MAYCOCK
ENVIRONMENTAL

INVOICE

FOR:	Andrew Jenkins
ADDRESS:	12269 Edyth Lake Way Rancho Cordova, CA 95742
PROPERTY:	0 McDougald Road, Sanford, NC 27332 Harnett County, PIN 9579-52-3028
DATE OF INVOICE:	August 13, 2023
DATE OF SERVICE:	July 21, 2023
TYPE OF SERVICE:	Soil evaluation for 15.295 ac on McDougald Rd
DELIVERABLES:	Improvement Permit form for G.S. 130A-335(a2) Soil evaluation form and site sketch, maps
AMOUNT DUE:	$1,500.00 (FIFTEEN HUNDRED DOLLARS)
AMOUNT PAID:	
PAYABLE TO:	ROBIN MAYCOCK PEREZ 2415 Adams Farm Court Snow Camp, NC 27349-9236

(PAY BY CHECK OR VIA ZELLE APP TO 919 418 7645)

SUBMITTED BY:

Robin M. Perez

MAYCOCK
ENVIRONMENTAL

August 13, 2023

Andrew Jenkins
12269 Edyth Lake Way
Rancho Cordoba, CA 95742

Subject: Soil/Site Evaluation Report for 15.295 ac lot located on McDougald Road, Sanford, NC 27332, Harnett County, PIN 9579-52-3028.000

Dear Andrew:

On July 21, 2023, Robin M. Perez (LSS #1205) conducted soil suitability evaluation on the subject property, a 15.295-acre tract located adjacent to 14554 McDougald Road, Sanford. The soil evaluation determined that there is provisionally suitable soil for Type III (b, g) low profile chamber or shallow conventional accepted septic system for the proposed 4-bedroom home, according to North Carolina Laws and Rules for Sewage Treatment and Disposal (15A NCAC 18A .1900). The proposed house location may change and may require a pump to the septic system area shown on the site sketch. Public water is available.

The subject property consists of approximately 15.295 acres and is currently wooded with a dirt road crossing the property. The subject property has a narrow road frontage approximately 140.59 feet wide at and approximately 650 by 1100 feet wide at the back. The subject property was recorded in 2019.

The soils were evaluated in accordance with the North Carolina Laws and Rules for Sewage Treatment and Disposal (15A NCAC 18A .1900). Twelve auger borings were evaluated to depths of 36 to 48 inches below the ground surface. An area was identified south of the dirt road (soil borings 1, 8, 9, 10, 11 and 12) that will support at least four bedrooms with a shallow conventional or low-profile chamber system, due to suitable depths to 24 to 30 inches. At the estimated Long Term Acceptance Rate (LTAR) of 0.4 gallons per day per square foot there appears to be more than enough available area for the proposed 4-bedroom house with a design flow of 480 gallons per day. There is approximately 28,000 square feet of available area for the primary drainfield and the reserve area. A pumped chamber (Low Profile Infiltrator) system, (Type III (b, g)) with an initial septic system consisting of 4 100-foot-long trenches (3 feet wide on 9-foot centers) would provide 400 linear feet or 1200 square feet for the primary drainfield. The maximum trench depth is 12 inches below the existing ground surface, with six inches of cover.

An additional area was evaluated north of the dirt road and an area is shown (with soil borings 2, 3, 4, 6, and 7 that had only 16 to 18 inches of suitable soil that may work with a drip irrigation system with aerobic treatment. This is an expensive system and more area may be evaluated at a later date to identify more provisionally suitable areas.

The proposed specifications for the proposed septic systems are recommended as follows:

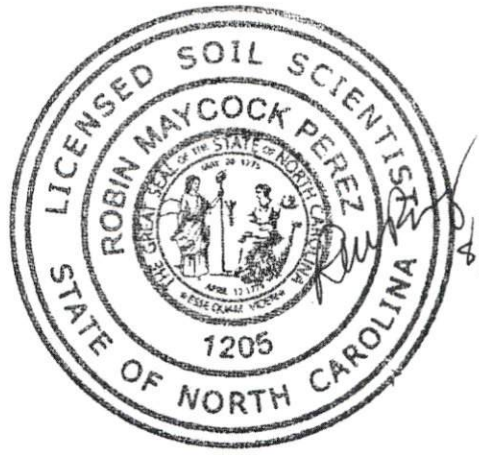
- Clearing and grubbing should be done with care to prevent soil disturbance or compaction.
- Maintain existing surface and natural contours when clearing the lot
- Install the septic system in dry soil conditions
- No grading or filling within proposed septic area
- 480 gallons per day design flow
- 0.4 LTAR for primary system
- 0.4 LTAR for repair system
- 1000-gallon septic tank
- 1000-gallon pump tank
- Maintain 10 feet setback from septic system/tanks to property line or to house
- Final grade shall divert runoff away from the septic system

The LSS/LG evaluation attached to this application is to be used to issue an Improvement Permit, in accordance with G.S. 130A-335 (a2) and (a3) with a Soil/Site Evaluation form, site map, property survey, and GIS maps showing aerial photographs with topographic contours and soil map units.

Please sign the Owner Authorization form and submit it with the attached Improvement Permit form, Soil Evaluation and Soil/Site Sketch forms to the Harnett County Environmental Health Department for approval with a completed application form and fee. I have included several attachments for your reference. If you have any questions regarding this report, please contact me. Thank you for allowing Maycock Environmental to perform this soil and site evaluation for you.

Sincerely,

Robin Maycock Perez
NC Licensed Soil Scientist #1205



Enclosed:
- Owner Authorization form
- Improvement Permit application form
- Soil/Site Evaluation Summary Form
- Property Survey
- Harnett County GIS maps
- NRCS Web Soil Survey excerpt

MAYCOCK
ENVIRONMENTAL

Date: August 13, 2023

Harnett County Environmental Health
307 W. Cornelius Harnett Blvd.
Lillington, NC 27546

RE: Improvement Permit Application Submittal by Robin Maycock Perez of Maycock Environmental for Andrew Jenkins, for 15.295 ac property located on McDougald Road, Sanford, NC 27332, Harnett County, PIN: 9579-52-3028

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: Andrew Jenkins

Owner's Signature: X

Owner's Representative: Robin M. Perez LSS 1205

Signature: Robin M Perez

Date: 8/13/2023

Permit #: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Submittal Includes: ☒ (a2) Improvement Permit ☐ (a2) Construction Authorization ☐ Fee $_____

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

County: HARNETT

PIN/Lot Identifier: 9579-52-3028.000

Issued To: ANDREW JENKINS

Property Location: 0.67 MI WEST OF DOLLHOUSE RD, ON NORTHSIDE OF MCDOUGALD RD

Subdivision (if applicable) (ADJACENT TO 14554 MCDOUGALD RD) Lot #: _____ Block: _____ Section: _____

LSS Report Provided: Yes ☒ No ☐

If yes, name and license number of LSS: ROBIN M. PEREZ LSS1205

New ☒ Expansion ☐ System Relocation ☐ Change of Use ☐

Proposed Structure: 4 BEDROOM HOUSE

Number of bedrooms: 4 Number of Occupants: 8 Other: _____

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

Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.4 Proposed LTAR (Repair): 0.4

Proposed Wastewater System Type*: III b,g LOW PROFILE (Initial) Pump Required: ☐ Yes ☐ No ☒ May be required

Proposed Wastewater System Type*: III b,g " " (Repair) Pump Required: ☐ Yes ☐ No ☒ May be required

Please include system classification for proposed wastewater system types in accordance with 15A NCAC 18A .1961 Table V(a)

Saprolite System (initial): ☐ Yes ☒ No Saprolite System (repair): ☐ Yes ☒ No

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

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

Usable Soil Depth (Initial): 24-30" Usable Soil Depth (Repair): 24-30"

Max. Trench Depth (Initial)‡: 12" Max. Trench Depth (Repair)‡: 12" ***‡Measured on the downhill side of the trench***

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

Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared 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:
PS SOIL AREA SHOWN WITH 24-30" SUITABLE DEPTH, 28,000 SF 140' X 200',

Licensed Soil Scientist Print Name: Robin M. Perez LSS1205

Licensed Soil Scientist Signature: Robin M Perez Date: 8/13/2023

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

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH
LOCATION: 5605 Six Forks Road, Building 3, Raleigh, NC 27609
MAILING ADDRESS: 1632 Mail Service Center, Raleigh, NC 27699-1632
www.ncdhhs.gov • TEL: 919-707-5854 • FAX: 919-845-3972

Permit #: _____

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date *Initials*

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ 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 Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) 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 permit is subject to revocation if the site plan, plat, or the intended use changes. 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 the conditions of this permit.

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

Permit #: _____

Re-submittal of Improvement Permit

LHD USE ONLY: This IP resubmittal received: _____ *Date* by _____ *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a3) for issuance of the Improvement Permit:

_____

_____

_____

_____

I, _____ *Licensed Soil Scientist (Print Name)* hereby attest that the information required to be included with this re-submittal is accurate and complete to the best of my knowledge and that the proposed Improvement Permit meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ *Signature of Licensed Soil Scientist*

_____ *Date*

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Improvement Permit

The review for completeness of this Improvement Permit re-submittal was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ 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 Applicant on _____ *Date*

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: 9579-52-3028
DATE OF EVALUATION: 7/21/23
COUNTY: HARNETT

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	SS 2% PS	0-18	GR, SL	FR, NP, NS	30" 10yr 7/2 PS	40"+ PS	—	—	PS 0.4
		18-30	w SBK, SCL	F, SP, SS, SXP					
		30-40	w SBK, SCL	VF, SP, SS, SXP					
2	SS 3% PS	0-8	GR, SL	FR, NP, NS	18" 10yr 8/1 10yr 8/1.5 W/PS DRIP	28"+ W/PS	—	—	W/PS DRIP SFC/6" 0.3
		8-16	ABK, SCL	F, SP, SS, SXP					
		18-24	SBK, C	F, P, S, SXP					
		24-28	SBK, C	F, P, S, SXP					
3	SS 3% PS	0-6	GR, SL	FR, NP, NS	24" 10yr 8/1 10yr 8/2 W/PS LP ACCEP.	40"+ PS	—	—	W/PS 12" 0.3 DRIP
		6-12	ABK, SCL	F, SP, SS, SXP					
		12-24	SBK, C	F, P, S, SXP					
		24-40	SBK, C	F, P, S, SXP					
4	SS 5% PS	0-6	GR, SL	FR, NP, NS	24" 10yr 8/2 W/PS	48" PS	—	—	W/PS 12" 0.3 DRIP
		6-12	GR, SCL	F, SP, SS, SXP					
		12-24	SBK, SC	F, P, S, SXP					
		24-48	SBK, SC	F, P, S, SXP					
5	SS 5% PS	0-8	GR, SL	FR, NP, NS	48" PS	48" PS	—	—	PS 0.4 CONV.
		8-18	GR, SL	FR, NP, NS					
		18-28	SBK, SCL	F, SP, SS, SXP					
		28-48	ABK, SCL	F, SP, SS, SXP					

COMMENTS: HOLES 1, 8, 9, 10, 11 + 12 PS FOR SHALLOW CONVENTIONAL (12") OR LOW PROFILE CHAMBER WITHOUT 25% REDUCTION, HOLES 2, 3, 5, 6, 7 → SURFACE DRIP PUMP MAY BE REQUIRED.

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: 9579-52-3028
DATE OF EVALUATION: 7/21/23
COUNTY: HARNETT

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
6	SS 4% PS	0-6	GR, SL	FR, NP, NS	U/PS	PS	—	—	U/PS DRIP 0.3
		6-12	GR, SL	FR, NP, NS	20"	36"			
		12-20	SBK, SCL	F, SP, SS, SXP	10yr 8/1 10yr 8/2				
		20-36	SBK, SCL	F, P, S, SXP					
7	SS 2% PS	0-4	GR, SL	FR, NP, NS	U/PS	PS	—	—	U/PS DRIP 0.3
		4-10	GR, SL	FR, NP, NS	18"	36"			
		10-16	SBK, SCL	F, SP, SS, SXP	10yr 8/1 10yr 8/2				
		16-24	SBK, SCL	F, P, S, SXP					
		24-36	SBK, SC	F, P, S, SXP					
8	SS 2% PS	0-4	GR, SL	FR, NP, NS	U/PS	PS	—	—	U/PS 0.4
		4-8	GR, SL	FR, NP, NS	30"	36"			
		8-24	SBK, SCL	F, SP, SS, SXP	10yr 7/2 10yr 8/2				
		24-36	SBK, SCL	F, SP, SS, SXP					
9	SS 2% PS	0-6	GR, SL	FR, NP, NS	U/PS	PS	—	—	U/PS 0.4
		6-10	GR, SL	FR, NP, NS	28"	36"			
		10-24	ABK, SCL	FR, SP, SS, SXP	10yr 7/2 10yr 8/2				
		24-28	SBK, SC	F, P, S, SXP					
		28-36	SBK, SC	F, P, S, SXP					
10	SS 2% PS	0-4	GR, SL	FR, NP, NS	U/PS	PS	—	—	U/PS 0.4
		4-18	GR, SL	FR, NP, NS	28"	36			
		18-28	ABK, SCL	F, SP, SS, SXP	10yr 7/2 10yr 8/1				
		28-36	SBK, SCL	F, SP, SS, SXP					

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: 9579-52-3028
DATE OF EVALUATION: 7/21/2023
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PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
11	SS 3% PS	0-6	GR, SL	FR, NP, NS	U/PS	PS			U/PS
		6-15	GR, SL	FR, NP, NS	28"	36"	—	—	0.4
		15-28	ABK, SCL	F, SP, SS, SXP	10yr 7/2				
		28-36	SBK, SCL	F, SP, SS, SXP					
12	SS 2% PS	0-6	GR, SL	FR, NP, NS	U/PS	PS			U/PS
		6-18	GR, SL	FR, NP, NS					
		18-30	ABK, SCL	F, SP, SS, SXP	30"	36"	—	—	0.4
		30-36	SBK, SCL	F, SP, SS, SXP	10yr 8/1				

LICENSED SOIL SCIENTIST
ROBIN MAYCOCK PEREZ
STATE OF NORTH CAROLINA
1205
8/3/23

COMMENTS: LOW PROFILE CHAMBER OR SHALLOW CONVENTIONAL PUMP MAY BE REQUIRED.

PIN: 9579-52-3028
DATE: 7/21/23
COUNTY: HARNETT

LEGEND

use the following standard abbreviations

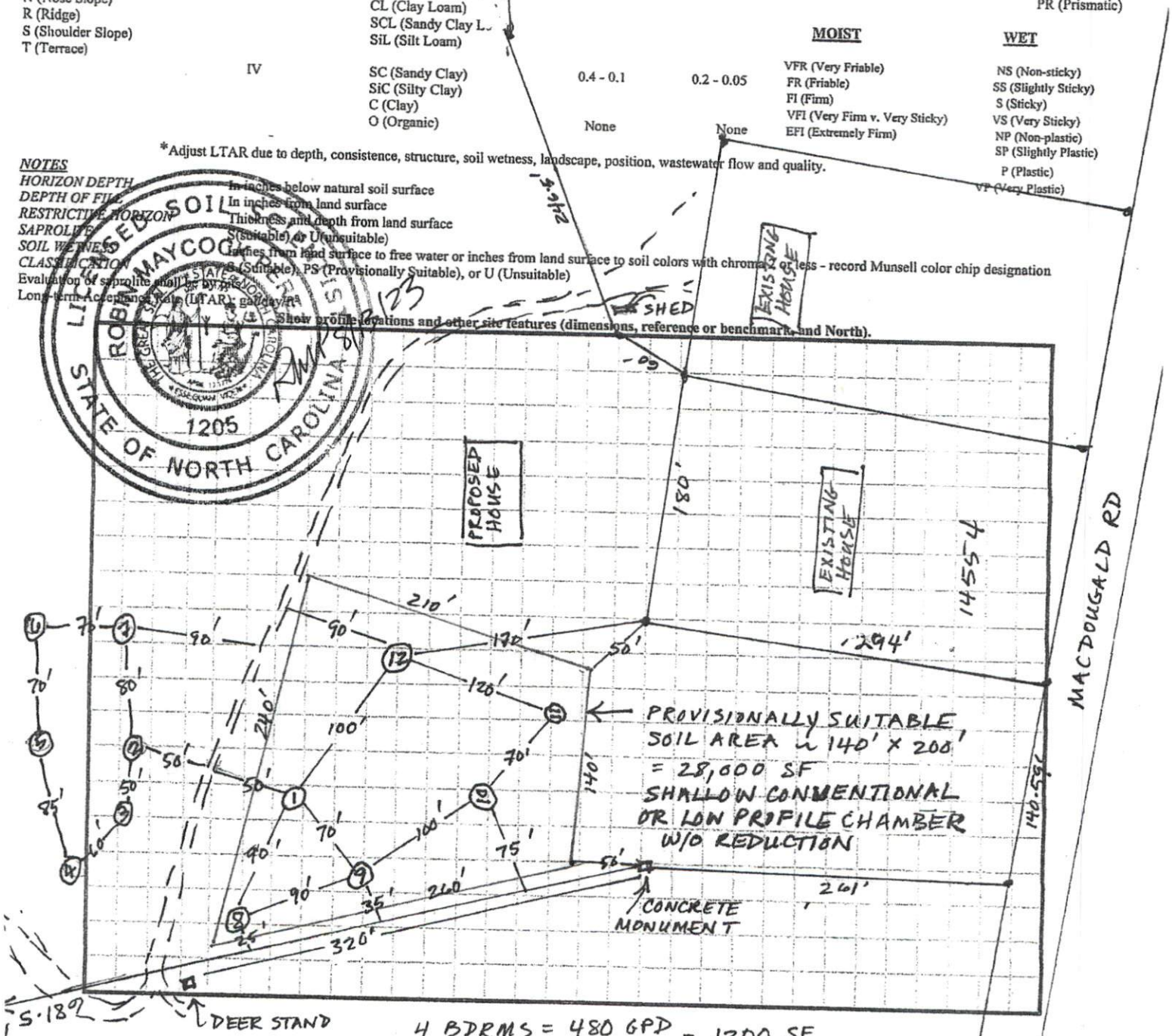
LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope) CV (Convex Slope) D (Drainage Way) DS (Debris Slump) FP (Flood Plain) FS (Foot Slope) H (Head Slope) L (Linear Slope) N (Nose Slope) R (Ridge) S (Shoulder Slope) T (Terrace)	I	S (Sand) LS (Loamy Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive) EXP (Expansive)	G (Single Grain) M (Massive) CR (Crumb) GR (Granular) SBK (Subangular Blocky) ABK (Angular Blocky) PL (Platy) PR (Prismatic)
	II	SL (Sandy ...) L (Loam)	0.8 - 0.6	0.4 - 0.3		
	III	Si (Silt) SiCL (Silty Clay ...m) CL (Clay Loam) SCL (Sandy Clay L...) SiL (Silt Loam)	0.6 - 0.3	0.3 - 0.15		
	IV	SC (Sandy Clay) SiC (Silty Clay) C (Clay) O (Organic)	0.4 - 0.1	0.2 - 0.05		
			None	None		

MOIST	WET
VFR (Very Friable)	NS (Non-sticky)
FR (Friable)	SS (Slightly Sticky)
FI (Firm)	S (Sticky)
VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
EFI (Extremely Firm)	NP (Non-plastic)
	SP (Slightly Plastic)
	P (Plastic)
	VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

NOTES
HORIZON DEPTH – In inches below natural soil surface
DEPTH OF FILL – In inches from land surface
RESTRICTIVE HORIZON – Thickness and depth from land surface
SAPROLITE – S (Suitable) or U (Unsuitable)
SOIL WETNESS – Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION – S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)
Evaluation of saprolite shall be by pits only.
Long-term Acceptance Rate (LTAR) - gal/day/ft²

Show profile locations and other site features (dimensions, reference or benchmark, and North).

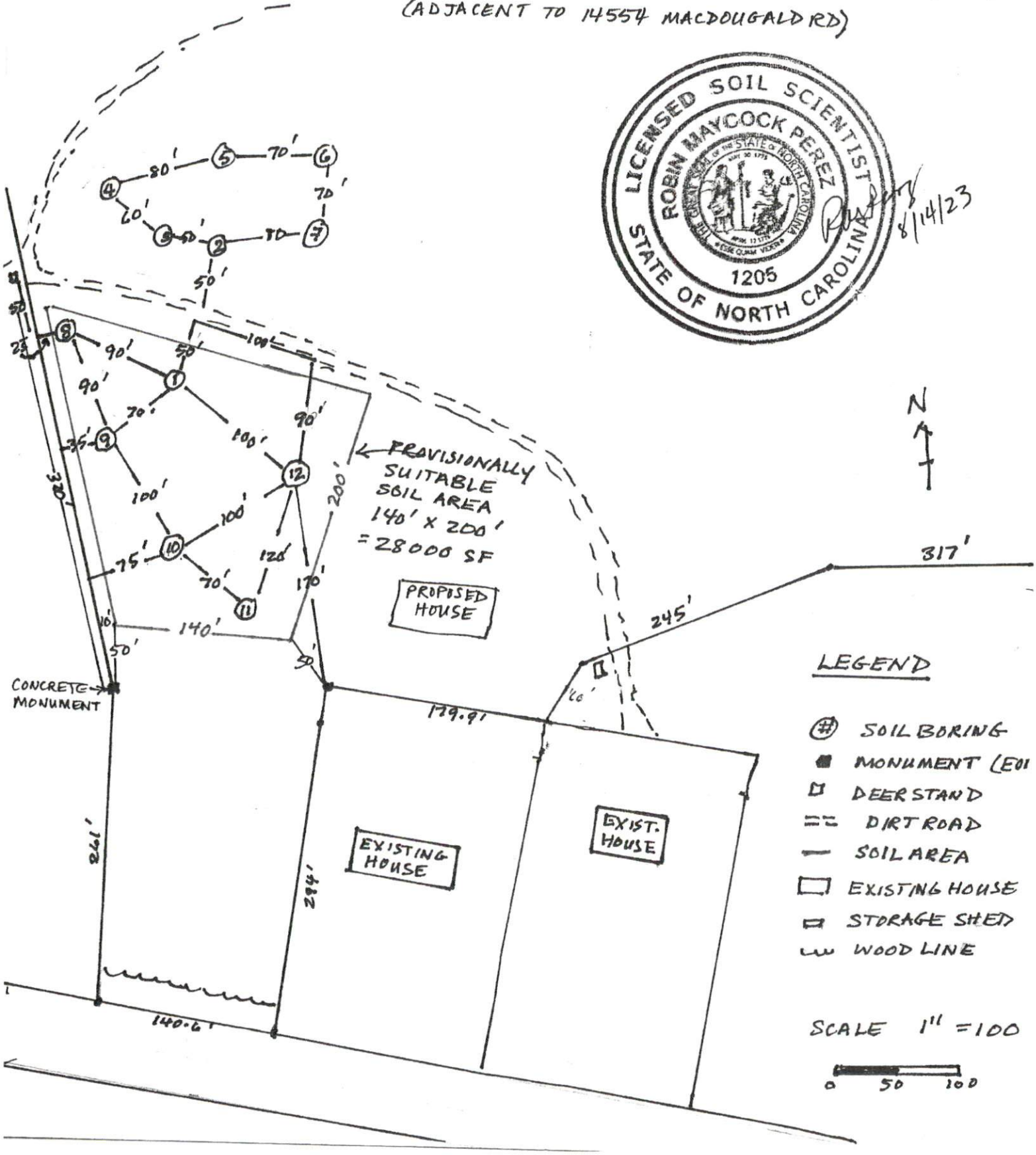


4 BDRMS = 480 GPD / 0.4 = 1200 SF / 3 = 400 LF
400 LF RESERVE
800 LF
≈ 75' X 100'

Updated February 2014

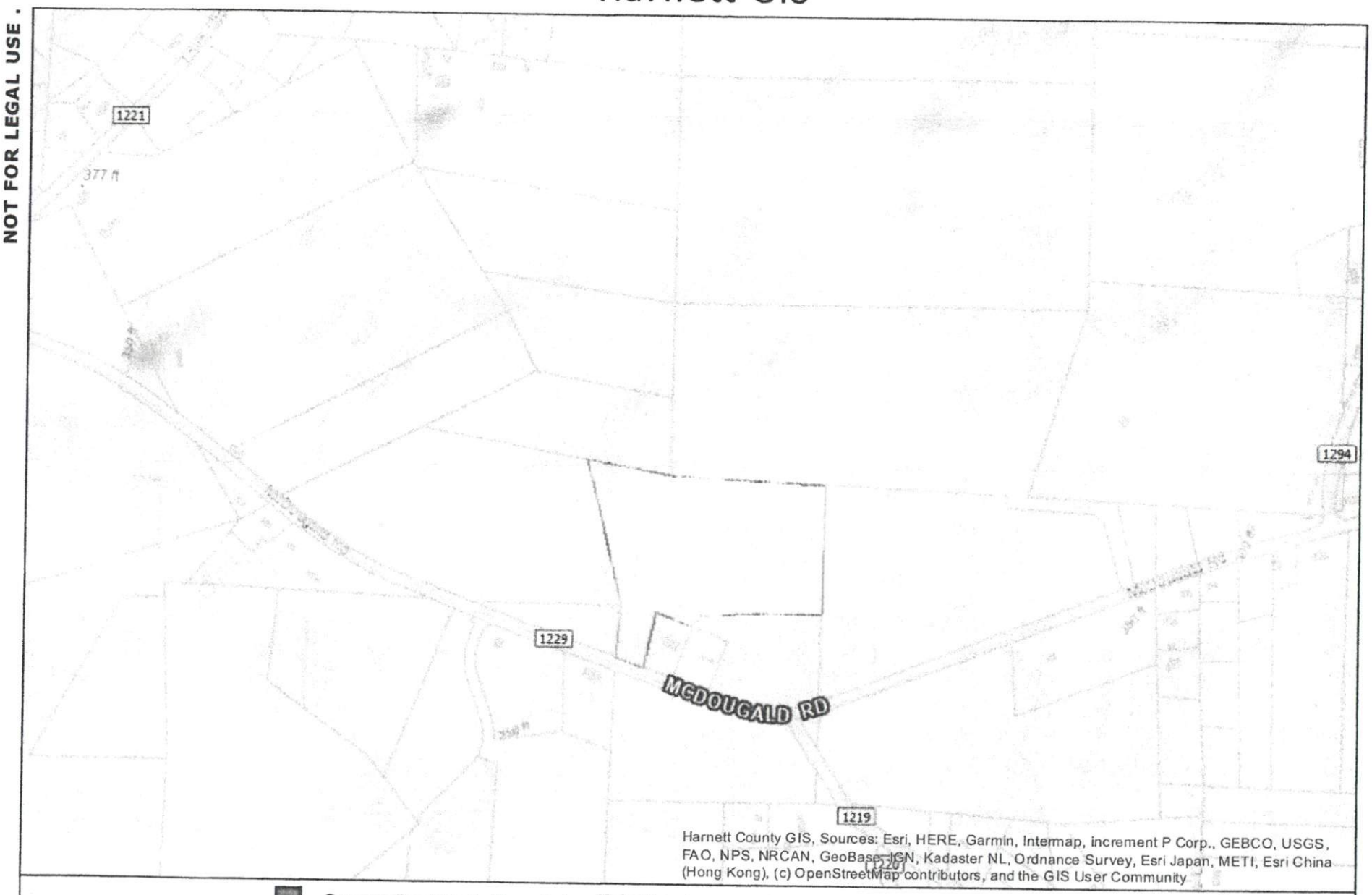
SOIL/SITE SKETCH FOR 15.295 AC ON MACDOUGALD RD
PIN: 9579-52-3028, HARNETT CO. 8/13/2023
(ADJACENT TO 14554 MACDOUGALD RD)

LICENSED SOIL SCIENTIST
ROBIN MAYCOCK PEREZ
1205
STATE OF NORTH CAROLINA
8/14/23



Harnett GIS

NOT FOR LEGAL USE .



Surrounding County Boundaries
City Limits
County Boundary
Airport

MajorRoads
Interstate
NC
US

RoadCenterlines
Railroad
Parcels
CapeFearRiver

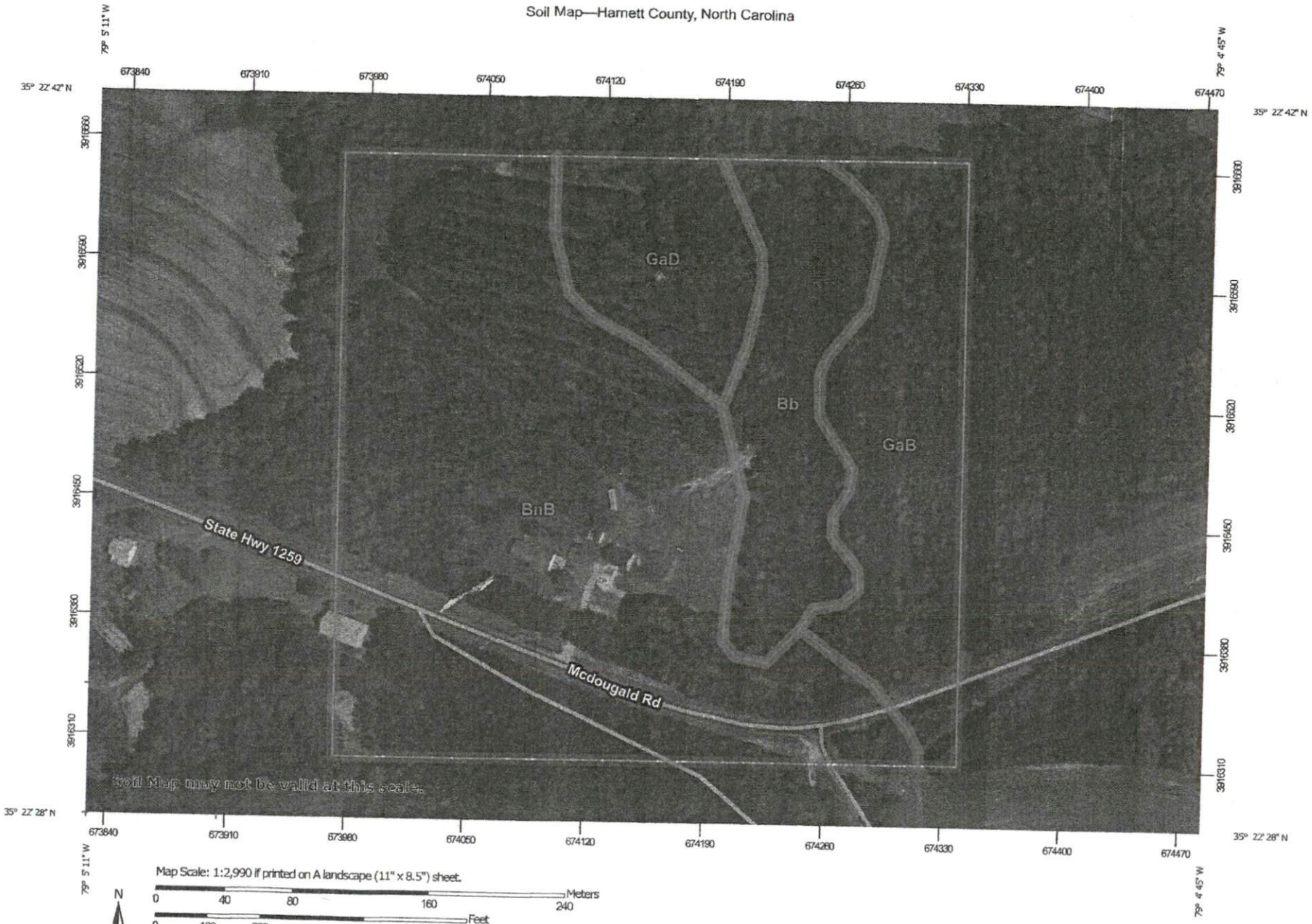
N
W
E
S

0 335 670 1,340 Feet

1 inch = 752 feet

GIS/E-911 Addressing
June 14, 2023

Soil Map—Harnett County, North Carolina



Map Scale: 1:2,990 if printed on A landscape (11" x 8.5") sheet.

N

0 40 80 160 240 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

6/14/2023

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Harnett County, North Carolina
Survey Area Data: Version 20, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2022—Apr 27, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bb	Bibb soils, frequently flooded	4.4	13.8%
BnB	Blaney loamy sand, 2 to 8 percent slopes	18.9	59.0%
GaB	Gilead loamy sand, 2 to 8 percent slopes	5.6	17.5%
GaD	Gilead loamy sand, 8 to 15 percent slopes	3.1	9.7%
Totals for Area of Interest		**32.0**	**100.0%**

Harnett County, North Carolina

BnB—Blaney loamy sand, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3snx
Elevation: 160 to 660 feet
Mean annual precipitation: 38 to 52 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 210 to 245 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Blaney and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blaney

Setting

Landform: Low hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: loamy sand
E - 4 to 25 inches: loamy sand
Bt - 25 to 62 inches: sandy clay loam
C - 62 to 80 inches: loamy coarse sand

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Ecological site: F137XY002GA - Loamy Summit Woodland - PROVISIONAL

Hydric soil rating: No

Data Source Information

Soil Survey Area: Harnett County, North Carolina
Survey Area Data: Version 20, Sep 8, 2022

Harnett County, North Carolina

GaD—Gilead loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 3spj
Elevation: 160 to 660 feet
Mean annual precipitation: 38 to 52 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 210 to 245 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gilead and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gilead

Setting

Landform: Low hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and clayey marine deposits

Typical profile

Ap - 0 to 5 inches: loamy sand
Bt1 - 5 to 8 inches: sandy loam
Bt2 - 8 to 42 inches: sandy clay
Bt3 - 42 to 52 inches: sandy clay loam
C1 - 52 to 76 inches: clay
C2 - 76 to 80 inches: gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Bibb, undrained
Percent of map unit: 3 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Johnston, undrained
Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Harnett County, North Carolina
Survey Area Data: Version 20, Sep 8, 2022