ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625

PERMIT # OSWP-2023-21879

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

PIN # 4659-06-9373

APPLICANT / OWNER: NORTHLAKE DEVELOPERS LLC | APPLICANT ADDRESS: 110 Nautical Point Court, Mooresville, NC 28117

SITE ADDRESS: 156 CLEAR SPRINGS RD, MOORESVILLE, NC 28115 | PHONE: 9808294090 | ALT. PHONE:

SITE DIRECTIONS: | SAP CONTROLLED: YES ☐ NO ☑

SUBDIVISION: Autumn Grove | SECTION: 2 | LOT #: 12 | LOT AREA: 0.6 | DESIGN FLOW: 360 | L.T.A.R.: 0.3

Septic Tank: 1000 (gal)	STB:	Date:	☐ New System ☐ Repair ☐ Expansion	System Type: III	☑ Residence	No. Bedrooms: 3	Water Supply: New Well
Pump Tank: 1000 (gal)	PT:	Date:	System Description: complete system design per Ashley Rollans Session Law design attached		☐ Business	No. Persons: 6	
Pump Make: gravity system	Model:	Serial #:	Repair System Description: repair system per Ashley Rollans Session Law design attached		☐ Other	No. Employee	
# Nitrification Fields: 1	# Lines: 3	Linear Ft.: 200	Maintenance Agreement Required: ☐ YES ☑ NO		☐ Slab	☑ Crawl Space	
Trench Width: 24	Trench Bottom Depth (Low side): 36		Gravel Depth:	☑ GRAVITY ☐ PRESSURE	☐ Basement w/ Plumbing	☐ Basement w/o Plumbing	

Comments / Conditions:

INITIAL SITE SKETCH

This permit is issued pursuant to G.S. 130A-335(a2). (a3) & (a4) using the Signed and Sealed LSS/LG Evaluation attached here from:
Soil & Forestry Services of the Carolinas

AS BUILT SKETCH

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

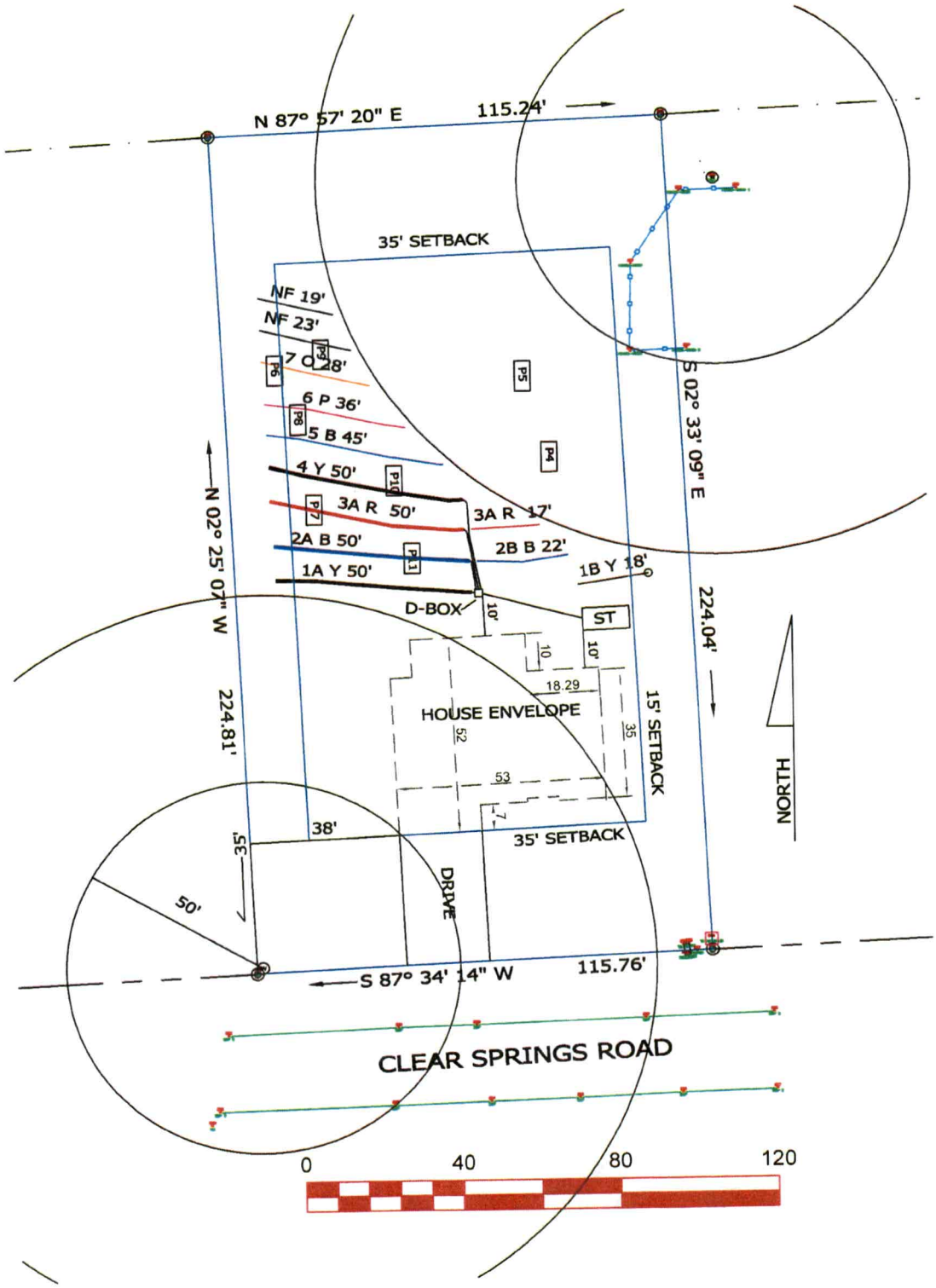
☐ **IMPROVEMENT PERMIT with plat** valid without expiration. ☑ **IMPROVEMENT PERMIT with site plan** valid for 60 mos. ☑ **AUTHORIZATION TO CONSTRUCT** valid for period equal to **IMPROVEMENT PERMIT**--not to exceed 60 mo.

Owner / Applicant Signature: [signature] Date: Installed By:

IMPROVEMENT PERMIT by: [signature] Date: 4-27-2023 OPERATION PERMIT by: Date:

AUTHORIZATION TO CONSTRUCT by: [signature] Date: 4-27-2023. Existing System Inspected By: Date:

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


N 87° 57' 20" E
115.24'
35' SETBACK
NF 19'
NF 23'
7 O 28'
6 P 36'
5 B 45'
4 Y 50'
3A R 50'
3A R 17'
2A B 50'
2B B 22'
1A Y 50'
1B Y 18'
P1
P2
P3
P4
P5
P6
P7
P8
P10
N 02° 25' 07" W
224.81'
S 02° 33' 09" E
224.04'
D-BOX
10'
ST
10'
10
18.29
HOUSE ENVELOPE
52
35
53
7
15' SETBACK
NORTH
38'
35'
35' SETBACK
50'
DRIVE
S 87° 34' 14" W
115.76'
CLEAR SPRINGS ROAD
0
40
80
120

PROPERTY ID #: _4659069373__
COUNTY: _IREDELL____

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

OWNER: _Northlake Developers LLC_____ APPLICATION DATE_____
ADDRESS: 110 Nautical Point Ct Mooresville NC 28117 DATE EVALUATED: 11/29/22
PROPOSED FACILITY: ____3 BR_____PROPOSED DESIGN FLOW (.1949): __360 GPD_____PROPERTY SIZE: _~0.6 AC_____
LOCATION OF SITE: 156 Clear Springs Rd_Mooresville NC 28115 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)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
P 1	L/6%	0-5	RBCLWFSBK	FRSSSP		62			PS 0.3-0.325
		5-26	BRCWMSKB	FRSSSP					
		26-50	RBCLWFSBK	FRSSSP					
		50-62	VARLMASS	FRSSP					
P 2	L/8%	0-3	BCL MASS	COMPACTED		64			PS 0.325
		3-18	BRCWMSBK/ABK	FRSSSP					
		18-54	RBCLWFSBK	FRSSSP	FEW TO COM SAP				
		54-64	VARLMASS						
P 3	L/9%	0-3	BCL MASS	COMPACTED		56			PS 0.3
		3-20	BRCWMABK/SBK	FRSSSP					
		20-32	BRCWMSBK/ABK	FRSSSP	FEW SAP				
		32-56	RBCLWFSBK	FRSSSP	FEW TO COM SAP				
P 4	L/12%	0-24	RBCLWMSBK	FRSSSP	FEW SAP	24	PS	PS	PS 0.4 DEEP
		24-67	VARFSL/L	FRSSSP					

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: ASHLEY ROLLANS
OTHER(S) PRESENT: ___C.WAGNER & M. FREEMAN_____

LICENSED SOIL SCIENTIST SAMUEL A. ROLLANS 1231 STATE OF NORTH CAROLINA

COMMENTS: _____

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

PROPERTY ID #: _4659069373___
DATE OF EVALUATION: _11/29/22___
COUNTY: _IREDELL_____

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
P 5	L/15%	0-21	BRCWMSBK/ABK	FRSSS	FEW COM SAP FEW CLAY INCL. FEW WR	30	PS		PS 0.35
		21-30	RBCLWMSBK	FRSSSP					
		30-73	VARLMASS	FRSSSP					
P 6	L/15%	0-14	BRCWMABK	FRSSSP	COM SAP	26	PS		PS 0.35-0.4 DEEP
		14-26	RBCLWFSBK	FRSSSP					
		26-63	VARLMASS	FRSSS					
P 7	L/15%	0-4	BRCLWFSBK	FRSSSP	FSAP	55	PS		PS 0.3
		4-46	BRCWMSBK	FRSSSP					
		46-55	RBCLWFSBK	FRSSSP					
P 8	L/16%	0-6	BRCLWFSBK	FRSSSP	FSAP	67	PS		PS 0.3
		6-46	BRCWMSBK	FRSSSP					
		46-67	RBCLWFSBK	FRSSSP					
P 9	L/15%	0-5	BRCLWFSBK	FRSSSP	FSAP	39	PS		PS 0.325-0.4 DEEP
		5-16	BRCWMSBK/ABK	FRSSSP					
		16-39	RBCLWFSBK	FRSSSP					
		39-74	VARSLMASS	FRSSSP					

COMMENTS:_____

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

PROPERTY ID #: 4659069373
DATE OF EVALUATION: 11/29/22
COUNTY: IREDELL

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
P 10	L/14%	0-12	BRCWMSBK/ABK	FRSSS	COMP	57	PS		PS 0.325-0.35
		12-57	RBCLWMSBK	FRSSSP	COM-MANY SAP				
		57-66	VARLMASS	FRSSSP					
P 11	L/8%	0-7	FILL/DISTURBED			~~46~~ 63			PS 0.3
		7-11	BRCWFSBK	FRSSSP					
		11-42	BRCWMSBK	FRSSSP					
		42-63	RBCLWMSBK	FRSSSP	FSAP				

COMMENTS: _____

CALCULATIONS

Location	156 Clear Springs Rd Mooresville, NC 28115	
Project Number	22-0161	
Lot No:	12	
No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	27	ft.
Supply Line Volume	17.631	gal.
Required Feet of Line	200	ft.
Amount of Line from Layout	200	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	48	
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

GRAVITY PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Applicant:	Bruce Kasaski
Address:	110 Nautical Point Mooresville, NC 28117
Phone:	980.829.4090
County:	Iredell
Location:	156 Clear Springs Rd Mooresville, NC 28115
Source of Wastewater Flow:	3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	360
System Flow:	N/A

Design Specifications

Drainfield Size:	200	
Loading Rate (gpd/ft.^{2}):	0.3	
Depth of Gravel in Trench:	N/A	
Gravel Size:	N/A	
Max.Trench Depth (LOW SIDE):	36 in.	Repair Trench Bottom 36 in.
Trench Width:	24 in.	
Septic Tank Size:	1000	

Estimated Supply Line Length:	27
Supply Line Diameter:	4 in. SCH 40 PVC
Supply Line Volume:	17.63
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
Threaded Union:	N/A
Gate Valves:	N/A
Check Valves:	N/A
Anti-Siphon Hole:	N/A
Additional Comments:	Soil suitability was performed by Soil & Forestry Services of the Carolinas

156 Clear Springs Rd

PPBPS SYSTEM

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	400
TOTAL LATERAL LENGTH:	200
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	200
SUPPLY LINE LENGTH:	27
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	N/A

Layout Specifications - 156 Clear Springs Rd

Project #: 22-0161

LAYOUT FOR 3 BEDROOM HOME

4/3/2023

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
1A	*YELLOW*					*50*	*50*
1B	YELLOW					18	18
2A	*BLUE*					*50*	*50*
2B	BLUE					22	22
3A	*RED*					*50*	*50*
3B	RED					17	17
4	*YELLOW*					*50*	*50*
5	BLUE					45	45
6	PINK					36	36
7	ORANGE					28	28
8	Not Flagged					23	23
9	Not Flagged					19	19
					Total	408	408

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION	LOW SID TRENCH DEPTH
** System*	*200*	*0.300*	**MOD. CONV**	*0.300*	*PPBPS*	*GRAVITY*	36"
Repair	208	0.300	MOD. CONV	0.300	PPBPS	LOW PRESSURE	36"

Notes: **All measures in feet

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

**Nitrification lines were located by GPS & Tape Measure

GRAVITY PPBPS SPECIFICATIONS - 156 Clear Springs Rd

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	# of Panels
1A	*YELLOW*	*N/A*	*50*	*N/A*	*N/A*	100	12
2A	*BLUE*	*N/A*	*50*	*N/A*	*N/A*	100	12
3A	RED	*N/A*	*50*	*N/A*	*N/A*	100	12
4	YELLOW	*N/A*	*50*	*N/A*	*N/A*	100	12
						400	48

total	feet =	200	gal/min =	N/A	
		Des. Flow	360		
		Pump Run=	N/A		
		soil LTAR	0.3		
		LTAR +5%	0.315		
		LTAR with mod.	0.6		
		LTAR with mod.. + 5%	0.63		

County: Iredell

This Section for Local Health Department Use Only

Initial submittal received: 4-27-2023. (Date) by BB (Initials)

Permit Number: OSWP-2023-21879.

G.S. 130A-335(a4) states the following: *'If a local health department fails to act on an application for an improvement permit submitted pursuant to subsection (a3) of the section within 10 business days of receipt of a complete application, the local health department shall issue the improvement permit.'*

In accordance with G.S. 130A-335(a3) the improvement permit application is:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the LSS and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Bass Date of Issuance: 4-27-2023

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2), (a3), and (a4) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: 4-27-2028

_____

See attached site sketch

County: Iredell.

This Section for Local Health Department Use Only

Initial submittal received: 4-27-2023 (Date) by BB. (Initials)

Permit Number: OSWP-2023-21879

G.S. 130A-335(a6) states the following: *'If a local health department fails to act on an application for a construction authorization submitted pursuant to subsection (a5) of the section within 10 business days of receipt of a complete application, the local health department shall issue the construction authorization.'*

In accordance with G.S. 130A-335(a5) the construction authorization application is:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing: _____

_____

Copies of this were sent to the AOWE/PE and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☐ Denied (See attached report.)

Copies of this were sent to the AOWE/PE and the Owner on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: Benjamin A Bates Date of Issuance: 4-27-2023

This Construction Authorization is issued pursuant to G.S. 130A-335(a2), (a5), and (a6) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes, or if information submitted in the application was falsified, inaccurate or misleading. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit. The location and identification of all property lines, easements, water lines, and other appropriate utilities shall be the responsibility of the owner. Final landscaping shall be constructed to divert water and establish vegetative cover.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: 4-27-2028.

See attached site sketch

County: Iredell

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4654106937 3

Issued To: Northlake Developers LLC

Property Location: 154 Clear Springs Rd

Subdivision: Autumn Brave Lot #: 12 Block: _____ Section: _____

LSS Report Provided: Yes ☒ No ☐

If yes, name and license number of LSS: Samuel Ashley Rollins # 1231

New ☒ Repair ☐ Expansion ☐ System Relocation ☐

Proposed Structure: Single Family residence

Proposed Wastewater System Type: PPBPS Gravity (Initial) PPBPS low Presure (Repair)

Fill System: ☐ Yes ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area please provide a fill plan)

Proposed Design Daily Flow: 360 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.3

Design Wastewater Strength: ☒ domestic ☐ high strength ☐ industrial process

Number of bedrooms: 3 Number of Occupants: 6 Other: _____

Pump Required: ☐ Yes ☒ No ☐ May be required based upon final location and elevations of facilities

Artificial Drainage Required: ☐ Yes ☒ No If yes, please specify details: _____

Type of Water Supply: ☒ Private well ☐ Public well ☐ Municipal Supply ☐ Spring ☐ Other: _____

Drainfield location meets requirements of Rule .1945: Yes ☒ No ☐

Drainfield location meets requirements of Rule .1950: Yes ☒ No ☐

Permit valid for: ☒ Five years [site plan submitted pursuant to GS 130A-334(13a)] ☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:

See design

Licensed Soil Scientist Print Name: Samuel A. Rollins

Licensed Soil Scientist Signature: Samuel A Rollins Date: 4/11/23

The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).

See attached site sketch

County: Iredell

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)/SL2022-11

PIN/Lot Identifier: 4659106913 73

Issued To: North Lake Developers LLC

Property Location: 156 Clear Springs Rd

AOWE/PE Plans/Evaluations Provided: Yes ☒ No ☐ If yes, name and license number of AOWE/PE: Samuel Ashley Rollins # 10027E

Facility Type: Single Family Residence

☒ New ☐ Expansion ☐ Repair System Relocation ☐

Basement? ☐ Yes ☒ No Basement Fixtures? ☐ Yes ☒ No

Type of Wastewater System** PPBPS Gravity (Initial) PPBPS low Pressure (Repair)

Design Daily Flow: 360 GPD Wastewater Strength: ☒ domestic ☐ high strength ☐ industrial process

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ☐ No

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 200 feet Trench/Bed Spacing: 8 feet on center

Drainfield square footage: 400 Trench/Bed Width: 24 inches LTAR: 0.3 gpd/ft²

Soil Cover: 6 min inches Slope Adjusted Maximum Trench/Bed Depth: 36 inches (LOW SIDE)

Aggregate Depth: _____ inches above pipe _____ inches below pipe _____ inches total

Pump Tank Size (if applicable): _____ gallons Requires more than 1 pump? ☐ Yes ☐ No

Pump Requirements: _____ ft. TDH vs. _____ GPM Grease Trap Size (if applicable): _____ gallons

Distribution Method: ☐ Serial ☑ D-Box or Parallel ☐ Pressure Manifold(s) ☐ LPP ☐ Other: _____

Artificial Drainage Required: Yes ☐ No ☒ If yes, please specify details: _____

Legal Agreements *(If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)*

Multi-party Agreement Required [.1937(h)]: Yes ☐ No ☒

Easement, Right-of-Way, or Encroachment Agreement Required [.1938(j)]: ☐ Yes ☒ No

Declaration of Restrictive Covenants: ☐ Yes ☒ No

****If applicable:**

I understand the system type specified is different from the type specified on the application. I accept the specifications of this permit.

Owner/Legal Representative Print Name: _____

Owner/Legal Representative Signature: _____ Date: _____

Pre-Construction Conference Required: Yes ☐ No ☒

Conditions: See design

The construction and installation requirements of Rules .1950, .1952, .1954, .1955, .1956, .1957, .1958, and .1959 are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached system layout.

AOWE/PE Print Name: Samuel A. Rollins

AOWE/PE Signature: Samuel A Rollins Date: 4/11/23

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5).

See attached site sketch

NC ONSITE WASTEWATER Certification Number 10027E EVALUATOR

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Project#: 22-0161
April 3rd, 2023

North Lake Developers, LLC
Attn: *Bruce Kososki*
Email: bruce@northlakedevelopers.com

RE: Soil & Site Evaluation for a 3 Bedroom Residence at 156 Clear Springs Rd, 0.6 ac Parcel, PIN# 4659069373, Mooresville, NC 28115, Iredell County, NC.

Bruce:

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 submittals to Iredell County Health Department.

Site Conditions

At the time of our evaluation land cover on the property was mostly wooded of the property. Topography within the evaluated area was gently to moderate slope near the house site with moderate percentage of slope in the proposed drainfield area. Property lines and corners were marked at the time of the evaluation by Jordan Grant & Associates Land Surveying. The Surveyor provided an Autocad File of the survey as a basemap. The proposed septic layout was located via GPS and tape measures which were used to produce the attached *Site Plan*. The house envelope was pinned in the field by the client and provided measures for our Site Plan. The house envelope must be pinned by survey prior to construction.

Methodology

We evaluated soil areas through the use of backhoe pits. Soil morphological conditions including color, texture, structure, etc. were reviewed in the field with eleven backhoe locations on the property flagged and located via GPS. Six of the eleven borings are located in 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 pit. The house envelope was located by the client. An on-ground layout of system and repair was performed using a laser level. Pin flag locations of the layout were also located by GPS and tape measure. Detailed system & repair information is summarized in the following paragraph for this Lot.

156 Clear Springs Rd (*See Attached Design*)
The septic layout for this lot (8' centers) yielded a total of 408 linear feet of line. The primary system is proposed as 200 linear feet of Modified Conventional (50% Reduction) drainfield with gravity distribution. Trench depth (Low Side) is specified at 36 inches. The repair system is proposed as 200 linear feet of Modified Conventional (50% Reduction) drainfield with low pressure distribution. Trench depth (Low Side) is specified at 36 inches. There is 208 linear feet available for repair. We recommend having the well radius of the neighbors well located via survey prior to installation to insure proper setbacks for the repair area that is saprolite controlled.

Session Law Requirements

All information needed to issue the IP must be submitted with the application. 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/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)."

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 G.S. 130A-335(a2)."

Disclaimer
This report reflects the findings of S&FS, PA. *This LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2)."* Any site modifications that impact the proposed septic areas on the site may nullify this design for 156 Clear Springs Road, Mooresville, NC 28115. 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

www.soilandforestryservices.com

Attached is a proposed design for an Modified Conventional Septic System (PPBPS) with gravity dist. for a 3 bedroom single family residence at 156 Clear Springs Rd, Lot 12, PIN#(4659069373) Mooresville 28115, Iredell County, NC.

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LICENSED SOIL SCIENTIST
SAMUEL A. ROLLANS
1231
STATE OF NORTH CAROLINA

April 3, 2023
Project #: 22-0161
Design By: Soil & Forestry Services of the Carolinas, PA