

Preliminary Soil Mapping Report

Brinson - Lynn Rd

November 14, 2023

Prepared By:

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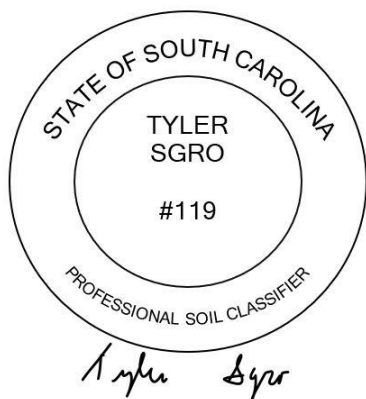
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Site Location and Characteristics

The project site is located in the Richburg area of Chester County, South Carolina. The site totals approximately 101 acres in size. The reviewed areas consist of varying topography, typical of the geologic region known as the Piedmont. The site is generally comprised of hillslope morphology, transitioning from broad hillslopes to lower stream terraces. The soil characteristics discussed below in this report reflect the general nature of the geographic features and conditions of the project site.

Soil Sampling Methodology

Preliminary soil testing locations were identified prior to the initiation of field work. These points were identified by using Light Detection and Ranging (LiDAR) models. These models displayed elevation variability across the project site that assisted in selecting appropriate soil testing locations. In total, 46 soil borings were obtained to complete the preliminary soil mapping for the project site. Soil characteristics such as depth to the seasonally high zone of soil saturation (ZOS), presence of a restrictive horizon, and long-term acceptance rate (LTAR) were recorded. These characteristics are all components of soil analysis for determination of soil suitability for septic system design.

Furthermore, site geography was reviewed in conjunction with this data to develop an overall soil map of the project site. The soil mapping reflects soils of identifiable soil series and probability of engineered vs. non-engineered systems as a result of the observed soil characteristics and/or site history. It is important to note that due to limitations of the preliminary soil mapping, inclusions of soil conditions requiring engineered septic systems may be present within mapped non-engineered septic areas, and vice versa. This information is captured and reflected in the column “Non-Engineered Probability” below in Table 2. Acreage analysis of suitability for engineered and non-engineered septic systems is calculated below in Table 2 as well. The findings and results of the soil borings and subsequent mapping analysis are outlined below. The corresponding project site and soil mapping exhibits can be found in Appendix A.

Soil Testing Data and Mapping Analysis

Table 1. Project Site Soil Boring Data

Soil Boring ID	Estimated ZOS (in inches)	Restrictive Layer Encountered? (if yes, depth in inches)	Estimated LTAR
TP-1	45+	No	0.3
TP-2	45+	No	0.3
TP-3	45+	No	0.3
TP-4	30	No	0.3
TP-5	25	No	0.3
TP-6	13	No	0.2

TP-7	8	Yes; 8"	0.1
TP-8	45+	No	0.3
TP-9	18	No	0.3
TP-10	45+	No	0.3
TP-11	14	Yes; 14"	0.2
TP-12	34	No	0.3
TP-13	32	No	0.3
TP-14	12	Yes; 12"	0.2
TP-15	45+	No	0.3
TP-16	27	No	0.3
TP-17	18	Yes; 20"	0.2
TP-18	27	No	0.3
TP-19	13	Yes; 15"	0.2
TP-20	27	No	0.3
TP-21	20	No	0.3
TP-22	12	Yes; 15"	0.2
TP-23	22	No	0.3
TP-24	38	No	0.3
TP-25	15	No	0.3
TP-26	45+	No	0.3
TP-27	45+	No	0.3
TP-28	45+	No	0.3
TP-29	45+	No	0.3
TP-30	45+	No	0.3
TP-31	45+	No	0.3
TP-32	38	No	0.3
TP-33	17	Yes; 20"	0.2
TP-34	20	No	0.3
TP-35	39	No	0.3
TP-36	45+	No	0.3

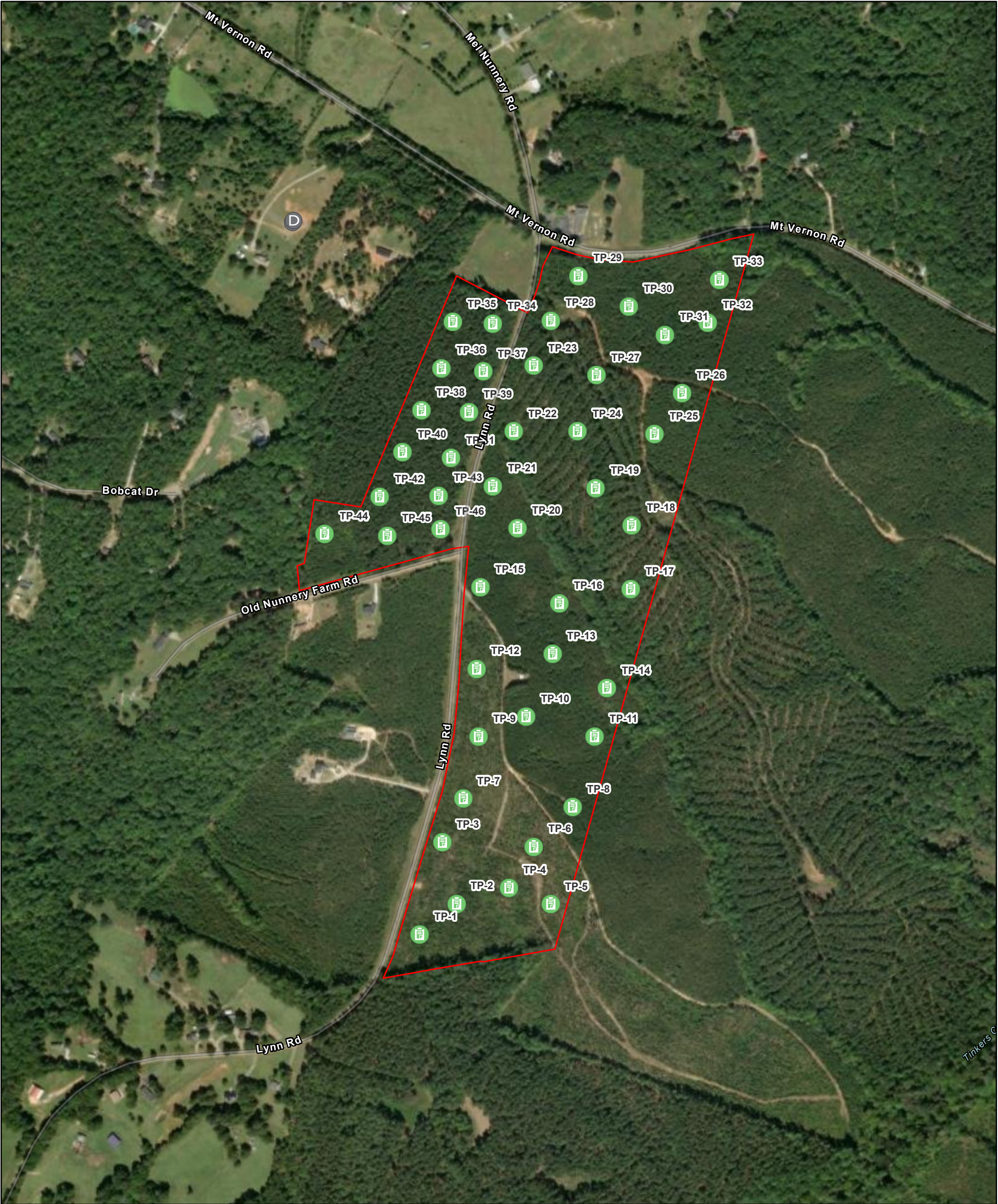
TP-37	23	No	0.3
TP-38	45+	No	0.3
TP-39	45+	No	0.3
TP-40	45+	No	0.3
TP-41	45+	No	0.3
TP-42	24	No	0.3
TP-43	18	No	0.3
TP-44	20	No	0.3
TP-45	19	No	0.3
TP-46	45+	No	0.3

Table 2. Project Site Soil Mapping Summary

Estimated Soil Series	Engineered vs. Non-Engineered	Non-Engineered Probability	Acreage of Mapped Area
Cecil	Non-Engineered	100%	76.55 acres
Helena	Non-Engineered	50%	10.92 acres
Wynott	Engineered	0%	7.74 acres
Wilkes	Engineered	0%	

Appendix A

Brinson - Lynn Rd - Preliminary Soil Borings



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Project_Area_4301

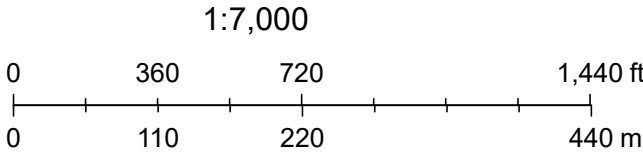
Septic_Design_8153

S Septic Tank

D Distribution Box

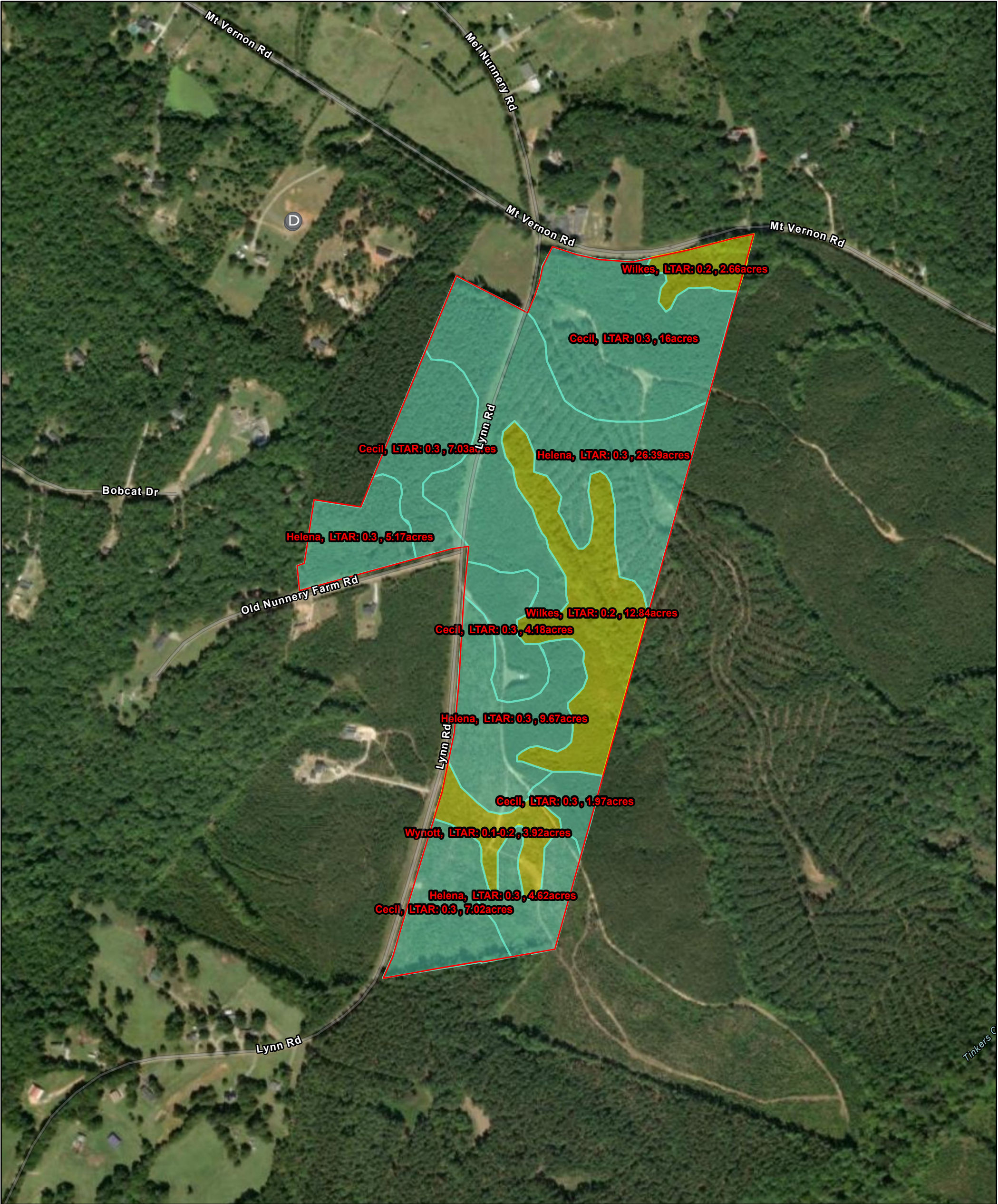
Soil_Data_Quick_Capture_2726

Evaluation Complete



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Brinson - Lynn Rd - Preliminary Soil Mapping



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Project_Area_4301

Septic_Design_8153

S

Septic Tank

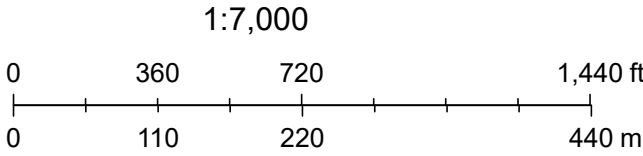
D

Distribution Box

Soil_Mapping_8998

Engineered

Non-Engineered



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