ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP 32404

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

PIN # 4645264011

APPLICANT/OWNER: David & Kerry Whitehead APPLICANT ADDRESS: 5 Highland Drive Summit NJ 07901

SITE ADDRESS: 138 Queens Cove Road Mooresville NC 28117 PHONE: 917-716-9516 ALT. PHONE —

SITE DIRECTIONS: 77 to Alcove Rd to Templeton Rd (L) to Camino Real (R) on Queens Cove SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: Queens Cove SECTION: III LOT # 110 LOT AREA: .83AC DESIGN FLOW: 480 L.T.A.R.: .30

Septic Tank	1000	(gal)	STB		Date	☒ New System	☐ Repair	☐ Expansion	System Type: I II III IV V VI	☒ Residence	No. Bedrooms 4
Pump Tank	1000	(gal)	PT	363	Date 9/1/21	System Description: LP-Pearl Block-50% Reduction				☐ Business	No. Persons 8
Pump Make	Goulds	Model	PE51		Serial #	Repair System Description: LP-Pearl Blau-50% Reduction				☐ Other	No. Employees
# Nitrification Fields	1	# Lines	3		Linear Ft 270	Maintenance Agreement Required: ☒ YES ☐ NO				☐ Slab	☐ Crawl Space
Trench Width	24in	Trench Bottom Depth(Low side)		30in	Gravel Depth —	☐ GRAVITY ☒ PRESSURE				☒ Basement w/plumbing	☐ Basement w/o plumbing

Water Supply: ☒ Private ☐ Public ☐ Community

Comments / Conditions: ~~Abandon Well Prior to A/C~~

4/11/22 Set 2FT pressure 9.5 inches

INITIAL SITE SKETCH

This permit is issued pursuant to Section 11 . (C) of S.L. 2018-114 using the signed and sealed LSS Evaluation by:

Soil + Forestry Services of the Carolinas, PA

LSS # 1231 Dated Aug 27th 2021

AS BUILT SKETCH

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

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: [signature] Date: 10-18-21 Installed by: Russell Williams

IMPROVEMENT PERMIT by: [signature] Date: 9/28/21 OPERATION PERMIT by: _____ Date: _____

AUTHORIZATION TO CONSTRUCT by: D. Wiebers Date: 2/8/22 Existing System Inspected by: _____ Date: _____

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed.

Item	Date	Initials
Drain Lines Checked		
Tanks Checked		
Pressure Manifold or Valve Box Checked		
Pressure Head Set		
Electrical Checked		
Floats Set		
Alarm Checked		
Maintenance Contract Needed? Y / N		
Comments:		

Repairs Only	
	State Code
Failing System Code	
Type of Distribution	G or P
Type of Failure/Malfunction	
Primary Cause of Failure/Malfunction	
Age of System? _____	
Initial or Repair? _____	

	Date	Initials
Drain Lines Checked	12/2/21	CW
Tanks Checked		
Pressure Manifold or Valve Box Checked		
Pressure Head Set		
Electrical Checked		
Floats Set		
Alarm Checked		
Maintenance Contract (Y) N		
Comments: Check ST to make sure 5ft away from wall.		

188 Queens Cove

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	Dave & Kerry Whitcher
Current Address:	5 Highland Drive Summit NJ 07901
Phone:	917.216.9516
County:	Iredell
Location:	188 Queens Cove Road Mooresville, NC 28117
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480 gpd
System Flow:	25.83gpm

Design Specifications

Drainfield Size:	270
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth (LOW SIDE):	30 in., Repair 30 in. Trench Depth
Trench Width:	24 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	275
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	47.85
Dosing Volume:	226.80
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:	4.90
Elevation Head:	15.50
Total Dynamic Head:	25.75
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 Soil & Forestry Services of the Carolinas, PA

188 Queens Cove Road

LP PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	540
TOTAL LATERAL LENGTH:	270
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	275
TOTAL DYNAMIC HEAD:	25.75
MANIFOLD SIZE:	N/A
DOSING VOLUME:	226.80
PUMP TANK DRAW DOWN*:	10.8
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.*

188 QUEENS COVE ROAD

Project #: 21-0063

LAYOUT FOR 4 BEDROOM HOME

August 27, 2021

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM			104.6				
INSTR. 1							
HOUSE CNR	(LEFT REAR)				773.00		
P. TANK					771.00		
1	WHITE				783.45	39	39
2	YELLOW				782.62	60	60
3	PINK				782.17	80	80
4	RED				781.60	92	92
5	***WHITE***				***781.23***	***105***	***90***
6	***BLUE***				***780.82***	***122***	***90***
7	***YELLOW***				***780.03***	***137***	***90***
					Total	**635**	**541**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
**** System***	***270***	***0.300***	***MOD.***	***0.300***	***PPBPS***	**LOW PRESSURE**
Repair	***271***	***0.300***	***MOD.***	***0.300***	***PPBPS***	**LOW PRESSURE**

Notes:

****All septic lines and borings located via Survey**

**All measures in feet

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

LP PPBPS TAPSHEET -188 QUEENS COVE ROAD

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
5	*WHITE*	*781.23*	*90*	*0.156*	*0.41*	*180*	*21*
6	*BLUE*	*780.82*	*90*	*0.156*	*0.41*	*180*	*21*
7	*YELLOW*	*780.03*	*90*	*0.156*	*0.41*	*180*	*21*

	total	feet =	270	gal/min =	25.83		63
			Des. Flow	480			
			Pump Run=	8.78			
			soil LTAR	0.3			
			LTAR +5%	0.315			
			LTAR with mod.	0.6			
			LTAR with mod.. + 5%	0.63			

.156 equals 5/32 inch hole

TAL COPIES OF THIS FILE ARE FOR REFERENCE
Y AND MAY NOT BE USED FOR DESIGN WORK.

; PROPERTY IS NOT LOCATED IN A 100
R FLOOD PLAIN.

ORTION OF THIS PROPERTY IS LOCATED IN A
YEAR FLOOD PLAIN.

L2	N 88°57'12" E	13.78'
L3	N 29°21'30" E	55.40'
L4	N 22°21'34" E	50.14'

OVERHEAD UTIL
FENCE

#4 REBAR
5.63'
PROPOSED WELL
DECK WITH CONCRETE BELOW
STORAGE
111
PB 16-46
760' CONTOUR
L4
L3
APPROX. 100 YEAR FLOOD LINE
35' SB
50' BUFFER
POOL (28' X 36')
10'
20.4'
S 61°27'56"E 341.92'
306.36'
CONCRETE DRIVE
DOCK
L2
ABANDON EXISTING SYSTEM (3 LINES)
L1
3.87'
3/8" PIN
1 STORY FRAME WITH BASEMENT
PORCH
110
PB 16-46
0.830 AC+-
& AN ADDITIONAL PARCEL
PER DEED 993-760
EXTRA
EXTRA
EXTRA
15' SB
B4
B1
B3
B2
5 W 781.23' 105' (INSTALL 90')
6 B 780.82' 122' (INSTALL 90')
7 Y 780.03' 137' (INSTALL 90')
1 W 783.35' 39'
2 Y 782.92' 60'
3 P 782.17' 80'
4 R 781.60' 92'
#4 REBAR
29.93'
PUMP TANK
EXISTING ST
15.8'
WELL (ABANDON)
169.5'
321.79'
N 71°43'57"W 355.77'
15' SB
CVB
C1
QUEENS COVE RD
60' PUBLIC
#5 REBAR
30.11'
109
PB 16-46

40 0 40 80 120
GRAPHIC SCALE – FEET

CW

ICHD Environmental Health Division

INSPECTIONS: 704-664-3703 Statesville Office: (704) 878-5305 x3456 Mooresville Office: (704) 660-3625

PRIVATE DRINKING WATER WELL PERMIT # 321404 **PIN #** 4645-26-4011 **Type of Permit (circle one): New Repair Abandonment**

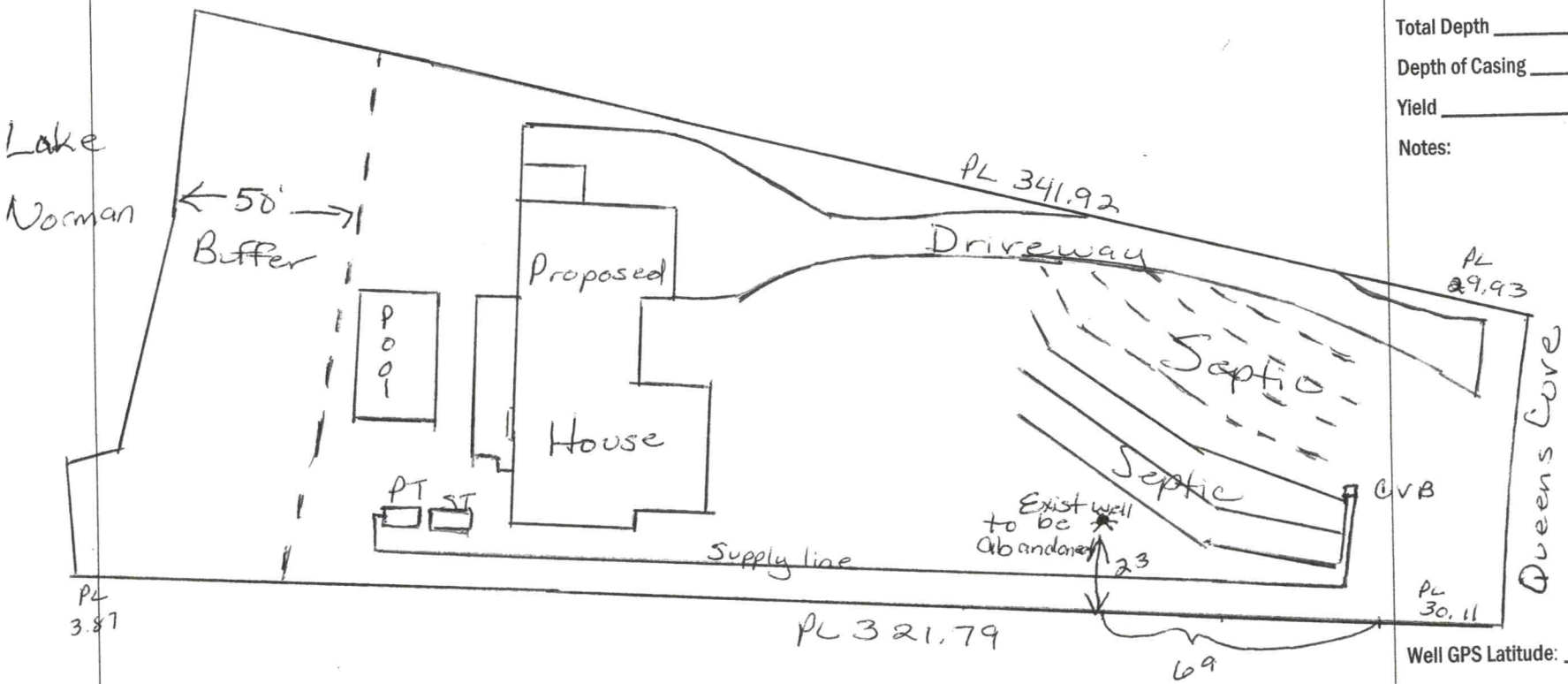
APPLICANT/OWNER NAME: Dave & Kerry Whitcher ADDRESS: 5 Highland Drive Summit NJ 07901 PHONE: 917 216 9516

DIRECTIONS TO SITE: Alcove Rd TR Templeton TL Harwell TR Queen's Cove, on left (lakeside)

SITE ADDRESS: 188 Queens Cove Rd Mooresville, NC SUBDIVISION: Queens Cove SECTION/LOT: _____

Initial Site Sketch

Scale 1:40



GROUTING RESULTS

Total Depth _____

Depth of Casing _____

Yield _____

Notes:

Well GPS Latitude: _____

Longitude: _____

PERMIT CONDITIONS/COMMENTS: Follow NC Well Construction rules for abandonment of Drinking Water Wells.

WELL PERMIT ISSUED BY: Maria Dotson DATE: 10/6/21 (Permit is valid for 5 years from date issued. This permit may be revoked if it is determined there has been a material change in any fact or circumstance upon which the permit is issued. Actions of the employees of the Iredell County Health Department shall in no way be taken as a guarantee that this well will produce water of any particular quantity or quality or for any amount of time. Employees of the Iredell County Health Department assume no liability for any damages, either direct or consequential which may be caused by this well.)

Well Contractor: Alfredo Bak CONTRACTOR CERT #: 32664 GROUT INSPECTION BY: Maria Dotson DATE: 2/3/22

OR CERTIFICATION OF GROUT NOT WITNESSED BY DEPT: _____ DATE: _____ WELL HEAD INSPECTION BY: _____ DATE: _____

WELL HEAD INSPECTION (check when completed): GROUT TO GROUND SURFACE ☐ WELL CONTRACTOR ID PLATE ☐ PUMP INSTALLER ID PLATE ☐ SAMPLE PORT ☐

ACCESS PORT / VENT ☐ WELL SEAL ☐ WELL HEAD 12 INCHES / PITLESS ADAPTOR 8 INCHES ABOVE GRADE ☐

CERTIFICATE OF COMPLETION BY: Maria Dotson DATE: 2/4/22 WATER SAMPLES BY: _____ DATE: _____

Attachments: Form GW-1a (required except for abandonment) ☐ Form GW-30 ☐ Water Sample Results ☐ Plat ☐ CALL 704-664-3703 to schedule grout or well head inspections between 8-9am

WELL ABANDONMENT RECORD

For Internal Use ONLY:

1. Well Contractor Information:

Alfred Kiesling Jr.

Well Contractor Name (or well owner personally abandoning well on his/her property)

3266-A

NC Well Contractor Certification Number

B & K Well Drilling Inc

Company Name

2. Well Construction Permit #: 321404

If applicable, or other permit numbers (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Industrial/Commercial
- ☐ Irrigation
- ☐ Municipal/Public
- ☒ Residential Water Supply (single)
- ☐ Residential Water Supply (shared)

Non-Water Supply Well:

- ☐ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Aquifer Storage and Recovery
- ☐ Aquifer Test
- ☐ Experimental Technology
- ☐ Geothermal (Closed Loop)
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Groundwater Remediation
- ☐ Salinity Barrier
- ☐ Stormwater Drainage
- ☐ Subsidence Control
- ☐ Tracer
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 2/3/22

5a. Well location:

Dave Whitaker

Facility Owner Name

Facility ID# (if applicable)

188 Queen Cove Rd

Physical Address, City, and Zip

Fredell

County

4645-26-4011

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees minutes seconds or decimal degrees:

(Take reading sufficient)

_____ N _____ W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record, if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: _____

6b. Total well depth: 285 (ft.)

6c. Borehole diameter: 6 (in.)

6d. Water level below ground surface: 30 (ft.)

6e. Outer casing length (if known): 71 (ft.)

6f. Inner casing tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

WELL ABANDONMENT DETAILS

7a. **For Geoprobe/DPT or Closed-Loop Geothermal Wells** having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. **Approximate volume of water remaining in well(s):** _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. **Type of disinfectant used:** Chlorine

7d. **Amount of disinfectant used:** 16 Ounces

7e. **Sealing materials used (check all that apply):**

- ☐ Neat Cement Grout
- ☐ Sand Cement Grout
- ☐ Concrete Grout
- ☐ Specialty Grout
- ☐ Bentonite Slurry
- ☒ Bentonite Chips or Pellets
- ☐ Dry Clay
- ☐ Drill Cuttings
- ☐ Gravel
- ☐ Other (explain under 7g)

7f. **For each material selected above, provide amount of materials used:**

70 Bags Hole plug

1 Bag, Concrete

7g. **Provide a brief description of the abandonment procedure:**

poured + Hydrated

8. **Certification:**

Alfred Kiesling Jr. 2/3/22

Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. **Site diagram or additional well details:**

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. **For All Wells:** Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. **For Injection Wells:** In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. **For Water Supply & Injection Wells:** In addition to sending the form to the addressee(s) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Project#: 21-0063
August 27th, 2021

DAVE & KERRY WHITCHER
Attn: *Joey Davis*
Email: joey@lawrielawrence.com

RE: Soil & Site Evaluation for a 4 Bedroom Residence on Lot 110 Queens Cove Subdivision, .83 ac Parcel, PIN# 4645264011, 188 Queens Cove Road, Mooresville, NC 28117.

Dear Dave & Kerry:

At your request Soil & Forestry Services of the Carolinas (S&FS) has performed soil/site evaluations on parcel noted above. The Lot size is noted on the attached survey map & soil evaluation form. The purpose of our work was to identify soil areas with potential to support subsurface wastewater disposal systems and provide design details for Session Law submittal to Iredell County Health Department.

Site Conditions
At the time of our evaluation land cover on the property was partially cleared and partially wooded. Topography within the evaluated area was gentle slope near the existing house site and proposed drainfield area. There is an existing septic and well that will need to be abandoned and a proposed new well (see Site Plan & Design with Applications). Property lines and corners were marked at the time of the evaluation by Dedmon Surveying. The surveyor provided an Autocad File of a survey as a basemap. The proposed septic layout was located via survey and used to produce the attached *Site Plan*. The existing site improvements (house, well, septic system, etc) was located via Survey by Dedmon Surveying.

Methodology
We evaluated soil areas through the use of soil borings. Soil morphological conditions including color, texture, structure, etc. were reviewed in the field with four soil boring locations on the property flagged and located via survey. All of the soil borings are located in or adjacent to the proposed septic layout. Soil suitability was determined by referencing 15A NCAC 18A.1900 "Laws and Rules for Sewage Treatment and Disposal Systems". *Soil & Site Evaluation Forms* were utilized to record the soil morphological data for each boring. An on-ground layout of system and repair was performed using a laser level. Pin flag locations of the layout were also located by survey. Detailed system & repair information is summarized in the following paragraph for this Lot.

188 Queens Cove Road (*See Attached Design*)
The septic layout for this lot (8' centers) yielded a total of 635 linear feet of line. The primary system is proposed as 270 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth is specified at 30 inches (Low Side). The repair system is proposed as 271 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth is specified at 30 inches (Low Side).

Session Law Requirements

An LSS Evaluation may be submitted in conjunction with a complete application to the LHD. The application shall include all information described in 15A NCAC 18A .1937(d) and be accompanied by a signed and dated statement from the applicant (owner or owner's legal representative) that reads as follows:

"The LSS Evaluation attached to this application is to be used to produce design and construction features for permitting in accordance with SL 2018-114 Section 11.(c).".

Owner Date

Print Name_____
Signature_____ _____

The LSS Evaluation shall include a statement bearing the LSS seal and signature that reads as follows:

"The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c)."

Disclaimer
This report reflects the findings of S&FS, PA. *This LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c).* Any site modifications that impact the proposed septic areas on 188 Queens Cove Road, Mooresville, NC 28117 may nullify this design. System design requirements and site requirements shall be adhered to for installation and Operations Permits to be issued by the local Health Department. If you have questions regarding these requirements a Pre-Construction meeting should be scheduled to discuss. Please contact S&FS if you have any questions regarding this report or the attached information. S&FS also offers septic system inspection, wetland delineation and forestry services.

Sincerely,



S. Ashley Rollans, LSS
Attachment: *Septic Design*

Soil & Forestry Services of the Carolinas, PA.

P.O. Box 832, Mooresville, NC 28115 Phone: (704) 746-5046 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 PPBPS Septic System w/Low Pressure distribution for a 4 bedroom single family residence on 188 Queens Cove Road Queen Cove Subdivision Lot # 110, (PIN# 46445264011), Mooresville NC, 28117.

Contents: **Page**

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

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5

Site Plan/System Plan---------- 6

Calculations---------- 7

Profile Descriptions---------- 8

Septic Application---------- 9-10

Zoning Permit & Receipt---------- 11-13

Agent Authorization---------- 14

Well Application---------- 15-16

Green Sheet---------- 17



August 27, 2021
Project #: 21-0063
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.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as a PPBPS installation with low pressure distribution.
- Repair is specified as a PPBPS installation with low pressure distribution.
- Backfill 4 - 6" of material (County Approved) over panels, rake trench walls, lime side-walls, install trenches 24" wide and have no more than 1/4" fall in 10 feet.
- **Existing Well must be properly Abandoned prior to Authorization to Construct**
- **Exisitng Septic Tank should be inspected by Installer to determine condition for use, otherwise a new septic tank should be installed.**
- **Existng Drainfield is to be abandoned.**

CALCULATIONS

Location	188 Queens Cove Road Mooresville, NC 28117	
Project Number	21-0063	
Lot No:	110	
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	275	ft.
Supply Line Volume	47.85	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	270	ft.
Gallons per Minute	25.83	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Pump Tank Capacity	1000	gal.
Panel Volume	3.6	gal.
# of Panels	63	
Dosing Volume	226.80	gal.
	Note:	*Dosing Volume based on 100% of # of panels times 3.6 gal/panel*
Tank Draw Down	10.8	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	8.78	minutes
Elevation Head	15.5	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	4.90	ft.
Total Dynamic Head (+15%)	25.75	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

188 Queens Cove Road (*See Attached Design*)
The septic layout for this lot (8' centers) yielded a total of 635 linear feet of line. The primary system is proposed as 270 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth is specified at 30 inches (Low Side). The repair system is proposed as 271 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. Trench depth is specified at 30 inches (Low Side).

Session Law Requirements

An LSS Evaluation may be submitted in conjunction with a complete application to the LHD. The application shall include all information described in 15A NCAC 18A .1937(d) and be accompanied by a signed and dated statement from the applicant (owner or owner's legal representative) that reads as follows:

"The LSS Evaluation attached to this application is to be used to produce design and construction features for permitting in accordance with SL 2018-114 Section 11.(c).".

Owner Date

Print Name Dave Whitcher Sep 6, 2021

Signature Sep 3, 2021

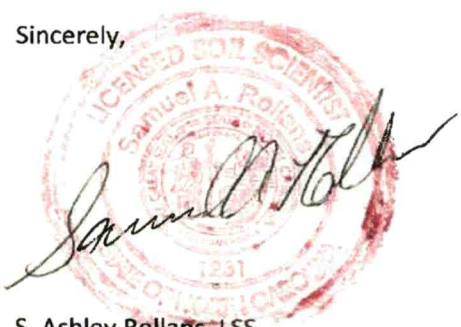
The LSS Evaluation shall include a statement bearing the LSS seal and signature that reads as follows:

"The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c)."

Disclaimer

This report reflects the findings of S&FS, PA. *This LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c).* Any site modifications that impact the proposed septic areas on 188 Queens Cove Road, Mooresville, NC 28117 may nullify this design. System design requirements and site requirements shall be adhered to for installation and Operations Permits to be issued by the local Health Department. If you have questions regarding these requirements a Pre-Construction meeting should be scheduled to discuss. Please contact S&FS if you have any questions regarding this report or the attached information. S&FS also offers septic system inspection, wetland delineation and forestry services.

Sincerely,



S. Ashley Rollans, LSS
Attachment: *Septic Design*

RECEIVED SEP 1 6 2021

IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

APPLICATION FORM

Paid $1200.00 AP-321404

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: (PRINT CLEARLY)

Applicant Name: Dave & Kerry Whitcher **Address:** 5 Highland Drive, Summit NJ **Zip:** 07901
Applicant Email: david.whitcher@gmail.com **Phone:** 917 716 9516 **Alt. Phone:** _____
Owner Name: Same as above **Address:** _____ **Zip:** _____
Owner Email: _____ **Phone:** _____ **Alt. Phone:** _____

Property Information:

Street Address: 188 Queens Cove Road Mooresville NC 28117
Subdivision Name: Queens Cove **Section/Phase:** III **Lot Number:** 110
Driving Directions: see Address

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

CHECK FOUNDATION TYPE

*Existing House
( ) New Single Family Residence Maximum Number of Bedrooms: 4 ( ) Crawl Space Foundation
( ) New Multi-Family Residence Maximum Number of Occupants: 8 ( ) Concrete Slab Foundation
( ) Accessory Building (✓) Swimming Pool (✓) Basement with Plumbing
( ) Bedroom(s) Addition ( ) Other Addition/Structure: _____ ( ) Basement without Plumbing
( ) Repair to failing septic system ___ Tank ___ Drain lines Describe Problem: _____
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: _____
(✓) 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: 1986
( ) 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: _____ 8/27/21
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

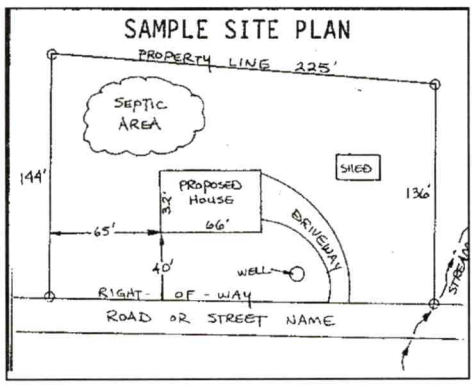
IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

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 OR WELL PERMIT*!!!

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

- (X) **Property Line measurements are clearly identified**
- ( ) **All proposed structures are indicated**
- ( ) **Front and side setbacks from property line**
- ( ) **Preferred driveway location**
- ( ) **Preferred well location**
- ( ) **Preferred septic system location**
- ( ) **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

Signature: Jerrold A Keller

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

8/27/21

DATE

Sheet 1 of 1
PROPERTY ID #: 4645264941
COUNTY: Iredell

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

OWNER: Dave & Kerry Whitaker
ADDRESS: 188 Weeks Chapel Rd Mooresville NC 28117
APPLICATION DATE:
DATE EVALUATED: 7-20-21
PROPOSED FACILITY: 4BR
PROPOSED DESIGN FLOW (.1949): 480gpd
PROPERTY SIZE: 0.83ac
LOCATION OF SITE: same as above
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	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
1	3% L	0-6"	BLCL wk GR		few sap. inclusions 32-48"	>48"			PS .3
		6-32"	RC mod sbk	FrSSSP SAP					
		32-48"	RBCL wk sbk	FrSSSP SAP					
2	40% L	0-6	BCL wk Gr		few sap inclusions 32-48"	>48"			PS .3
		6-36	RC mod sbk	FrSSSP SAP					
		36-48"	RBCL wk sbk	FrSSSP SAP					
3	30% L	0-6	BLC wk Gr		few sap inclusions 32-40"	>48			PS .3-.325
		6-24	RC mod sbk						
		24-48"	RBCL wk sbk	FrSSSP SAP					
4	40% L	0-8"	BLC wk Gr	FrSSSP SAP	few sap inclusions	>48	40-48"		PS .3-.325
		8-34	RC mod sbk	FrSSSP SAP					
		34-48"	RBCL wk sbk	FrSSSP SAP					

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

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: S. Ashley Rollins
OTHER(S) PRESENT: L. Cook

LICENSED SOIL SCIENTIST Samuel A. Rollins 1231 STATE OF NORTH CAROLINA

COMMENTS:

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

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

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

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, Dave & Kenny Whitcher, am the legal owner(s) of the property located at 199 Queens Cove Rd Mooresville NC 28117, identified as PIN (Parcel Identification Number) 4645264011, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) S. Ashley Rollins/SFS & Joey Davis, Laurie Lawrence, 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	Signature of Witness	Date
Dave Whitcher	Sep 6, 2021	Kenny Whitcher	Sep 7, 2021

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 · NC

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

APPLICATION NUMBER
321404 Issue Date:

Permit Type: ZONING

Parcel Number	Street Address	Jurisdiction
4645264011.000	188 QUEENS COVE RD	IREDELL COUNTY

Owner Information	Applicant Information
Name: WHITCHER DAVID+KERRY	Name: ROLLANS SOIL & ENVIRONMENTAL SERVICES
Address:	Address: 470 NORTH BROAD STREET SUITE D MOORESVILLE, NC 28115
Phone:	Phone: (704)658-1723

Use Requested	Zone Code
SWIMMING POOL	R20

Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
0.83	35	50	10	10	WSIV-CA Catawba/Lake Norman	YES

Remarks

pool

: Must meet requirement R22 of the LDC. Pools shall be located to comply with minimum setbacks for accessory structures- located behind front building line of house, 10' from side & rear property line. Lake lots must meet the 50' setback from the 760 contour line AND the 35' setback from the rear property line. Pools that are not an integral part of the principal building shall be located at least the minimum distance from the principal building necessary to comply with N.C. Building Code. Setback from house could be +/-10'. Fenced with a minimum 4' in height, and equipped with self-closing and positive self-latching gate provided with hardware for permanent locking. Fence not required for above ground pools if they are at least 4' in height, the ladder removed, or when NOT in use have a gate to the ladder as described above.

The applicant certifies that there are no deed restrictions, contractual agreements or governmental regulations of any kind that interfere with or prohibit the use of the property or the use for which this permit is requested. The applicant further acknowledges that enforcement of deed restrictions, plat conditions and other contractual agreements will not be undertaken by Iredell County and is the sole responsibility of the affected parties.

Signature of Owner/Contractor

Date: 09/16/2021

Permit Number	321404	TOTAL FEES:	$77.25

IREDELL COUNTY PLANNING & DEVELOPMENT
PO BOX 788, STATESVILLE NC 28687-0788
349 N. Center Street / Building Standards Center
(704) 878-3118 / FAX (704)928-2025

Residential Zoning Permit Application

What are you building?(Please check) ***No building or addition shall be used for commercial, business, or other non-residential use unless appropriate permits and approval are obtained from Iredell County for commercial use.**

Stick built_✓_ Modular___ Duplex___ Singlewide___ Doublewide___ Pier___ Addition___ Bedroom addition___

Accessory dwelling (ie: M-I-L Suite, guest house) ___ Accessory building (ie: garage, shed)___ Swimming pool_✓_

Are there any other structures currently on the property such as dwellings, sheds, garages? (Please list type below)

Is there a septic tank on the property? (Yes) No If residence how many bedrooms? 4 and stories? 2

Please describe project (Details, Purpose, or Use): Residential

Please list square footage of project (Pier, Addition, Accessory Dwelling, Accessory Building only): _____

Does the property have community water? Yes (No) If yes, please list who provides it: _____

Does the property have community sewer? Yes (No) If yes, please list who provides it: _____

Owner Information

Property Owner's Name Dave Whitcher Phone # 9172169516

Owner's Current Address 5 Highland Dr Summit NJ 07901

Property Information

Property Address 188 Queens Cove Rd Mooresville NC 28117 Parcel # 4645264011

Subdivision: Queens Cove Lot: 10 Zoning: ____ Watershed: Y / N Flood Plain: Y / N Township: _____

Directions to property (from a MAIN ROAD) _____

Application Information

Applicant's Name or Company Slumeasabrit Applicant's Phone # _____

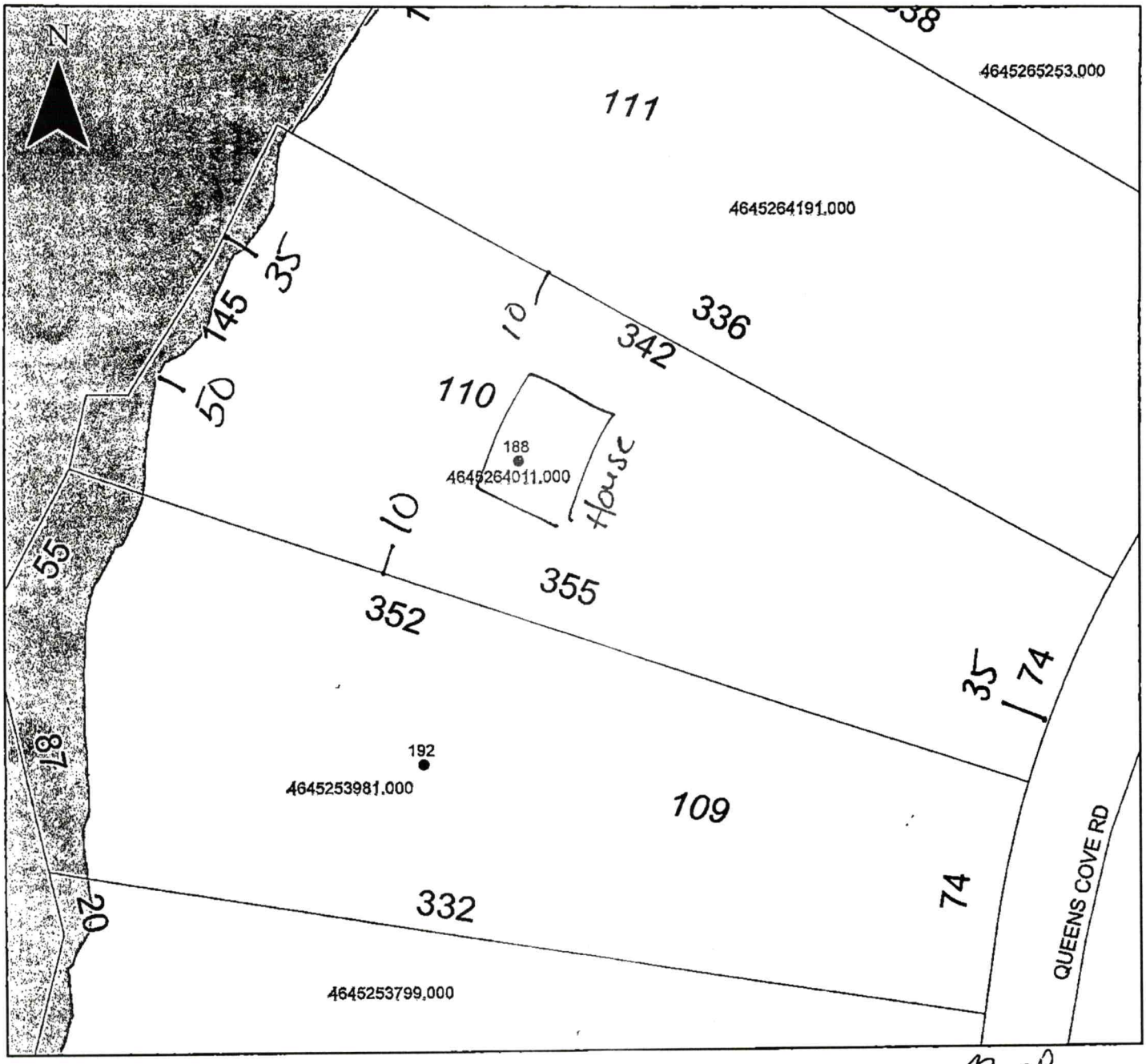
Applicant's Address _____

If Company, Representative's Name and Title _____

IN APPLYING FOR A ZONING PERMIT I CERTIFY THAT ALL INFORMATION ON THIS APPLICATION IS CORRECT AND THAT ALL WORK WILL COMPLY WITH IREDELL COUNTY ZONING REGULATIONS. THE IREDELL COUNTY PLANNING & DEVELOPMENT DEPARTMENT WILL BE NOTIFIED OF ANY CHANGES THAT ARE MADE TO THIS PROJECT. I AM AWARE THAT THIS IS AN APPLICATION ONLY - NOT A PERMIT - AND DOES NOT CONSTITUTE APPROVAL OF THIS PROJECT. HOWEVER, IF THIS PROJECT IS APPROVED, THIS SIGNATURE IS VALID FOR MY PERMIT.

SIGNATURE OF APPLICANT Dave Whitcher DATE 9/16/21

ZONING DISCLAIMER



Property Address 188 Queens Cove

.83 R20

The applicant certifies that there are no deed restrictions, contractual agreements or governmental regulations of any kind that interfere with or prohibit the use of the property or the use for which this permit is requested. Applicant further acknowledges that the enforcement of deed restrictions, plat conditions, and other contractual agreements will not be undertaken by Iredell County and is the sole responsibility of the affected parties.

Samuel A Yellen

Applicant

9/16/21

Date