ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 | Mooresville Office (704) 660-3625 | PERMIT # AP32704/2

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

PIN # 4678 -- 21 -- 7627

APPLICANT/OWNER: Edwin Stott/Lacuso Homes | APPLICANT ADDRESS: 216 S Swing Rd Suite I Greensboro, NC 27409

SITE ADDRESS: 726 Wiggins Rd Mooresville NC | PHONE: 336-344 4008 | T. PHONE ——

SITE DIRECTIONS Oakridge Farm Hwy @ onto Wiggins Property on Left | SAP CONTROLLED: [X] YES [ ] NO

SUBDIVISION: Wiggins Walk | SECTION: - | LOT # 2 | LOT AREA: 1.04 Ac | DESIGN FLOW: 480 | L.T.A.R.: .275

Septic Tank 1000 (gal)	STB 760	Date 1/10/23	[X] New System [ ] Repair [ ] Expansion	System Type: I II III IV V VI	[X] Residence	No. Bedrooms 4	Water Supply
Pump Tank 1000 (gal)	PT 363	Date 12/18/22	System Description: Pump to Serial - 25% Reduction.		[ ] Business	No. Persons 8	[X] Private
Pump Make	Model	Serial #	Repair System Description: Pump to Serial - 25% Reduction		[ ] Other	No. Employees	[ ] Public
# Nitrification Fields 1	# Lines 4	Linear Ft 440	Maintenance Agreement Required: [ ] YES [X] NO		[ ] Slab	[X] Crawl Space	[ ] Community
Trench Width 36in	Trench Bottom Depth(Low side) 30in	Gravel Depth —	[ ] GRAVITY [X] PRESSURE		[ ] Basement w/ plumbing	[ ] Basement w/o plumbing	

Comments / Conditions:

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:

Piedmont Environmental Associates, PA.

LSS # 1229 Dated March 9, 2022

AS BUILT SKETCH

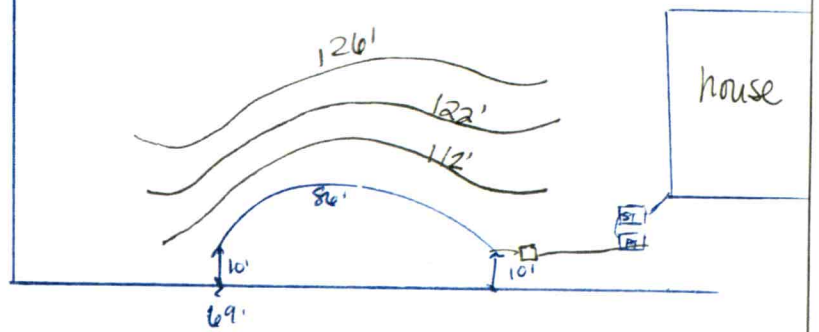
FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

electrical alarms Box floats SB 5/10/23

2/6 < tanks & upper line

2/20 lines, plumbing

As Built NTS



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: [signature] Date: 6/24/22 | Installed by: Specialty Septic

IMPROVEMENT PERMIT by: [signature] Date: 4/6/2022 | OPERATION PERMIT by: Sarah Bracken Date: 5/10/23

AUTHORIZATION TO CONSTRUCT by: [signature] Date: 5/25/22 | Existing System Inspected by: Date:

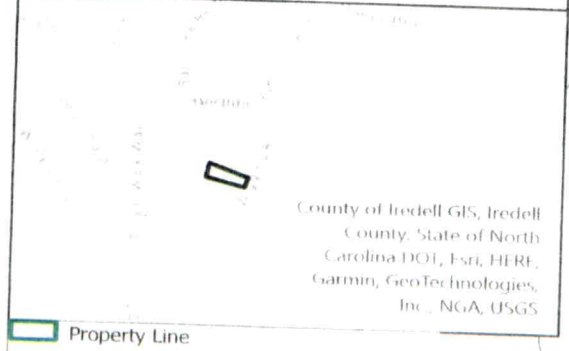
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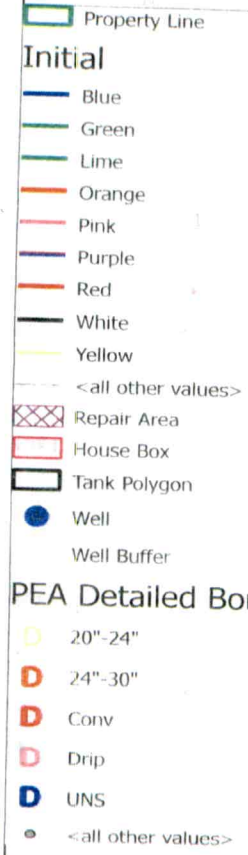
PIEDMONT ENVIRONMENTAL ASSOCIATES P A

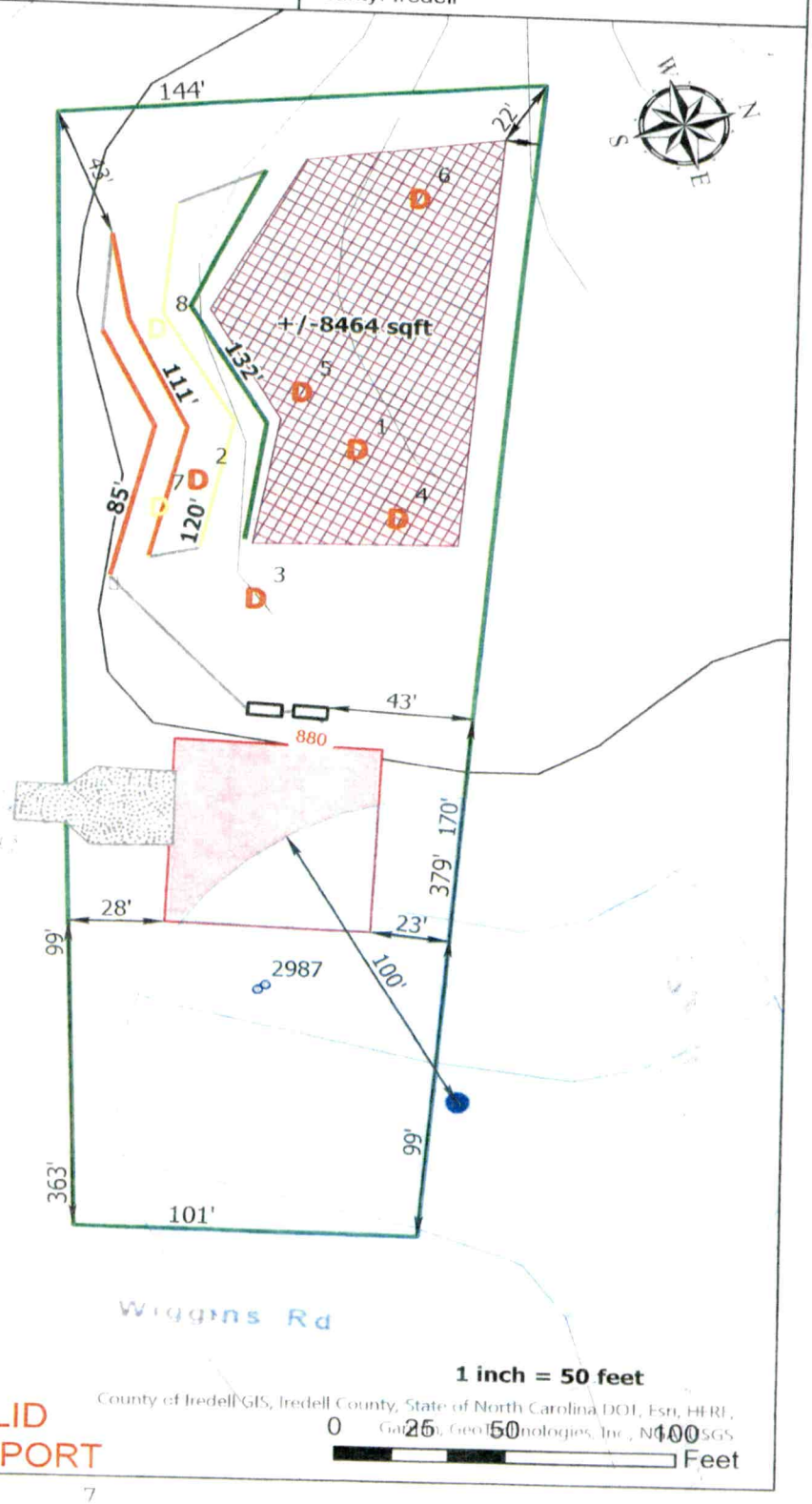
Layout Diagram/Site Plan - 726 Wiggins Road (Lot 2)

216 S. Swing Rd. Suite 1
Greensboro, NC 27409
piedmontsoil.com

Job# 2987
Date: 3/9/2022
Client: Caruso Homes
County: Iredell







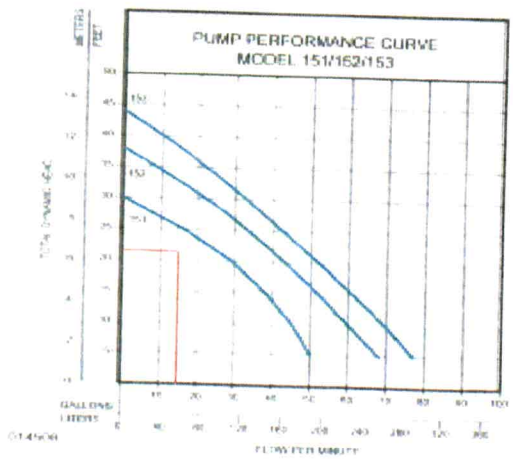
LICENSED SOIL SCIENTIST
ROBERT EDWIN SIOTT, II
1229
STATE OF NORTH CAROLINA

MAP NOT VALID
WITHOUT REPORT

Pump Sizing Sheet, Pump to Serial Distribution

Lot2 Wiggins Walk

Site Information		
Bedrooms:	4	
LTAR:	0.275	
Daily Flow (gpd):	480	
25% Reduction?	YES	
Trench Length (ft):	440	
Septic Tank Size (gal):	1000	
Pump Tank Size (gal):	1000	
Supply Line Length (ft):	60	
Supply Line Dia. (in):	1.5	
Total Design Flow:	480	
Total Drainfield Length:	440	
4" Pipe:	0.65079	
Total Drainfield Vol.:	286.35	
Percent of Dose Vol.:	0.66	(from :1900 rules)
Dosing Vol. (gal):	189.0	
Pump Tank (gal/in):	21.0	(average)
Drawdown (in):	9.0	
Ground Elev. at Pump Tank (ft):	880	
Pump Tank Install Depth (ft):	1	
Pump Tank Elevation (ft):	879	
Pump Elev. Difference (ft):	5	(typical configuration)
Pump Elev. (ft):	874	
Elev. of Highest Drainline (ft):	880	
Elev. Head (ft):	6.0	
Friction Head (ft):	0.91	
Pressure Head (ft):	0.0	
Total Dynamic Head:	6.9	
TDH Capacity (ft):	6.9	
Flow Capacity (GPM):	13	(typical value)
Pump Run (min./dose):	14.54	
Recommended Pump:	Zoeller Model 151	or approved equivalent
Anti-Siphon Hole Required		



Septic System Layout Specifications

Lot 2 Wiggins Walk

Piedmont Environmental Associates Job # 2987

Layout for a 4-BR home

LINE #	FLAG COLOR	FLAGGED LINE LENGTH (ft)	DESIGN LINE LENGTH (ft)	Chambers Needed
TBM INSTR. 1				
1	red	85	84	21
2	orange	111	108	27
3	yellow	120	120	30
4	green	132	128	32
	Total:	448	440	

	DESIGN LINE LENGTH (ft)	SOIL LTAR GPD/FT^2	SYSTEM TYPE	DESIGN LTAR GPD/FT^2	DISTRIBUTION MEDIA	DISTRIBUTION METHOD	DESIGN FLOW (GPD)
System	440	0.275	Accepted	0.344	Q4 Chamber	Pump to serial	480
Repair	****	0.25	Accepted	0.3125	Q4 Chamber	Pump to Serial	480

****REPAIR BASED ON SQUARE FOOTAGE. RULE .1945 MET

Notes:

- **All measures in feet.
- **Nitrification lines are demonstrated on contour via colored pin flags.
- ** Soil evaluated by LSS
- ** Laid out on 9-foot centers on contour

PIEDMONT
ENVIRONMENTAL
ASSOCIATES, P.A.

March 9, 2022 Project # 2987

Iredell County Public Health
Environmental Health Section
Attn: Environmental Health Director or Program Specialist

To whom it may concern,

In accordance with Regulatory Reform Act of 2018; Session Law 2018-114 Sections 9 through 12, this statement is submitted respectfully to satisfy signed and dated statement requirement from the property owner or owner's legal representative:

"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)."

Sincerely,

Mr. Mike Davis, Caruso Homes

216 S. Swing Rd., Suite 1 Greensboro, NC 27409 (336) 260-3564

March 9, 2022 Job# 2987

SL 114 - SITE/SYSTEM SUMMARY AND SPECIFICATIONS

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

PERMIT SUBJECT TO REVOCATION IF DISPOSAL AREA IS DISTURBED

☒ **IMPROVEMENT PERMIT** ☒ **CONSTRUCTION AUTHORIZATION**

Applicant: Caruso Homes **Lot Number:** 2 **Subdivsion:** Wiggins Walk

County: Iredell **Pin or Tax Map Number: 4678-21-7627**

Site Address: 726 Wiggins Road

Number Bedrooms (residence): 4 **Daily Design Flow: 480**

PRIMARY SYSTEM: 25% RED. LTAR: 0.275 LINEAR FOOTAGE: 440'

TRENCH DEPTH: 30 inches on shallow side of ditch

REPAIR SYSTEM: 25% RED. LTAR: 0.25 LINEAR FOOTAGE: 480'

TRENCH DEPTH: 30 inches on shallow side of ditch

SEPTIC TANK: 1000 gal **PUMP TANK:** 1000 gal

DISTRIBUTION: pump to distribution box serial distribution at distal ends **LAST 2 INCHES OF STEPDOWNS MUST BE DUG BY HAND USE QUICK 4 INFILTRATOR PRODUCT**

Square Footage: Repair Area +/-8400 sf **Distance to property line:** 10 ft

Distance to house: 5 ft min **Distance to wells:** 100 ft min

Permit Conditions: Install on contour. Do not install during wet soil conditions. Do not clear septic area in wet conditions, keep disturbance to minimum when clearing septic area. Variation from design must be approved by LSS and Iredell County. Stepdowns must be correct height and on distal ends

Disclaimer: No warranty written or implied on any septic system. SEE REPORT.

provides no warranty either written or implied regarding the lifespan of any type of septic system. Piedmont Environmental Associates utilizes accepted soil science practices and assigns LTAR's and proposes trench depths based on field observation, law, rule, published data and accepted practice of the profession. Piedmont Environmental Associates however cannot guarantee the life span of any type of septic system component, trench media, pretreatment device, distribution device, distribution method, or installation method as there are simply too many variables that are not within the control of Piedmont Environmental Associates.

If you have any further questions, please feel free to call. Thank you for the opportunity to serve.

Sincerely,



R. Edwin Stott, REHS, MSEH
NC Licensed Soil Scientist
Piedmont Environmental Associates

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

15A NCAC 18A .1950 LOCATION OF SANITARY SEWAGE SYSTEMS

(a) Every sanitary sewage treatment and disposal system shall be located at least the minimum horizontal distance from the following:

(1) Any private water supply source, including any well or spring 100 feet;
(2) Any public water supply source 100 feet;
(3) Streams classified as WS-I 100 feet;
(4) Waters classified as S.A. 100 feet, from mean high water mark;
(5) Other coastal waters 50 feet, from mean high water mark;
(6) Any other stream, canal, marsh, or other surface waters 50 feet;
(7) Any Class I or Class II reservoir 100 feet, from normal pool elevation;
(8) Any permanent storm water retention pond 50 feet, from flood pool elevation;
(9) Any other lake or pond 50 feet, from normal pool elevation;
(10) Any building foundation 5 feet;
(11) Any basement 15 feet;
(12) Any property line 10 feet;
(13) Top of slope of embankments or cuts of 2 feet or more vertical height 15 feet;
(14) Any water line 10 feet;
(15) Drainage Systems:
(A) Interceptor drains, foundation drains, and storm water diversions
(i) upslope 10 feet,
(ii) sideslope 15 feet, and
(iii) downslope 25 feet;
(B) Groundwater lowering ditches and devices 25 feet;
(16) Any swimming pool 15 feet;
(17) Any other nitrification field (except repair area) 20 feet;

(b) Ground absorption sewage treatment and disposal systems may be located closer than 100 feet from a private water supply, except springs and uncased wells located downslope and used as a source of drinking water, for repairs, space limitations, and other site-planning considerations but shall be located the maximum feasible distance and in no case less than 50 feet.

(c) Nitrification fields and repair areas shall not be located under paved areas or areas subject to vehicular traffic. If effluent is to be conveyed under areas subject to vehicular traffic, ductile iron or its equivalent pipe shall be used. However, pipe specified in Rule .1955 (e) may be used if a minimum of 30 inches of compacted cover is provided over the pipe.

(d) In addition to the requirements of Paragraph (a) of this Rule, sites to be used for subsurface disposal for design units with flows over 3,000 gallons per day, will require more stringent setback requirements.

March 9, 2022 Project # 2987

Caruso Homes
Mike Davis
2120 Baldwin Ave, Suite 200
Crofton, NC 21114

RE: SL 114 Soil Report, Property Located at 726 Wiggins Road, Iredell County, PIN: 4678217627 (Approx. 1.04 acres), Lot 2 Wiggins Walk

Dear Mr. Davis,

This report details the findings of a detailed site and soil evaluation performed on the property described above. The evaluation was conducted at the clients request in order to determine the site's suitability for the installation of sub-surface wastewater disposal systems to serve domestic strength wastewater for a four-bedroom single family residence using conventional or accepted type wastewater disposal systems.

The evaluation was conducted during moist soil conditions with the use of hand auger. Characteristics that affect the suitability of sub-surface systems include soil depth to expansive clay, seasonal high-water table, rock, and unusable saprolite. Topography and slope also affect the suitability of an area for septic systems. The evaluation of these components was conducted on the site in accordance with 15A NCAC 18A .1900 "Laws and Rules for Sewage Treatment and Disposal Systems". This report is intended to fulfill the requirements for a permitting process described in S.L. 2018-114 section 11(c). Criteria for this application process are given below:

§ 130A 335. Wastewater collection, treatment and disposal; rules
(a1) Any proposed site for a residence, place of business, or a place of public assembly located in an area that is not served by an approved wastewater system for which a new wastewater system is proposed or repair is necessary for compliance may be evaluated for soil conditions and site features by a person licensed pursuant to Chapter 89F of the General Statutes as a licensed soil scientist. For purposes of this subsection, "site features" include topography and landscape position; soil characteristics (morphology); soil wetness; soil depth; restrictive horizons; available space; and other applicable factors that involve accepted public health principles. A person licensed pursuant to Chapter 89E of the General Statutes as a licensed geologist may evaluate the proposed site or repair area, as applicable, for geologic and hydrogeologic conditions.
(a2) Evaluations conducted by a licensed soil scientist or a licensed geologist pursuant to subsection (a1) of this section to produce design and construction features for a new proposed wastewater system or a proposed repair project for an existing wastewater system, including the

addressing of any special hydrologic conditions that may be required under the applicable rules for an authorization to construct or for permitting, shall be approved by the applicable permitting authorities under G.S. 130A 336 and G.S. 130A 336.1, provided both of the following conditions are met:

(1) The evaluation of soil conditions, site features, or geologic and hydrogeologic conditions satisfies all requirements of this Article. The evaluation shall not cover areas outside the scope of the applicable license.

(2) The licensed soil scientist or licensed geologist conducting the evaluation maintains an errors and omissions liability insurance policy issued by an insurer licensed under Chapter 58 of the General Statutes in an amount commensurate with the risk.

Findings

Soils in the proposed area were found to be provisionally suitable with a recommended LTAR of 0.275 gpd/ft^2 for the primary and 0.25 gpd/ft^2 for the repair area. Augers were used at first and the site was found to be shallow to saprolite. A backhoe was brought in to evaluate the saprolite. Since this is a saprolite system, the minimum setback to any well is 100 feet. A layout was performed on site and yielded enough line for a four-bedroom chamber type primary and repair wastewater system. This system would need a trench depth of 30 inches. **Please note that mechanical grading or traffic over the drainfield area is strictly prohibited**. **Traffic over the drainfield area could render the site unsuitable. Take every possible precaution to protect and preserve the wastewater disposal area.**

Design flow with residential systems utilizes the number of bedrooms and assumes no more than two residents per bedroom at 60 gallons per resident or 120 gallons per bedroom. This is how the design flow of 480 gallons per day is calculated. The wastewater system is designed to handle a *maximum* flow of 480 gallons per day. This flow should not be maintained for any sustained length of time or oversaturation can occur in the trenches. An average daily water usage of 50% is recommended for peak performance. **No garbage disposals should be added to the wastewater stream.** Water softener waste should not be added to the wastewater stream. Fats, oils and greases or FOG should not be added to the wastewater stream and can cause premature failure. Dispose of fats, oils, greases and garbage properly in household waste. There should be no traffic over the wastewater system area. Piedmont Environmental recommends a preconstruction conference prior to any installation to ensure that the system is placed in the correct area once the site is cleared of vegetation. Please note that mechanical clearing that is done in wet conditions or done by someone not following best management practices can render an otherwise usable site unsuitable. Piedmont Environmental Associates, PA highly recommends using a reputable septic system installer that is licensed in North Carolina to perform or oversee any clearing.

This report discusses the general location of potentially usable soils for on-site wastewater disposal and the soil and site limitations on the property that exists at the time of the evaluation. Piedmont Environmental Associates, PA ("Piedmont") provides professional consulting specializing in the practice of soil science and wastewater management. Piedmont is therefore hired for its professional opinion regarding these matters. This report is being prepared as part of a packet to obtain an improvement permit under SL114. Piedmont Environmental Associates

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PIEDMONT ENVIRONMENTAL ASSOCIATES, P.A.

March 9, 2022 Project # 2987

Iredell County Public Health
Environmental Health Section
Attn: Environmental Health Director or Program Specialist

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Sincerely,

DocuSigned by:
Mike Davis
F6E3E714E86A457...

Mr. Mike Davis, Caruso Homes

216 S. Swing Rd., Suite 1 Greensboro, NC 27409 (336) 260-3564

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