

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

PIN/Lot Identifier: 0633-75-8451

Issued To: Davidson Homes

Property Location: Castle Pond Way - Fuquay-Varina, NC

Subdivision: Prince Place Phase II Lot #: 40 Block: _____ Section: _____

LSS Report Provided: Yes No

If yes, name and license number of LSS: Alex Adams - LSS#1247

New Repair Expansion System Relocation

Proposed Structure: SFH

Proposed Wastewater System Type: Type III (b) (Initial) Type III (b) (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: 480 GPD Proposed LTAR (Initial): 0.35 Proposed LTAR (Repair): 0.35

Design Wastewater Strength: domestic high strength industrial process

Number of bedrooms: 4 Number of Occupants: 8 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:

Licensed Soil Scientist Print Name: Alex Adams

Licensed Soil Scientist Signature: _____ Date: 6/5/23

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

See attached site sketch

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date Initials

Permit Number: _____

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: _____ Date of Issuance: _____

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: _____

See attached site sketch

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

PIN/Lot Identifier: 0633-85-8451

Issued To: Davidson Homes

Property Location: Castle Pond Way - - Lot #40 Prince Place - Fuquay-Varina

AOWE/PE Plans/Evaluations Provided: Yes No If yes, name and license number of AOWE/PE: Alex Adams - AOWE#10021E

Facility Type: SFH

New Expansion Repair System Relocation

Basement? Yes No Basement Fixtures? Yes No

Type of Wastewater System** Type III (b) (Initial) Type III (b) (Repair)

Design Daily Flow: 480 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: 345 feet Trench/Bed Spacing: 9 feet on center

Drainfield square footage: 1035 Trench/Bed Width: 36 inches LTAR: 0.35 gpd/ft²

Soil Cover: 6 inches Slope Adjusted Maximum Trench/Bed Depth: 24 inches

Aggregate Depth: 6 inches above pipe 6 inches below pipe 12 inches total

Pump Tank Size (if applicable): 1000 gallons Requires more than 1 pump? Yes No

Pump Requirements: 14.2 ft. TDH vs. 21.3 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: Celinda Howell DAVIDSON HOMES RALEIGH DIVISION PERMITTING COORDINATOR

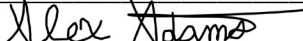
Owner/Legal Representative Signature:  Date: 06/06/23

Pre-Construction Conference Required: Yes No

Conditions: _____

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: Alex Adams

AOWE/PE Signature:  Date: 6-5-23

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

See attached site sketch

County: _____

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date Initials

Permit Number: _____

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: _____ Date of Issuance: _____

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: _____

See attached site sketch

Adams Soil Consulting, PLLC
1676 Mitchell Road
Angier, NC 27501
919-414-6761
alexadams@bcsoil.com

June 5, 2023
Project #479

“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).”

“The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335 (a2), (a5), and (a6)”

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

RE: Castle Pone Way – Fuquay-Varina. NC (Harnett County) -Lot #40 – Prince Place Subdivision for Davidson Homes (PIN#0633-75-8451)

To whom it may concern:

Adams Soil Consulting (ASC) conducted a preliminary soil evaluation on the above referenced parcel to determine the areas of soils which are suitable for subsurface wastewater disposal systems (conventional & LPP). The soil/site evaluation was performed using hand auger borings during moist soil conditions based on the criteria found in the State Subsurface Rules, 15ANCAC 18A .1900 “Laws and Rules for Sewage Treatment and Disposal Systems”. From this evaluation, ASC is providing the attached 4-bedroom septic design.

The suitable soils found on the subject property were relatively consistent in the initial and repair areas. The area designated for the initial/primary septic system (see attached septic plan) was found to contain soils with greater than 24 inches in depth before a restrictive horizon was encountered.

Please find the attached wastewater soil/site evaluation forms for specific soil properties found in the initial and repair areas as well as assigned soil long term acceptance rate (LTAR). Numerous soil borings were made throughout the property and representative soil profile descriptions for the primary septic field and repair area are provided. A location sketch for profile descriptions is also attached. The initial and primary septic fields were sized based on a flow rate of 480 gallons/day and utilizing Accepted Status. Any unauthorized site disturbance, filling, soil removal, or layout changes may result in the permit being revoked.

The septic installer contractor shall install the primary and repair (if needed) system on contour, see attached site plan for the primary system and repair locations. No underground utilities, water lines, or sprinkler systems shall be placed into the initial or repair septic areas. Installation must meet all state and local county regulations for septic system installation. The trenches must be installed in the same location as the site plan. If the installation is in question at the time of installation call me (Alex Adams) at 919-414-6761.

This report discusses the location of provisionally suitable soils identified on the property and does not guarantee the future function of any waste water disposal system installed.

If you have any questions regarding the findings on the attached map or in this report, please feel free to contact me anytime.

Sincerely,



Alex Adams
NC Licensed Soil Scientist #1247
AOWE Certification: 10021E



Prince Place - Phase II
 4-Bedroom Septic Design
 Lot # 40
 Harnett County

*House footprint to be field staked by surveyor and system verified prior to any construction

**Septic area must not be altered by construction activities.

***No cuts of 2' or greater within 15' of septic area

**** Recommend protective barrier around septic field during construction.

*If plumbing is not sufficient a pump tank will be required to septic field.

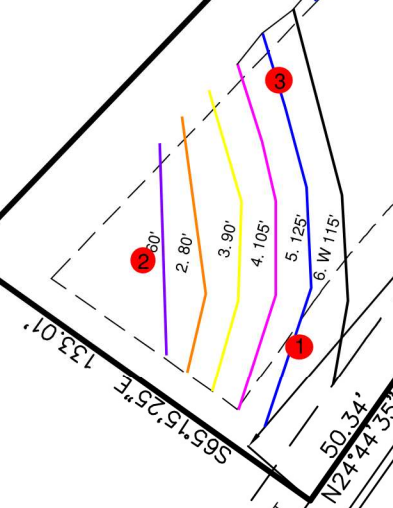
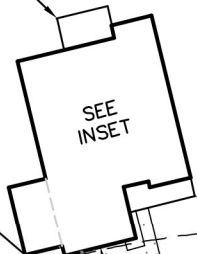
INITIAL:
 Lines 4-6 (345')
 Accepted Status
 Pressure Manifold
 REPAIR:
 Lines 1-3 (230")
 PPBPS
 Pressure Manifold

40
 75,162 S.F.
 1.73 AC

S33°22'55"W
 617.51'

SETBACKS (TYP.)
 74'-4"

N00°59'10"W
 378.86'



CASTLE POND WAY
 50' PUBLIC R/W & UTILITY EASEMENT

Adams
 Soil Consulting
 919-414-6761
 Job #479

GRAPHIC SCALE
 1" = 60'



Prince Place - Phase II
 4-Bedroom Septic Design
 Lot # 40
 Harnett County

*House footprint to be field staked by surveyor and system verified prior to any construction

**Septic area must not be altered by construction activities.

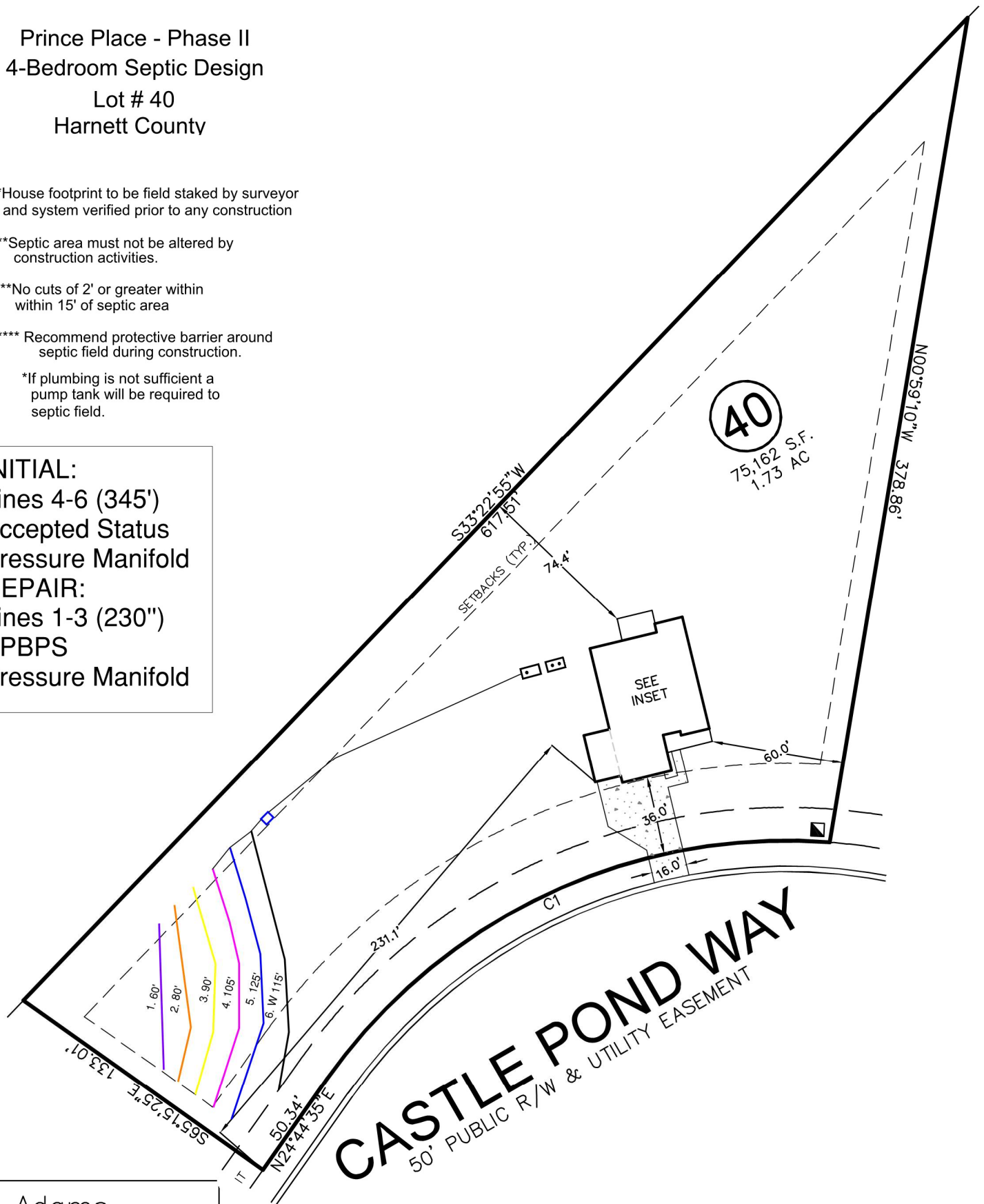
***No cuts of 2' or greater within 15' of septic area

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*If plumbing is not sufficient a pump tank will be required to septic field.

INITIAL:
 Lines 4-6 (345')
 Accepted Status
 Pressure Manifold
 REPAIR:
 Lines 1-3 (230")
 PPBPS
 Pressure Manifold

40
 75,162 S.F.
 1.73 AC



Adams
 Soil Consulting
 919-414-6761
 Job #479

CASTLE POND WAY
 50' PUBLIC R/W & UTILITY EASEMENT

GRAPHIC SCALE
 1" = 60'



RESIDENTIAL PRESSURE MANIFOLD DESIGN

Lot 40 - Prince **Place Phase II**

of BDR: **4** Daily Flow: **480** gal/day L.T.A.R.: **0.3500** gal/day/sq.ft

Septic Tank: **1000** gals Pump Tank: **1000** gals Sq. Foot: **1035** System Type: **Accepted**

Number of Taps: **3** Length of Trenches: **345** ft(See Tap Chart for Details)

Depth of Trenches: **24** in Manifold Length: **36** in

Manifold Diameter: **4in sch 80pvc** Tap Configuration: 6 in spacing **1** side(s) of manifold

Supply Line: length: **125** ft Diameter: **2** in sch 40pvc

Friction Loss + Fitting Loss: **2.17** ft(supply line length + 70' for fittings in pump tank)

Design Head: **2** ft Elevation Head: **10.00** ft

Total Head: **14.17** ft Pump to Deliver: **21.33** gals/min at **14.17** ft head

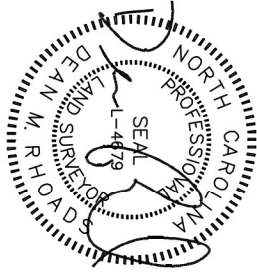
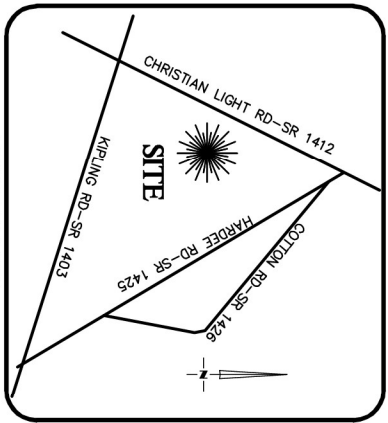
Dosing Volume: **157** gals,

Drawdown: **157** gals divided by **21.4** gals/in = **7.3** inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

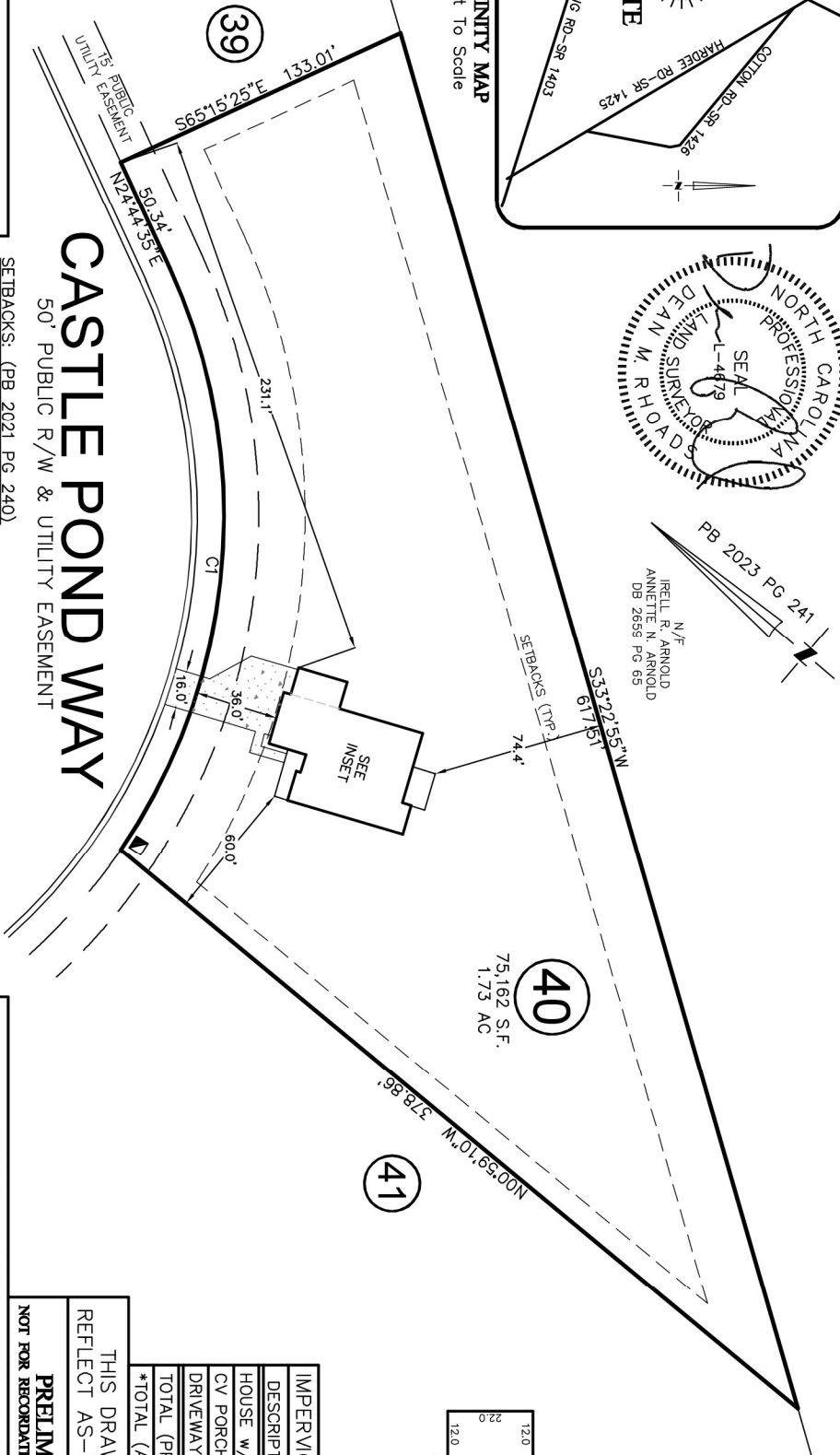
TAP CHART

Benchmark	0	is = 100.00	set at					Design Head:	2				
Pump tank elev.	9	91.00	Pump elev.	86.00	Manifold elev.	96.00							
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	Spacing of Panels (in)		
4	Pink	5.00	95.00	115	1/2in SCH 40	7.11	160.00	345	0.4638				
5	Blue	5.70	94.30	115	1/2in SCH 40	7.11	160.00	345	0.4638				
6	White	6.50	93.50	115	1/2in SCH 40	7.11	160.00	345	0.4638				
Total Feet =				345	gal/min =	21.33	LTAR =		0.3500				
Feet Required =				343	Velocity =	2.04	(ltar + 5%)		0.3675				
Total # of Panels (PPBPS)				Des. Flow		480	(ltar w/25% red)		0.4667				
% of Dose Vol.				Pump Run=		22.50	(ltar + 5%)		0.4900				
Dose Volume				Tank Gal/IN		21.4							
Dose Pump Time				Elev. Head		10.00							
Drawdown in Inches													
Comments:													



N./E.
IRELL R. ARNOLD
ANNETTE N. ARNOLD
DB 2655 PG 65

VICINITY MAP
Not To Scale



SETBACKS: (PB 2021 PG 240)

FRONT: 35' FROM R/W
REAR: 25'
SIDE: 10'
CORNER LOT SIDE: 20'

CURVE	RADIUS	ARC LENGTH	CH LENGTH	CH BEARING
C1	255.00'	263.18'	251.66'	N54°19'10"E

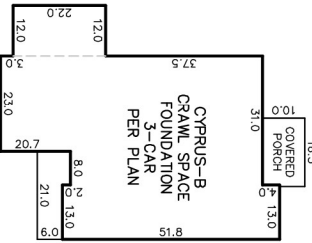
THIS PROPERTY MAY BE SUBJECT TO ANY AND ALL APPLICABLE DEED RESTRICTIONS, EASEMENTS, RIGHT-OF-WAY, UTILITIES AND RESTRICTIVE COVENANTS WHICH MAY BE OF RECORD OR IMPLIED

60
0
60
SCALE: 1" = 60'

RESIDENTIAL LAND SERVICES, PLLC.
1917 Evans Road
Cary, North Carolina 27513
Phone: (919) 378-9316
Firm License # P-0873

40
75,162 S.F.
1.73 AC

41



*PB 2023 PG 241

IMPERVIOUS SURFACE AREA	DESCRIPTION	AREA
HOUSE w/ PORCH		2,884 S.F.
CV PORCH/MISC		171 S.F.
DRIVEWAY & WALKS		1,061 S.F.
TOTAL (PROPOSED)=		4,115 S.F.
*TOTAL (ALLOWED)=		4,208 S.F.

THIS DRAWING DOES NOT REFLECT AS-BUILT INFORMATION
PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES, OR SALES

HOUSE LOCATION PLOT PLAN
FOR
CASTLE POND WAY
LOT 40, PRINCE PLACE, PHASE 2
Hectors Creek Township, Harnett County, North Carolina

PROPERTY OF: **DAVIDSON HOMES**

PLAT BOOK 2023 PAGE 240-241 DEED REFERENCE _____

DRAWN: JMW SURVEYED: N/A CHECKED: DMR DATE: MAY 31, 2023

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

OWNER: Davidson Homes

ADDRESS:

PROPOSED FACILITY: Single Family, 4-bedroom PROPOSED DESIGN FLOW (.1949): 480gpd

LOCATION OF SITE: Prince Place lot 40

WATER SUPPLY: Public Water

EVALUATION METHOD: Auger Boring

APPLICATION DATE:

DATE EVALUATED: 4-27-23

PROPERTY SIZE: 1.69 Acres

TYPE OF WASTEWATER: Sewage

P R O F I L E #	.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	
1	Linear Slope/2%	0-24	GR/SL	FR/SEXP/NS	7.5 YR 7/2 @ 40"	40"	N/A	N/A	PS/.35
		24-40	SBK/CL	FI/SEXP/SS					
2	Linear Slope/2%	0-44	GR/SL	FR/SEXP/NS	N.O	44"	N/A	N/A	P.S/.6
		44	AR						
3	Linear Slope/2%	0-24	GR/SL	FR/SEXP/NS	7.5 YR 7/2 @ 38"	38"	N/A	N/A	U/PS/.35
		24-38	SBK/C	FI/SEXP/SS					
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	OTHER FACTORS (.1946): _____
Available Space (.1945)	S	S	SITE CLASSIFICATION (.1948): P.S
System Type(s)	Type III G	Type III (b)	EVALUATED BY: A. Adams OTHER(S) PRESENT:
Site LTAR	0.35	0.35	

COMMENTS: