



## SOIL SERVICES, PLLC

PO BOX 91115 ♦ RALEIGH, NC ♦ 27675

April 23, 2021  
Project No. 1803-1

Peter Gitto  
AMG Realty  
7320 Bassett Hall Ct  
Raleigh, NC 27616

**Re: Detailed Soil/Site Evaluation  
Martindale Rd Property (Approx. ~2.36 Acres)  
113 Martindale Road, Franklin County  
PIN No. 1862-05-8942**

Dear Mr. Gitto:

On April 22, 2021, Soil Services, PLLC (Soil Services) completed a detailed soil/site evaluation on the property located at 113 Martindale Road. The evaluation identified areas of soil that have the potential for subsurface wastewater disposal. This evaluation was performed as part of the preliminary planning process.

Soil Services traversed the site during slightly wet conditions. Hand auger borings were used to evaluate soil conditions (texture, structure, depth, wetness condition, etc.) relative to subsurface wastewater disposal. Both man-made and natural landforms (drainways, slope, land disturbances, past and present uses, etc.) were observed as well. Based on these observations, a soil boundary between the potentially suitable and unsuitable soils were flagged and located with a GPS receiver. The criteria used to evaluate the soil and site is contained in 15A NCAC 18A .1900 "Laws and Rules for Sewage Treatment and Disposal Systems" and/or Local Regulations.

### **Results and Recommendations**

The property is located in the Piedmont region of Franklin County, North Carolina. The soils found on site were Wake, Vance or fill material. The Wake series had The Vance soils had a loamy sand surface above an expansive clay subsurface. Due to the shallow unsuitable clay mineralogy and shallow seasonal high wetness condition, these soils are generally considered unsuitable for conventional subsurface wastewater disposal systems.

As stated above, there are no soil areas within the property boundary that have suitable soil characteristics to a depth of 18 inches or greater. Therefore, the site does not have the potential for conventional, modified conventional, ultra-shallow conventional or Low Pressure Pipe (LPP) septic systems. Due to lack of space, the soils do not have the potential for alternative

systems such as pre-treatment surface drip or spray irrigation. There are 2 possible options for development of this project. The first is an off-site septic system. Off-site systems are septic systems utilize suitable soil on a separate parcel for the treatment field. The second option is municipal sewer if feasible. Both options may be economically limiting. Soil Services can provide additional information regarding these system types if requested.

Soil Services, PLLC would be pleased to assist you in any future site analysis needs. Please contact Sarah I. Menser at (919) 745-1928 with any requests, questions or concerns.

Sincerely,  
**Soil Services, PLLC**



Sarah I. Menser, LSS  
NC License No. 1304

Attachments:

- Site Analysis Summary

**Soil/Site Evaluation Summary**

**15A NCAC 18A**

- .1940** Slope:  <15% (S)  15% - 30% (PS)  >30% (U)  
 Gullies/Ravines (U)  Depression (U)
- .1941** (1) Texture Group:  
Group I (S):  Sand  Loamy Sand  
Group II (S):  Sandy Loam  Loam  
Group III (PS):  Silt  Silt Loam  
 Sandy Clay Loam  Clay Loam  
 Silty Clay Loam  
Group IV (PS):  Sandy Clay  Silty Clay  
 Clay
- (2) Structure:  
 Crumb/Granular (S)  Block Like (PS)  
 Platy (U)  Prismatic (U)  
 Single Grain (S)  Massive (U)
- (3) Clay Mineralogy:  
 Slightly Expansive (PS)  Expansive (U)
- .1942** Depth to Soil Wetness (Chroma 2 Indicator):  
 >48" (S)  36" – 48" (PS)  <36" (U)
- .1943** Soil Depth (to rock, saprolite or parent material):  
 >48" (S)  36" – 48" (PS)  <36" (U)
- .1944** Restrictive Horizon (3" thick or more):  
 >48" (S)  36" – 48" (PS)  <36" (U)
- .1945** Available Space (only if layout has been done):  
System and Repair Available?  Yes  No  NA
- .1947** Overall Site Suitability:  S  PS  U

## **.1950 Location of Sanitary Sewage Systems**

(c) Every sanitary sewage treatment and disposal system shall be located at least the minimum horizontal distance from the following:

- |  |                                     |
|--|-------------------------------------|
| (1) any private water supply source including a well or spring   | 100 feet                            |
| (2) any public water supply source   | 100 feet                            |
| (3) streams classified as WS-I   | 100 feet                            |
| (4) water classified as S.A.   | 100 feet from mean high water mark  |
| (5) Other coastal waters   | 50 feet from mean high water mark   |
| (6) any other stream, canal, marsh, or other surface waters  | 50 feet                             |
| (7) any Class I or Class II reservoir  | 100 feet from normal pool elevation |
| (8) any permanent storm water retention pond   | 50 feet from flood pool elevation   |
| (9) any other lake or pond   | 50 feet from normal pool elevation  |
| (10) any building foundation   | 5 feet                              |
| (11) any basement  | 15 feet                             |
| (12) any property line   | 10 feet                             |
| (13) top of slope of embankments or cuts of 2 feet or more   |                                     |
| (A) vertical height  | 15 feet                             |
| (14) any water line  | 10 feet                             |
| (15) drainage systems:   |                                     |
| (A) Interceptor drains, foundation drains and storm water diversions   |                                     |
| i. upslope   | 10 feet                             |
| ii. sideslope  | 15 feet                             |
| iii. downslope   | 25 feet                             |
| (B) Groundwater lowering ditched and devices   | 25 feet                             |
| (16) any swimming pool   | 15 feet                             |
| (17) any other nitrification field (except repair area)  | 20 feet                             |
| (A) Ground absorption, sewage treatment and disposal systems may be located closer than 100 feet from a private well supply, except springs and uncased wells located downslope and used as a source of drinking water, repairs, space limitations and other site-planning considerations but shall be located the maximum feasible distance and, in no case, less than 50 feet. |                                     |
| (B) Nitrification fields and repair areas shall not be located under paved areas or areas subject to vehicular traffic. If effluent is to be conveyed under areas subject to vehicular traffic, ductile iron or its equivalent pipe shall be used. However, pipe specified in Rule .1955 (e) may be used if a minimum of 30 inches of compacted cover is provided over the pipe. |                                     |

Note: Systems over 3000 GPD or an individual nitrification fields with a capacity of 1500 GPD or more have more restrictive setback requirements, see .1950 (a) (17) (d) for specifics.