Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N Salem Street, Suite 203, Apex, NC 27502
agriwaste.com | 919.859.0669

Soil Suitability for Sewage Treatment and Disposal Systems

Fred Royster Rd
Henderson, NC 27537
(Vance County PIN: 040402006 & 040001011)

Prepared For:	Dominion Land & Timber Company LLC
Prepared By:	Trent Bostic, Senior Soil Scientist
Report Date:	May 28, 2025

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Soil Suitability for Sewage Treatment and Disposal Systems
Fred Royster Rd, Henderson, NC 27537

PREPARED FOR: Dominion Land & Timber Company, LLC

PREPARED BY: Trent Bostic

DATE: May 28, 2025

Soil suitability for domestic sewage treatment and disposal systems was evaluated on April 28, 2025, for property located at Fred Royster Rd in Henderson, NC. Trent Bostic, Heath Clapp, Brent Purdum, and Connor Britt of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. The detailed soil evaluation of the land area will follow. Property reference maps are in Attachment 1. A review of the soil and landscape characteristics that dictate soil suitability for domestic sewage treatment and disposal systems can be found in Attachment 2.

Two parcels were evaluated. They are approximately 49 acres in total. Both parcels are wooded with multiple creeks/drainages.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems

The aerial map in Attachment 3 details the approximate property boundaries, soil boring locations, soil types, and soil areas for septic systems. Numerous soil borings/pits were advanced on the property (Attachment 3). Only a portion of the property was evaluated. This evaluation was merely a preliminary review to determine what potential this land might have for domestic sewage treatment and disposal systems. Therefore, specific types of septic systems, exact locations of future drainfields and repair areas, plus buffers from property lines (current and potential future lot lines), building foundations, wells, etc. are not fully considered. These things will need to be more fully considered as the plans develop for the potential future of this site.

The suitable soil borings had the following characteristics. Soil texture was suitable and was estimated to be sandy loam near the soil surface (A and E horizons) and clay in the subsoil (B horizons). Soil structure was suitable and was estimated to be granular near the soil surface (A and E horizons) and subangular blocky in the subsoil (B horizons).

Clay mineralogy was suitable with friable moist soil consistence and slightly-sticky to sticky and slightly-plastic wet soil consistence.

The major soil types on this property are the Helena, Wedowee, and the Appling soil series. The suitable area contained soil most closely matching the Appling soil series.

Area 1 contained soil characteristics and soil depths (24" or greater) that are suitable for conventional systems. This area is shown on the map in Attachment 3. Typical profile descriptions of the suitable soil for this property are in Attachment 4.

The land area required for a conventional septic system is calculated based on the size of the proposed facility and the Long-Term Acceptance Rate (LTAR) of the soil. The LTAR range for the provisionally suitable soils on this property is 0.1– 0.4 GPD/ft^2 based on the most restrictive soil texture in the subsoil. The LTAR suggested by AWT for the majority of the suitable soil is 0.25 GPD/ft^2, but the final LTAR for specific septic system types and septic drainfield locations will be set by the permitting entity. Generally, 10,000-13,000 ft^2 of suitable soil is required for a 3-bedroom conventional septic system in this soil type; however, other system types exist that will reduce the required area size. The detailed computations are in Attachment 5.

Areas 2 and 3 contained soil characteristics and soil depths (15" or greater) that are suitable for drip systems. This area is shown on the map in Attachment 3. Typical profile descriptions of the suitable soil for this property are in Attachment 4.

The land area required for a drip septic system is calculated based on the size of the proposed facility and the Long-Term Acceptance Rate (LTAR) of the soil. The LTAR range for the provisionally suitable soils on this property is 0.05– 0.15 GPD/ft^2 based on the most restrictive soil texture in the subsoil. The LTAR suggested by AWT for the majority of the suitable soil is 0.1 GPD/ft^2, but the final LTAR for specific septic system types and septic drainfield locations will be set by the permitting entity. Generally, 9,000-11,000 ft^2 of suitable soil is required for a 3-bedroom drip septic system in this soil type; however, some areas may require additional pre-treatment. The detailed computations are in Attachment 5.

Conclusions

Based on the results of this evaluation, the installation of multiple conventional and drip septic systems is very probable for this property in the suitable soils area shown.

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

SECTION .0500 – SOIL AND SITE EVALUATIONSITE EVALUATION

15A NCAC 18E .0501

(a) Upon receipt of an application, an authorized agent shall investigate each proposed site in accordance with this Section to determine whether the site is suitable or unsuitable for the installation of a wastewater system. The field investigation shall include the evaluation of the following soil and site features with written field descriptions including:

(1) topography, slope, and landscape position;

(2) soil morphology;

A. depth of horizons;
B. texture;
C. structure;
D. consistence;
E. color; and
F. organic soils, as applicable;

(3) SWC;

(4) soil depth;

(5) restrictive horizons;

(6) the suitability for each profile description;

(7) LTAR; and

(8) available space.

(b) Soil profiles shall be evaluated at the site by borings, pits, or other means of excavation, and described to reflect variations in soil and site characteristics across both initial and repair areas.

(c) Soil profiles shall be evaluated and described to the following minimum depths:

(1) 48 inches from the ground surface; or

(2) to a LC determined in accordance with this Section.

(d) Owners may be required to provide pits when necessary for evaluation of the site as determined by the authorized agent, such as for evaluation of saprolite or soil structure.

(e) Based on the evaluation of the soil conditions and site features listed in Paragraph (a) of this Rule, each soil profile shall be classified suitable or unsuitable. The

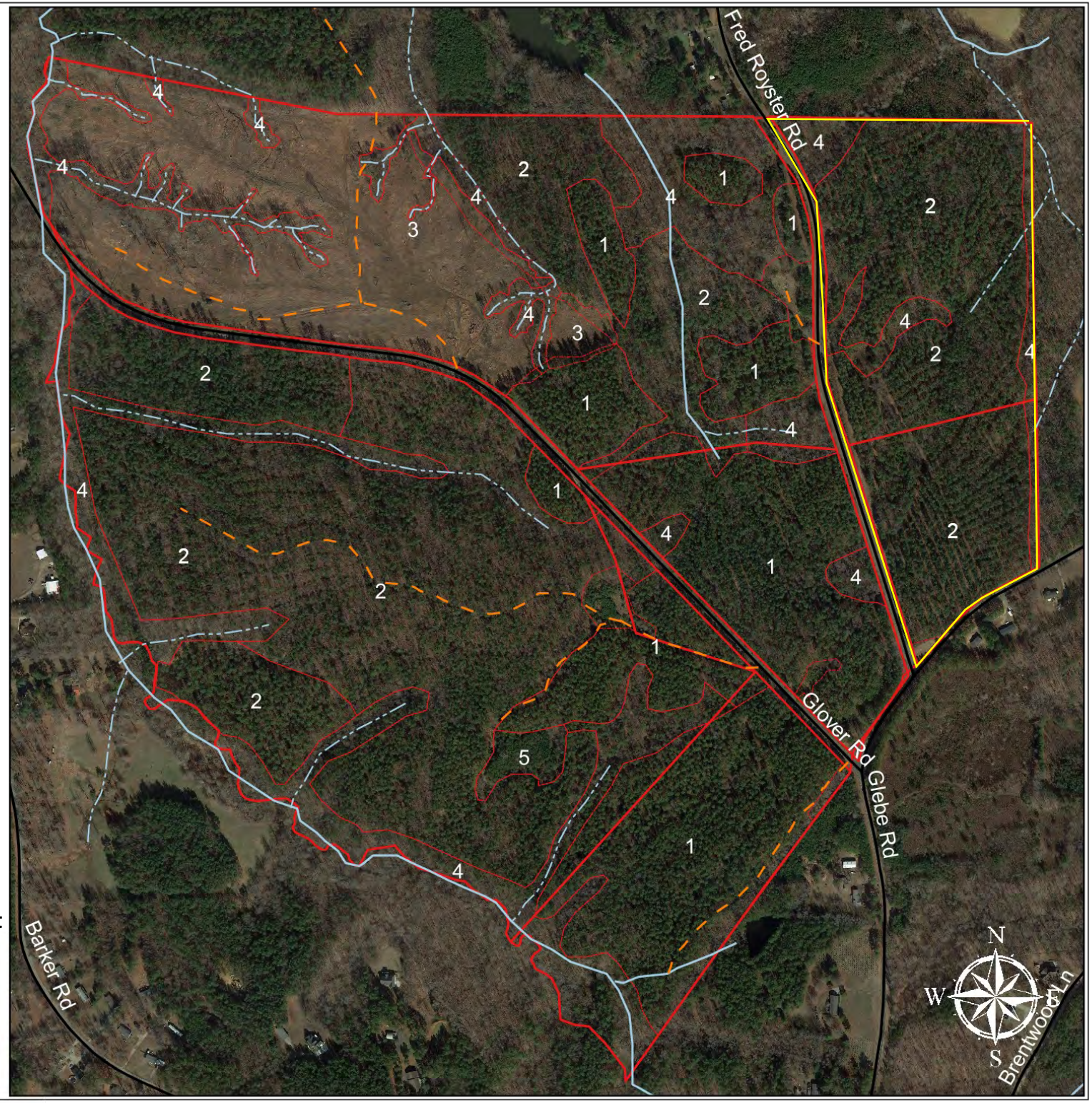
authorized agent shall specify the overall site suitability and classification in accordance with Rule .0509 of this Section.

(f) The authorized agent shall specify the LTAR in accordance with Section .0900 of this Subchapter for sites classified suitable in accordance with Rule .0509 of this Section.

(g) A LC initially classified unsuitable may be reclassified suitable if the requirements of Rule .0509(b) or (c) of this Section are met.

Dominion Land & Timber, LLC Tract

Vance County, NC



Legend

- Property
- Stand
- Forest Road
- Stream
- Intermittent Stream

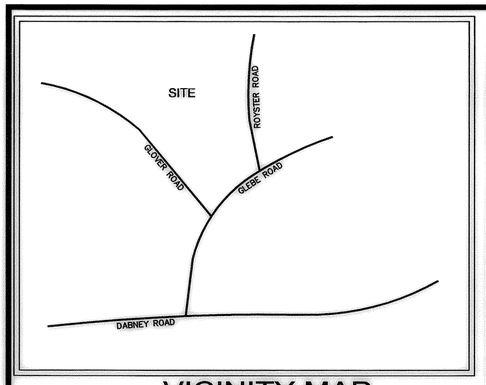
Stand	Description	Area
Stand 1	Thinned pine	77+/- ac
Stand 2	Thinned pine/ HW	170+/- ac
Stand 3	Clear-cut area	49+/- ac
Stand 4	Hardwood	51+/- ac
Stand 5	Natural regen	2+/- ac
Open	Old homesite, roads	1+/- ac

Parcel ID's
0404 02006
0400 01001

Scale: 1" = 660'

0 330 660 990 1320 ft

Timber Marketing & Management of the Carolinas, Inc.
800 Salem Woods Dr. #101
Raleigh, NC 27615
www.tmmoc.com
info@tmmoc.com
919-846-7520
Date: 8/6/18



VICINITY MAP
NOT TO SCALE

LINE TABLE		
LINE	DIRECTION	DISTANCE
1	S31°54'36"E	95.66
2	S53°30'27"W	49.56
3	S19°57'28"W	38.07
4	S67°46'44"E	42.05
5	S16°59'15"E	66.24
6	S00°40'55"W	40.15
7	S26°58'44"E	55.10
8	S09°56'59"E	56.22
9	S18°04'58"E	66.87
10	N75°27'20"W	31.48
11	S30°13'00"E	84.21
12	S46°26'46"W	88.47
13	S39°36'04"W	107.61
14	S14°18'02"W	28.73
15	S29°56'56"E	34.99
16	S14°41'02"W	29.32
17	S74°48'41"W	21.37
18	S06°00'28"W	14.27
19	S35°13'07"E	142.61
20	N17°32'57"W	181.38
21	S17°32'57"E	163.71
22	N01°08'34"W	318.44
23	N03°39'15"E	220.78

CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	570.63	940.86	N17°06'40"W	561.92
C2	320.48	1029.98	S08°38'07"E	319.19
C3	635.42	962.79	N63°48'43"W	623.95
C4	936.43	957.92	S54°43'29"E	899.58
C5	301.81	969.98	S08°38'07"E	300.59
C6	607.41	1001.50	N17°06'40"W	598.14

NCGRID NORTH
(NAD83)

LEGEND and NOMENCLATURE

SYMBOLS

- Ex. iron pipe/rod or nail
- Ex. concrete monument
- New iron pipe
- Calculated point
- Cable pedestal
- Telephone pedestal
- Electric pedestal
- Fiber-optic marker
- Traffic signal box
- Water meter
- Fire hydrant
- Valve (water or gas)
- Sanitary sewer manhole
- Sanitary sewer cleanout
- Storm curb inlet
- Drainage inlet (w/ grate)
- Storm drain manhole
- Utility pole
- Lamp post
- Signal pole
- Guy wire
- Sign post

LINETYPES

- Fence
- Overhead utility
- Water
- Sanitary sewer
- Storm drain

ABBREVIATIONS

DB	Deed Book
PB or BM	Plat Book / Book of Maps
N/F	Now or formerly
Pg.	Page
SF	Square feet
Ac.	Acres
R/W	Right-of-way
NCSR	North Carolina State Route
NCDOT	North Carolina Dept. of Transportation
R/W	Right-of-way
Ex.	Existing
RCP	Reinforced concrete pipe
PVC	Polyvinyl chloride pipe
(M)	Measured
(P)	Platted
(D)	Deed

EXISTING 1/2" IRON PIPE
EXISTING 5/8" IRON PIPE
EXISTING 5/8" IRON PIPE
S76°30'21"E
(230.35')
(394.91')
EXISTING 1/2" IRON PIPE
(358.35')
983.61'
EXISTING 5/8" IRON PIPE
S89°49'52"E
(395.46')
EXISTING 5/8" IRON PIPE
(397.76')
EXISTING 3/4" IRON PIPE
(399.30')
EXISTING IRON ROD
(398.39')
EXISTING 5/8" IRON PIPE
(398.85')
EX. 1/2" IRON PIPE
EX. 5/8" IRON PIPE
2032.21'
N89°48'30"W
339.98'
EX. 5/8" IRON PIPE
EXISTING 3/4" IRON PIPE
S88°54'15"E
1245.68'
EXISTING AXLE
EXISTING 3/8" IRON ROD
EXISTING 3/8" IRON ROD
23
22

KENNETH E. GUIST
DB 686, PG 820
PB U, PG 711
PIN: 0400.01.012

ADA BOBBITT
DB 944, PG 366
PB U, PG 711
PIN: 0400.01.028

MAMIE LEE BOYD GREENE
DB 220, PG 68
PB A, PG 12 (TRACT 12)
PIN: 0401 03 004

BOBBY P. PARHAM
DB 1226, PG 469
PB W, PG 680
PIN: 0401 03 040

PROPERTY LINE FOLLOWS THE THREAD OF LICK CREEK

IRON SET OVER 60" CMP

CONTROL CORNER
North Carolina State Plane Coordinates
N(y)=955,250.52
E(x)=2,151,670.26

CONTROL CORNER
North Carolina State Plane Coordinates
N(y)=955,213.71
E(x)= 2,151,766.76

1
PIN: 0400 01 011
DB 203, PG 23
4,716,839 SF
108.28 AC

2
PIN: 0400 01 011
DB 203, PG 23
1,406,785 SF
32.30 AC

DWELLING

CAROLYN S. PARHAM
DONNA C. PARHAM
DB 739, PG 479
PIN: 0401 03 003

S00°34'00"W
1026.37'

EXISTING 5/8" IRON ROD
EXISTING IRON PIPE(BENT)
S00°33'18"W
203.70'

S00°15'50"W 374.22'
S00°18'50"W 374.23'

C1
C6
C2
C5
C4
C3

N82°41'55"W
972.20'
GLOVER ROAD
(NCSR 1306)(60' PUBLIC R/W)

N44°27'40"W
376.15'
IRON PIPE SET
N77°22'54"E
918.23'
IRON PIPE SET
N77°37'06"W
351.53'
IRON PIPE SET
IRON PIPE SET
S72°22'54"W
920.74'

3
GLADYS S. ROYSTER, HEIRS
(SEE SHEET 3 OF 4)

4
ELIZABETH M. ROYSTER, HEIRS
(SEE SHEET 4 OF 4)

5
ELIZABETH M. ROYSTER, HEIRS
(SEE SHEET 4 OF 4)

ALICE I. OVERBY
DB 0949, PG 031
PIN: 0401 03 001A

GLOVER ROAD
(NCSR 1306) (60' PUBLIC R/W)

FRED ROYSTER ROAD
(NCSR 1307) (60' PUBLIC R/W)

GLEBE ROAD

NOTES:

1) All distances are horizontal ground distances.

2) This survey does not include nor depict any environmental evaluations.

3) Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence or any other facts that an accurate and current title search may disclose.

4) Subject property is not located within a special flood hazard zone per FEMA Flood Insurance Rate Map (FIRM) 3720194400J, April 17, 2007.

6) The North Carolina State Plane Coordinates for the project were produced with RTK GPS observations and processed using the North Carolina VRS Network. The network positional accuracy of the derived positional information is (+/-)0.12'.

Horizontal Datum: NAD83

THIS SURVEY IS OF EXISTING PARCELS AND DOES NOT CHANGE NOR CREATE A STREET.

I, Robert T. Newcomb, III, certify that this plat was drawn under my supervision from an actual survey made under my supervision from references as noted on said plat; that the boundaries not surveyed are clearly indicated as drawn from information as indicated under references; that the ratio of precision as calculated is greater than 1:10,000; that this plat was prepared in accordance with NCGS 47-30 as amended.

Witness my original signature, registration number and seal this 26 day of JUNE, 2013.

NORTH CAROLINA
PROFESSIONAL
L-2444
LAND SURVEYOR
ROBERT T. NEWCOMB III

Professional Land Surveyor (L-2444)

RECORDED IN BOOK Y PAGE 300 VANCE COUNTY REGISTRY

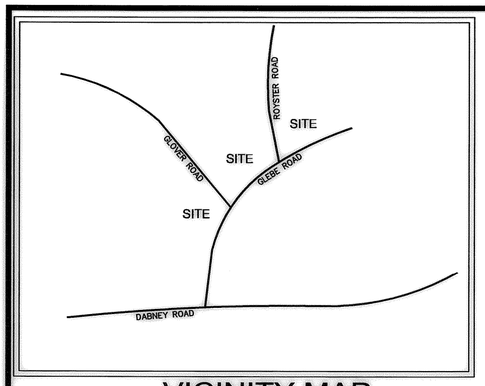
PROPERTY OF
GLADYS S. ROYSTER, HEIRS
DABNEY T'SHIP VANCE COUNTY NORTH CAROLINA

300 150 0 300 600
SCALE: 1"= 300'

NEWCOMB *land surveyors, Llc, (NC License No.: P-0203) 246 West Millbrook Road, Raleigh, NC 27609, (919) 847-1800, (919) 847-1804 (fax)*

SHEET 2 OF 4

JOB NO.: 135161
FILE NAME: WD
PLOT DATE: 05/01/13



VICINITY MAP

NOT TO SCALE

LINE TABLE			CURVE TABLE				
LINE	DIRECTION	DISTANCE	CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
1	N38°28'47"E	18.75	C6	220.65	496.88	S23°40'47"W	218.84
2	S34°24'50"W	100.00	C7	367.72	987.77	S51°27'00"W	365.60
3	N19°58'59"W	120.85					
4	N68°17'25"W	24.79					
5	N28°52'00"E	55.74					
6	N62°12'22"E	65.67					
7	N36°41'51"W	45.77					
8	N07°07'26"W	32.91					
9	N32°29'15"W	20.98					
10	N19°45'57"E	34.09					
11	N26°49'33"W	18.39					
12	N18°26'11"E	33.29					
13	N48°57'58"W	17.67					
14	N26°01'30"E	13.39					
15	N10°28'52"W	29.63					
16	N67°53'47"W	36.69					
17	N05°49'00"E	49.83					
18	S86°32'42"W	24.70					
19	N53°49'05"W	41.46					
20	N84°30'30"W	30.98					
21	N57°08'57"W	33.63					
22	N82°52'11"W	39.72					
23	S21°18'12"W	13.29					
24	S22°40'16"E	29.22					
25	S36°07'57"W	31.51					
26	S02°17'12"W	22.22					
27	S42°35'09"W	19.29					
28	N82°31'35"W	67.57					
29	S79°07'05"W	32.36					
30	N35°34'42"W	47.85					
31	N63°00'01"W	88.93					
32	N38°04'17"E	21.85					

NOTES:

1) All distances are horizontal ground distances.

2) This survey does not include nor depict any environmental evaluations.

3) Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence or any other facts that an accurate and current title search may disclose.

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Horizontal Datum: NAD83

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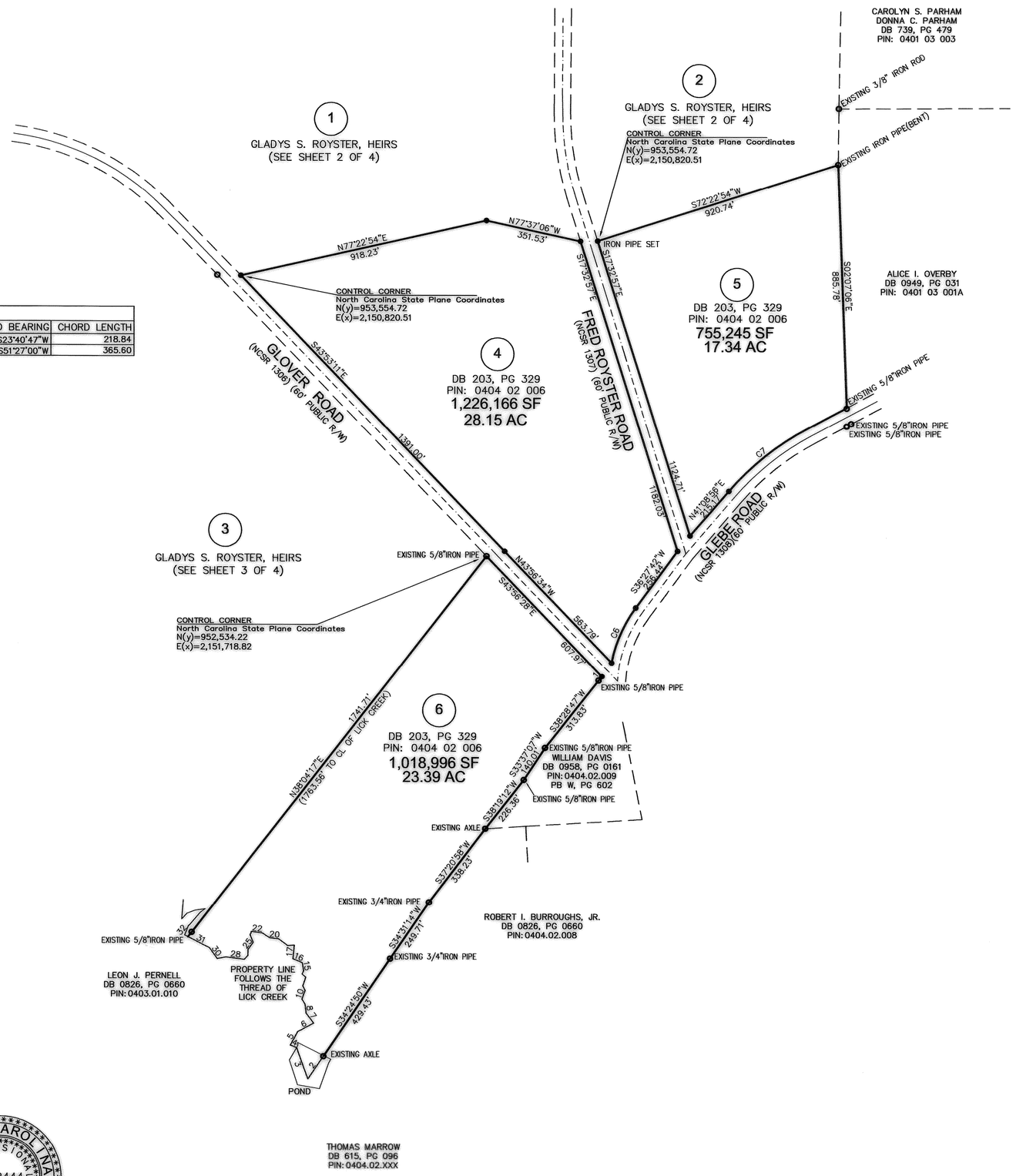
I, Robert T. Newcomb, III, certify that this plat was drawn under my supervision from an actual survey made under my supervision from references as noted on said plat; that the boundaries not surveyed are clearly indicated as drawn from information as indicated under references; that the ratio of precision as calculated is greater than 1:10,000; that this plat was prepared in accordance with NCGS 47-30 as amended.

Witness my original signature, registration number and seal this 26 day of JUNE, 2013.

Professional Land Surveyor (L-2444)

NORTH CAROLINA PROFESSIONAL L-2444 LAND SURVEYOR ROBERT T. NEWCOMB III



LEGEND and NOMENCLATURE

SYMBOLS

- Ex. iron pipe/rod or nail
- Ex. concrete monument
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- Calculated point
- Cable pedestal
- Telephone pedestal
- Electric pedestal
- Fiber-optic marker
- Traffic signal box
- Water meter
- Fire hydrant
- Valve (water or gas)
- Sanitary sewer manhole
- Sanitary sewer cleanout
- Storm curb inlet
- Drainage inlet (w/ grate)
- Storm drain manhole
- Utility pole
- Lamp post
- Signal pole
- Guy wire
- Sign post

LINETYPES

- —— x —— Fence
- —— OU —— Overhead utility
- —— W —— Water
- —— SS —— Sanitary sewer
- —— SD —— Storm drain

ABBREVIATIONS

DB	Deed Book
PB or BM	Plat Book / Book of Maps
N/F	Now or formerly
Pg.	Page
SF	Square feet
Ac.	Acres
R/W	Right-of-way
NCSR	North Carolina State Route
NCDOT	North Carolina Dept. of Transportation
R/W	Right-of-way
Ex.	Existing
RCP	Reinforced concrete pipe
PVC	Polyvinyl chloride pipe
(M)	Measured
(P)	Platted
(D)	Deed

RECORDED IN BOOK Y PAGE 302 VANCE COUNTY REGISTRY

PROPERTY OF
ELIZABETH M. ROYSTER, HEIRS

DABNEY T'SHIP VANCE COUNTY NORTH CAROLINA

300 150 0 300 600

SCALE: 1"= 300'

SHEET 4 OF 4

JOB NO.: 135161
FILE NAME: WMS PAR
PLOT DATE: 05/02/13

NEWCOMB *land surveyors, Llc, (NC License No.: P-0203) 246 West Millbrook Road, Raleigh, NC 27609, (919) 847-1800, (919) 847-1804 (fax)*

AWT
Engineers and Soil Scientists

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501 N Salem Street, Suite 203, Apex, NC 27502
agriwaste.com | 919.859.0669

Preliminary Soil Evaluation

Dominion Land
Vance Co., NC
PIN: 040402006
and 040001011

GIS Acres: ~49

N

Area for Septic:

Area 1: ~262,617 sq. ft.
Area 2: ~179,356 sq. ft.
Area 3: ~53,056 sq.ft

Soil Types:

HeB- Helena sandy loam
WeD- Wedowee sandy loam
ApB- Appling sandy loam

Notes:

Not in NC Riparian Buffer
No mapped NWI Wetlands

Parcel
Parcel Setback 10 ft.
2 ft. Contour
USGS/Soil Survey Water
USGS/Soil Survey Setback 50 ft.

Evaluation

Area 1
Area 2
Area 3
Unsuitable Topo

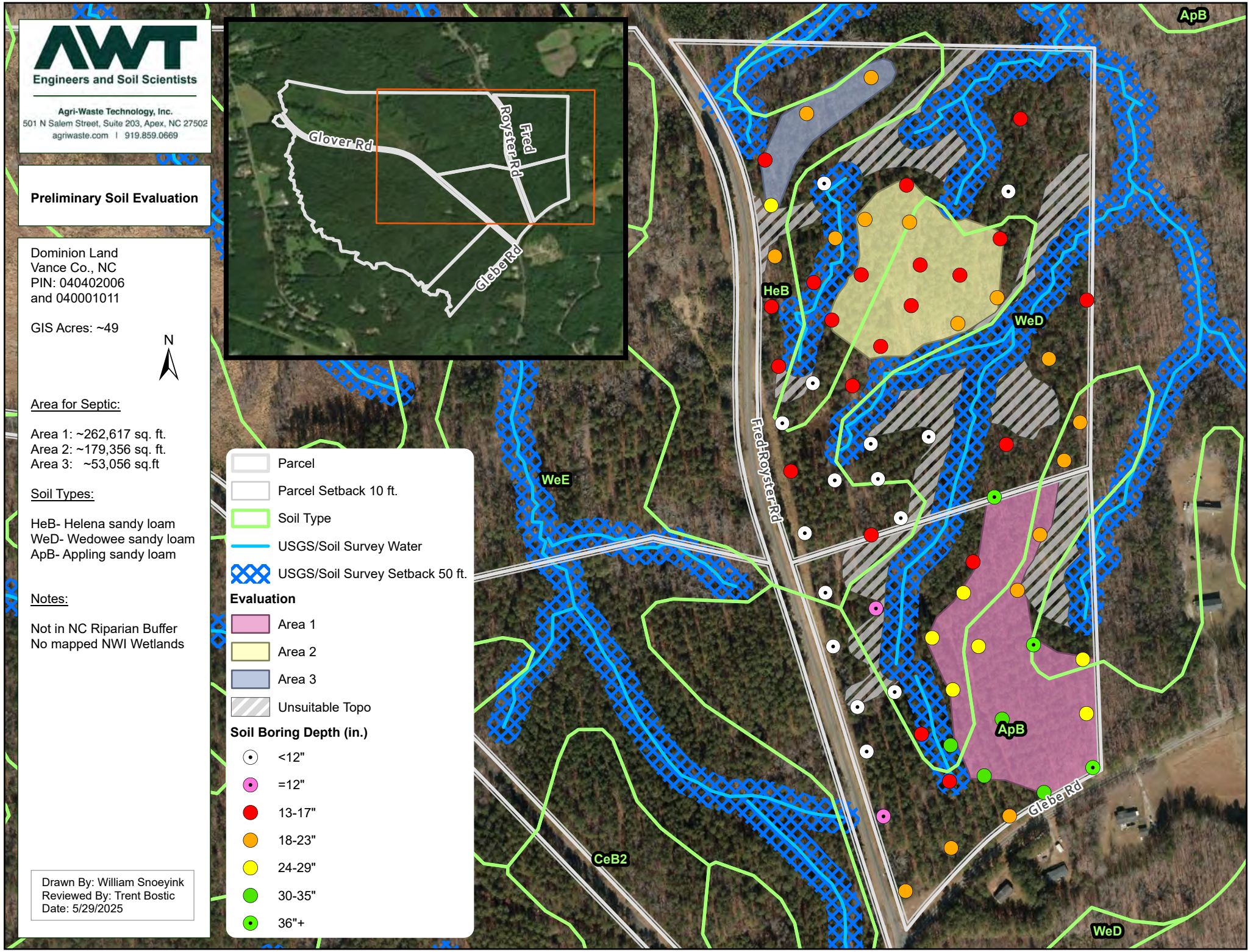
Soil Boring Depth (in.)

<12"
=12"
13-17"
18-23"
24-29"
30-35"
36"+

Fred Royster Rd
Glebe Rd

Drawn By: William Snoeyink
Reviewed By: Trent Bostic
Date: 5/29/2025

Surface water and/or bad topo areas have not been officially evaluated for stream ID according to local regulatory requirements. This map is intended for preliminary purposes only and not to be used as a plat/survey or can it be assumed all streams are identified on this property.



Surface water and/or bad topo areas have not been officially evaluated for stream ID according to local regulatory requirements. This map is intended for preliminary purposes only and not to be used as a plat/survey or can it be assumed all streams are identified on this property.

Property ID#: 040402006 & 040001011
County: Vance

SOIL/SITE EVALUATION
FOR
ON-SITE WASTEWATER SYSTEM

Location Site: Fred Royster rd
Water Supply: On Site Well X Comm. Well ___ Public ___ Other ___ Evaluation Method: Auger Boring: X Pit ___

PROFILE 1: Typical Profile Description (Conventional Area)

Horizon/ Depth (IN)	Matrix	Mottles	Mottle Abundance / Contrast	.0503 Texture	.0503 Structure	.0503 Minerology	.0503 (Wet)	.0503 (Moist)
Ap 0-6"	**10YR 5/2**	**-**	**-**	**SL**	**GR**	**NEXP**	**NS, NP**	**Fr**
E 6-9"	**10YR 6/4**	**-**	**-**	**SL**	**Gr**	**NEXP**	**NS, NP**	**Fr**
Bt1 9--26+"	**10YR 5/8**	**-**	**-**	**C**	**SBK**	**SEXP**	**SS, SP**	**Fi**

.0502 Landscape Pos/Slope %	L	Profile LTAR	0.25 GPD/ft^2
.0504 Wetness Condition	S	System Type	Conventional
.0506 Saprolite	S		
.0507 Restrictive Horizon	S		
.0509 Profile Classification	S		

PROFILE 2: Typical Profile Description (Drip Area)

Horizon/ Depth (IN)	Matrix	Mottles	Mottle Abundance / Contrast	.0503 Texture	.0503 Structure	.0503 Minerology	.0503 (Wet)	.0503 (Moist)
A 0-6"	**10YR 5-2**	**-**	**-**	**SL**	**GR**	**NEXP**	**NS, NP**	**Fr**
E 6-12"	**10YR 6/4**	**-**	**-**	**SL**	**GR**	**NEXP**	**NS, NP**	**Fr**
Bt 12-15"+	**10YR 5/8**	**10YR 6/4**	**2, m, D**	**C**	**w/SBK**	**SEXP**	**SS, SP**	**Fi**

.0502 Landscape Pos/Slope %	L	Profile LTAR	0.1 GPD/ft^2
.0504 Wetness Condition	S	System Type	Drip
.0506 Saprolite	S		
.0507 Restrictive Horizon	S		
.0509 Profile Classification	S		

Comments:

EVALUATED BY: Trent Bostic
COMMENTS: ___

LEGEND OF ABBREVIATIONS FOR SOIL/SITE EVALUATION FORM

LANDSCAPE POSITION
CC – Concave Slope
CV – Convex Slope
DS – Debris Slump
D – Depression
DW – Drainage Way
FP – Flood Plain
FS – Foot Slope
H – Head Slope
I – Interfluve
L – Linear Slope
N – Nose Slope
P – Pocosin
R – Ridge
S – Shoulder
T – Terrace

STRUCTURE
G – Single Grain
M – Massive
CR – Crumb
GR – Granular
SBK – Subangular Blocky
ABK – Angular Blocky
PL – Platy
PR – Prismatic
(w in front denotes "weak")

MOTTLES
1 – Few
2 – Common
3 – Many

f – Fine
m – Medium
c – Coarse

F – Faint
D – Distinct
P – Prominent

MOIST CONSISTENCE
VFr – Very Friable
Fr – Friable
Fi – Firm
VFi – Very Firm
EFi – Extremely Firm

WET CONSISTENCE
NS – Non Sticky
SS – Slightly Sticky
S – Sticky
VS – Very Sticky

NP – Non Plastic
SP – Slightly Plastic
P – Plastic
VP – Very Plastic

MINERALOLOGY
NEXP – Non Expansive
SEXP – Slightly Expansive
EXP – Expansive

TEXTURE GROUP	TEXTURE CLASS	.1955 LTAR (gal/day/sq.ft.)
I	S – Sand LS – Loamy Sand	1.2 – 0.8
II	SL – Sandy Loam L – Loam	0.8 – 0.6
III	SCL – Sandy Clay Loam CL – Clay Loam SiL – Silt Loam Si – Silt SiCL – Silty Clay Loam	0.6 – 0.3
IV	SC – Sandy Clay SiC – Silty Clay C – Clay	0.4 – 0.1

TABLE 11.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated]

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
ApB, AuB[1]---- Appling	Moderate: percs slowly.	Moderate: slope, seepage.	Moderate: too clayey.	Slight----	Fair: too clayey.
CeB2---- Cecil	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey, seepage.	Slight----	Fair: too clayey.
CeD2---- Cecil	Moderate: percs slowly, slope.	Severe: slope.	Moderate: too clayey, seepage.	Moderate: slope.	Fair: too clayey, slope.
CuB[1]---- Cecil	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey, seepage.	Slight----	Fair: too clayey.
Cw---- Chewacla	Severe: floods, wetness.	Severe: floods, wetness.	Severe: floods, wetness.	Severe: floods, wetness.	Good.
DuB---- Durham	Moderate: wetness.	Moderate: slope, seepage.	Slight----	Slight----	Good.
GeB---- Georgeville	Moderate: percs slowly.	Moderate: slope, seepage.	Moderate: too clayey.	Slight----	Poor: too clayey.
GeD---- Georgeville	Moderate: percs slowly, slope.	Severe: slope.	Moderate: too clayey.	Moderate: slope.	Poor: too clayey.
GoC, GoE---- Goldston	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: seepage.	Poor: small stones, thin layer.
HeB---- Helena	Severe: percs slowly, wetness.	Moderate: slope.	Severe: too clayey.	Slight----	Poor: too clayey, hard to pack.
IrB---- Iredell	Severe: percs slowly, wetness.	Severe: wetness.	Severe: too clayey, wetness.	Severe: wetness.	Poor: thin layer.
LgB---- Lignum	Severe: percs slowly, wetness.	Severe: wetness.	Severe: depth to rock, wetness.	Severe: wetness.	Poor: too clayey.
LoB---- Louisburg	Moderate: depth to rock.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Good.
LoD---- Louisburg	Moderate: depth to rock.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: slope.
LoE---- Louisburg	Severe: slope.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Poor: slope.
NaB---- Nason	Moderate: depth to rock.	Moderate: slope, seepage.	Severe: too clayey.	Slight----	Poor: too clayey.

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
NaD---------- Nason	Moderate: slope, depth to rock.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey.
PaE---------- Pacolet	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
Pt.[1] Pits					
TaE---------- Tatum	Severe: slope.	Severe: slope.	Severe: slope, too clayey, depth to rock.	Severe: slope.	Poor: slope, too clayey.
UL.[1] Udorthents					
VaB---------- Vance	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight----------	Poor: too clayey.
WeD---------- Wedowee	Moderate: percs slowly, slope.	Severe: slope.	Moderate: too clayey.	Moderate: slope.	Fair: too clayey, area reclaim, slope.
WeE---------- Wedowee	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
Wh---------- Wehadkee	Severe: wetness.	Severe: floods, wetness.	Severe: floods, seepage, wetness.	Severe: floods, seepage, wetness.	Poor: wetness. wetness.
WkC---------- Wilkes	Severe: depth to rock.	Severe: slope, depth to rock.	Severe: depth to rock, seepage.	Severe: seepage.	Poor: thin layer.
WkE---------- Wilkes	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: depth to rock, seepage, slope.	Severe: slope, seepage.	Poor: thin layer.
WoA---------- Worsham	Severe: percs slowly, wetness.	Slight----------	Severe: wetness, too clayey.	Severe: wetness.	Poor: wetness, too clayey.

[1] See description of the map unit for composition and behavior characteristics.

Conventional Septic System Area Computation

Created by: TB
Created on: 5/22/2025

Client Name:	*Dominion*	
Number Bedrooms:	***3***	
Design Flow (gal/day):	360	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.25*	
Trench Bottom Area (ft^2):	1440	(Design flow/LTAR)
Trench Width (ft):	3	
On-center distance between trenches (ft):	9	
Trench Bottom Length (ft):	480	(Conventional - Pipe & Gravel)
Minimum Field Area Required (ft^2):	4320	(Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft^2):	3240	(25% reduction)
Minimum Field Area Required (Panel Block) (ft^2)	2160	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	10800	(Minimum field area*2.5)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	8100	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	5400	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	12960	(Minimum field area*3)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	9720	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	6480	(50% reduction)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name:	*Dominion*	
Number Bedrooms:	***4***	
Design Flow (gal/day):	480	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.25*	
Trench Bottom Area (ft^2):	1920	(Design flow/LTAR)
Trench Width (ft):	3	
On-center distance between trenches (ft):	9	
Trench Bottom Length (ft):	640	(Conventional - Pipe & Gravel)
Minimum Field Area Required (ft^2):	5760	(Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft^2):	4320	(25% reduction from above)
Minimum Field Area Required (Panel Block) (ft^2)	2880	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	14400	(Minimum field area*2.5)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	10800	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	7200	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	17280	(Minimum field area*3)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	12960	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	8640	(50% reduction)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name:	*Dominion*	
Number Bedrooms:	***5***	
Design Flow (gal/day):	600	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.25*	
Trench Bottom Area (ft^2):	2400	(Design flow/LTAR)
Trench Width (ft):	3	
On-center distance between trenches (ft):	9	
Trench Bottom Length (ft):	800	(Conventional - Pipe & Gravel)
Minimum Field Area Required (ft^2):	7200	(Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft^2):	5400	(25% reduction from above)
Minimum Field Area Required (Panel Block) (ft^2)	3600	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	18000	(Minimum field area*2.5)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	13500	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	9000	(50% reduction)
Total Field Area Required (ft^2)$^{(1)}$:	21600	(Minimum field area*3)
Total Field Area Required (Innovative) (ft^2)$^{(1)}$:	16200	(25% reduction from above)
Total Field Area Required (Panel Block) (ft^2)$^{(1)}$:	10800	(50% reduction)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Drip Septic System Area Computation

Client Name:	*Dominion*	
Number Bedrooms:	*3*	
Design Flow (gal/day):	360	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.1*	
Trench Bottom Area (ft^2):	3600	(Design flow/LTAR)
Trench Width (ft):	0	
On-center distance between trenches (ft):	2	
Trench Bottom Length (ft):	1800	
Minimum Field Area Required (ft^2):	3600	(Trench Bottom Length*Trench on-center distance)
Total Field Area Required (ft^2)$^{(1)}$:	9000	(Minimum field area*2.5)
Total Field Area Required (ft^2)$^{(1)}$:	10800	(Minimum field area*3)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name:	*Dominion*	
Number Bedrooms:	*4*	
Design Flow (gal/day):	480	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.1*	
Trench Bottom Area (ft^2):	4800	(Design flow/LTAR)
Trench Width (ft):	0	
On-center distance between trenches (ft):	2	
Trench Bottom Length (ft):	2400	
Minimum Field Area Required (ft^2):	4800	(Trench Bottom Length*Trench on-center distance)
Total Field Area Required (ft^2)$^{(1)}$:	12000	(Minimum field area*2.5)
Total Field Area Required (ft^2)$^{(1)}$:	14400	(Minimum field area*3)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name:	*Dominion*	
Number Bedrooms:	*5*	
Design Flow (gal/day):	600	(120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft^2)	*0.1*	
Trench Bottom Area (ft^2):	6000	(Design flow/LTAR)
Trench Width (ft):	0	
On-center distance between trenches (ft):	2	
Trench Bottom Length (ft):	3000	
Minimum Field Area Required (ft^2):	6000	(Trench Bottom Length*Trench on-center distance)
Total Field Area Required (ft^2)$^{(1)}$:	15000	(Minimum field area*2.5)
Total Field Area Required (ft^2)$^{(1)}$:	18000	(Minimum field area*3)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.