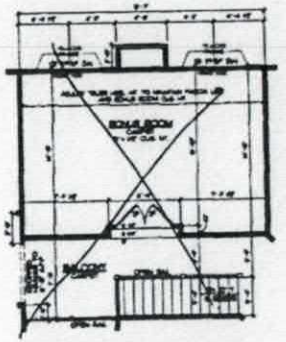
Date

RA Date 2-13-17

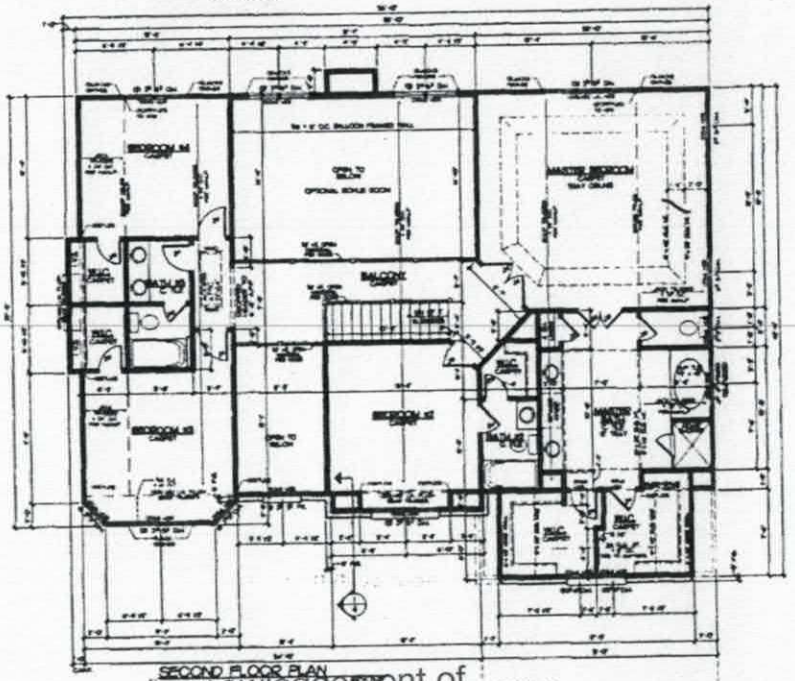
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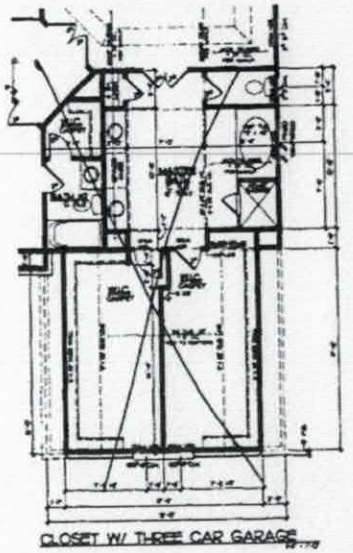
B1 SECTION @ PORCH
LVL AND LINTEL



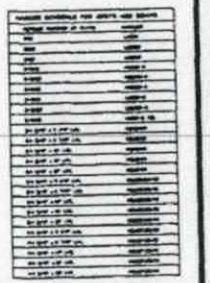
BONUS ROOM ABV. FAMILY

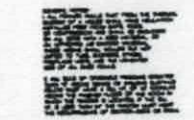


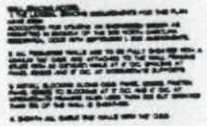
SECOND FLOOR PLAN



CLOSET W/ THREE CAR GARAGE







Acknowledgement of
Plans Submittal ONLY!

Date

Date 2-13-17

IQ CUSTOM CONSTRUCTION

The Birch

SECOND FLOOR PLAN

4

IREDELL COUNTY

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

APPLICATION NUMBER
223211
Issue Date: 11/16/2016

Permit Type: IMPROVEMENT PERMIT APPLICATION

Parcel Number	Street Address	Jurisdiction
4676604963.000	118 BRAWLEY WOODS LANE	

Owner Information	Applicant Information	Contractor Information
Owner: BRAWLEY WOODS LLC Address: 114 MORLAKE DR STE 103 MOORESVILLE, NC 28117 Phone: - -	Applicant: CAROLINA SOIL SEPTIC C Address: 162 WEST B ST KANNAPOLIS, NC 28081 Phone: 704-202-5791	Contractor: CAROLINA SOIL SEPTIC C Address: 162 WEST B ST KANNAPOLIS, NC 28081 Phone: 704-202-5791 License Type: UNLI License Number:

Project Description

NEW SINGLE FAMILY - IREDELL

Scope of Work

SFD

Permit Details:

EFT	IMPROVEMENT PERMIT FEE	Amount: Amount: Amount: Amount: Amount: Amount: Amount:	350.00

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: 11/16/2016

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	85904	TOTAL FEES:	$ 350.00