HAL OWEN & ASSOCIATES, INC.
SOIL & ENVIRONMENTAL SCIENTISTS
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11 October 2005

Mr. Oliver Tolksdorf
Harnett County Environmental Health
307 West Cornelius Harnett Blvd.
Lillington, NC 27546

Reference: Septic System Design Layout
Lot 22, Ballard Woods Subdivision

Dear Mr. Tolksdorf,

A site meeting was conducted with yourself, Dr. David McCloy, the regional Soil Scientist and I for the above referenced property on August 4, 2005. The site is located at the corner of subdivision road Mackenzie Court and Ruth Circle in Ballard Woods Subdivision off the southern side of Ballard Road (SR 1437), Hector's Creek Township, Harnett County, North Carolina. During that site visit, it was determined that the soils were of a useable nature for ultra-shallow conventional or innovative drainlines and needed to be demonstrated on site to determine if an adequate amount of space was available on the lot to support a subsurface sewage waste disposal system and 100 % repair area for a typical three-bedroom home. It is my understanding that public water supplies will be utilized for this lot. A foundation drain will not be possible. A gravity driven septic system to three 100-ft innovative drainlines is proposed for the initial septic system and a pressure-manifold to five unequal length innovative drainlines totaling 305 linear feet is the proposed design for the repair septic system. Both systems are proposed with ultra-shallow trench bottom depths of 12 inches below ground surface on the downhill side of the trench.

Attached is the septic system layout and supporting information for this lot. I trust that this report provides all the information that you require at this time. If you have any questions or need additional information, please contact me at your convenience.

Sincerely,

Laura J. Fortner

Laura J. Fortner
Licensed Soil Scientist

HAL OWEN & ASSOCIATES, INC.
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PROPERTY ID #:
PROPERTY RECORDED:
COUNTY: Harnett

SOIL/SITE EVALUATION
FOR
ON-SITE WASTEWATER SYSTEM

APPLICANT: Mr. Beau Harrison OWNER: ☒ AGENT: ☐ PHONE: (919) 422-3318
ADDRESS: Oak City Homes DATE EVALUATED: 4 August 2005
P.O. Box 6127 PROPOSED FACILITY: 3 bedroom residential
Raleigh, NC 27628 PROPERTY SIZE: Lot 22 (25,209 sqft)
LOCATION OF SITE: corner of Mackenzie Court and Ruth Circle
WATER SUPPLY: On-Site Well ☐ Comm. Well ☐ Public ☒ Other EVALUATION METHOD: Auger Boring ☐ Pit ☒

PROFILE 1

HORIZON	DEPTH (IN)	MATRIX	MOTTLES	MOTTLE ABUNDANCE/ SIZE / CONTRAST	.1941 (a)(1) TEXTURE	.1941 (a)(2) STRUCTURE	.1941 (a)(3) MINEROLOGY	CONSISTENCE MOIST	CONSISTENCE WET
A	0-4				SL	1 GR	NEXP	VFR	NS/NP
Bt	4-32				CL	2 SBK	SEXP	FI	SS/SP
C	32+				SL	0 MA	SEXP	FR	NS/NP

.1940 LANDSCAPE POS./ SLOPE%	8% Linear	PROFILE LTAR	0.3 gpd/sqft
.1942 WETNESS CONDITION		SYSTEM TYPE	Ultra-shallow conventional
.1943/.1956 SAPROLITE	32"		
.1944 RESTRICTIVE HORIZON			
.1948 PROFILE CLASSIFICATION	Provisionally Suitable for modified or alternative systems		
COMMENTS:			

PROFILE 2

HORIZON	DEPTH (IN)	MATRIX	MOTTLES	MOTTLE ABUNDANCE/ SIZE/ CONTRAST	.1941 (a)(1) TEXTURE	.1941 (a)(2) STRUCTURE	.1941 (a)(3) MINEROLOGY	CONSISTENCE MOIST	CONSISTENCE WET
A	0-4				SL	1 GR	NEXP	FR	NS/NP
Bt	4-27				CL	2 SBK	SEXP	FR	SS/SP
C	27+				SL	PL/MA	NEXP	FR	SS/NP

.1940 LANDSCAPE POS./ SLOPE%	Linear 8%	PROFILE LTAR	0.3 gpd/sqft
.1942 WETNESS CONDITION		SYSTEM TYPE	Ultra-shallow conventional
.1943/.1956 SAPROLITE	27"		
.1944 RESTRICTIVE HORIZON			
.1948 PROFILE CLASSIFICATION	Provisionally Suitable for modified or alternative systems		
COMMENTS:			

PROFILE 3

HORIZON	DEPTH (IN)	MATRIX	MOTTLES	MOTTLE ABUNDANCE/ SIZE/ CONTRAST	.1941 (a)(1) TEXTURE	(a)(2) STRUCTURE	(a)(3) MINEROLOGY	CONSISTENCE MOIST	WET
A	0-2				SL	1 GR	NEXP	FR	NS/NP
Bt	2-28				C	2 SBK	SEXP	FI	MS/SP
C	28+				SL	MA	NEXP	FR	SS/NP

.1940 LANDSCAPE POS./ SLOPE%	Linear 8%	PROFILE LTAR	0.3 gpd/sqft
.1942 WETNESS CONDITION		SYSTEM TYPE	Ultra-shallow conventional
.1943/.1956 SAPROLITE	27"		
.1944 RESTRICTIVE HORIZON			
.1948 PROFILE CLASSIFICATION	Provisionally Suitable for modified or alternative systems		
COMMENTS:			

EVALUATED BY: Laura J. Fortner (LSS)

10-10-2005

Lot 22, Ballard Woods Subdivision

On-Site Wastewater Design Specifications

House Footprint: 52ft X 64ft
No Foundation Drain
Bedrooms: 3 (360 gpd)

Initial System: 3 X 100ft Gravity to Innovative Drainlines
on contour at 12 inches
Soil LTAR 0.3 gal/day/sqft
Repair System: Pressure Manifold to Innovative Drainlines
on contour at 12 inches
Soil LTAR 0.3 gal/day/sqft

Prepared By: KDB
Hal Owen & Associates, Inc.
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P.O. Box 400, 266 Old Coats Rd.
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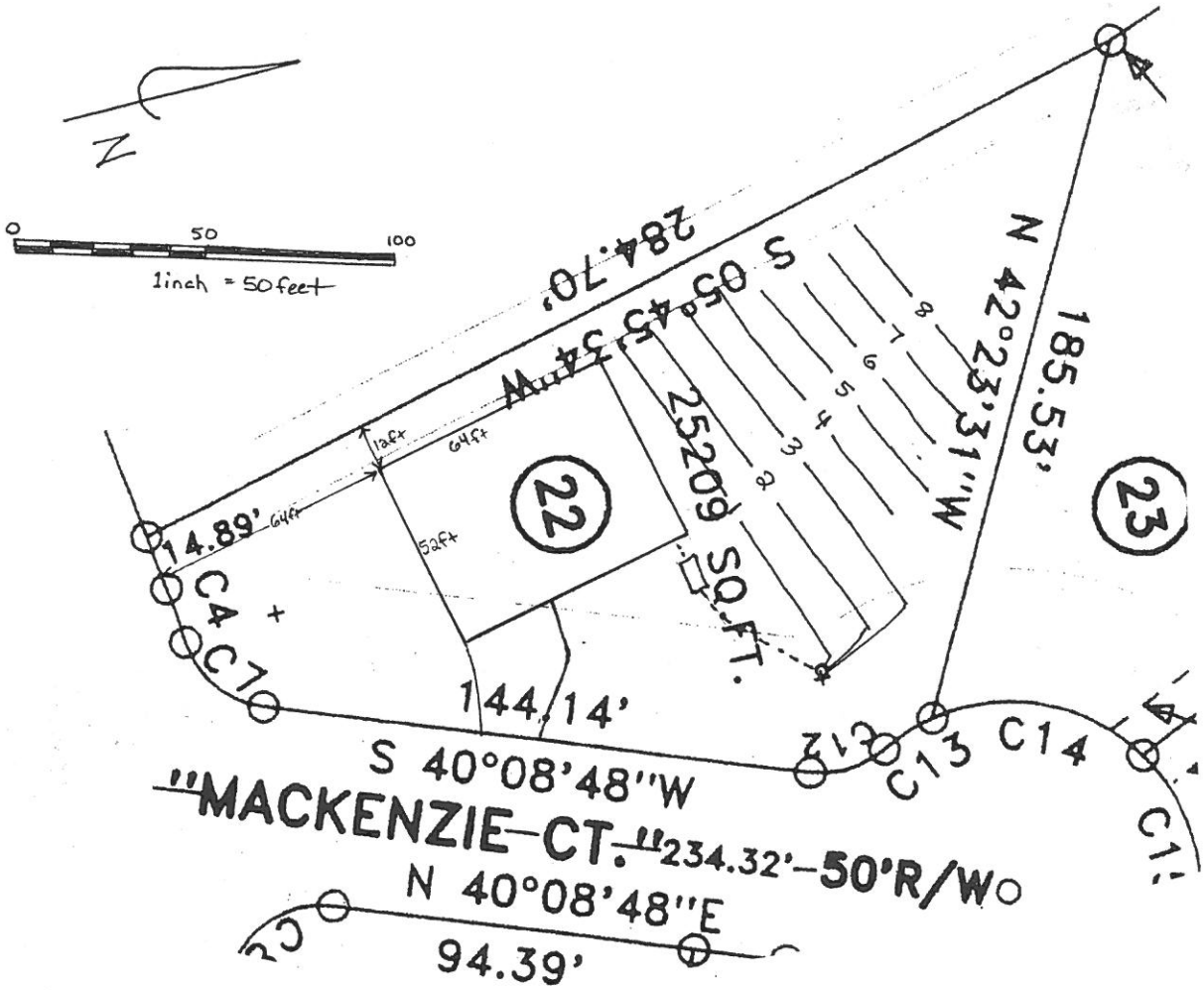
LEGEND

EIP	Septic Tank
Supply Line	Pump Tank
Proposed Well	D-Box
Existing Well	Pressure Manifold



Lines flagged at site on 9-ft centers.

Initial/ Repair	Line #	Color	Drainline Length(ft)	Measured Field Line Length (ft)	Relative Elevation (ft)
Initial	1	W	100	110	104.69
Initial	2	Y	100	114	103.37
Initial	3	B	100	105	102.35
Repair	4	R	70	69+	100.51
Repair	5	W	70	77	99.19
Repair	6	Y	55	61+	97.24
Repair	7	B	55	60	95.52
Repair	8	R	55	57	94.3
	9	W	-	45	92.4
	10	Y	-	39	
		Total:	605	607	EIP = 100