

**MICHAEL ATHANAS & ASSOCIATES, INC.**  
**LICENSED SOIL SCIENTIST**  
**561 Ennis Road**  
**Weddington, NC 28173**  
**704-576-3887 (Mobile)**

April 9, 2018

**Tim Kornegay**  
**Metro Land Brokers**  
3508 Johnny Cake Lane  
Charlotte NC 28226

**Reference: Soil Preliminary Investigation of Property Located on Anders Vincent Rd;  
Lancaster County, SC; PIN 0020-00-021.00**

Dear Mr. Kornegay:

On April 4 and 5, 2018 Michael Athanas & Associates, Inc. (MA&A) performed a soil preliminary investigation for the property referenced above. This preliminary soil investigation was performed at your request to determine the property's suitability for subsurface wastewater disposal systems. Site suitability is based on but not limited to topography, soil characteristics, soil wetness, soil depth, restrictive horizons, and available space. All ratings and determinations were conducted in accordance with **SC DHEC, R.61-56, Onsite Wastewater Systems, Bureau of Environmental Health.**

This investigation was accomplished by traversing the property and observing landforms (slope, drainage patterns, gullies, past uses, etc.) as well as soil characteristics (depth, structure, texture, seasonal wetness, etc.) through the use of soil observations/auger borings. During this evaluation soil observations were generally excavated to a depth of 12"-48" inches and approximately 37 soil observations were completed.

The soil observations mostly appeared to be provisionally suitable with respect to a typical on-site wastewater systems. The provisionally suitable soil on this property mainly consisted of a brown loam/clay loam with weak subangular blocky structure with a slightly sticky, slightly plastic consistence. Below this horizon, was a red clay that appeared to be subangular blocky in structure and slightly sticky, slightly plastic in consistence. Below the red clay horizon, a red clay loam horizon was encountered. The red clay loam showed a weak subangular blocky structure and was slightly sticky, slightly plastic in consistency, there were also few to common saprolite inclusions. Below this horizon, several borings showed a verigated loam saprolite. The saprolite was slightly sticky and slightly plastic in consistency and had a massive structure. In one of the soil observations a Zone of Saturation (ZOS) was found. The ZOS is determined by chroma 2 mottles in the soil using the Munsell Soil Chart. The ZOS in this boring was found at 29". This area of the property would be considered marginally suitable and should be avoided if possible. This area is indicated with yellow dots on the preliminary map. In several

observations, rock was encountered at 30" or less. These areas are considered unsuitable due to slope and need to be avoided. They are located on the map using red dots.

Several areas on the property have drainage areas, ditches, and other examples of unsuitable topography. Most of the large areas of unsuitable topography have been indicated on the map. These areas are considered unsuitable for onsite systems. These areas should be used for property lines or greenspace. Small topographical features may be blended away to allow a system to be installed in that area.

The survey provided to MA&A did not match the survey shown on Lancaster County's GIS site. The survey provided and shown in the field only included 57.6 acres. MA&A evaluated what was shown on the county GIS site. The acreage shown on the GIS site was 61.7. There was little to no survey of the 61.7 acres. The approximate location of the borings were determined using aerial photos and the county's GIS page.

Most four bedroom system types located in provisionally suitable soil with an application rate of 0.3 gal/d/ft<sup>2</sup> or less will need approximately 600 linear feet or more of space **completely** designated for septic area. Only once a plat showing the proposed lot/house arrangements (preferred house/well location etc...) is produced, can we fully determine whether this property could support a certain number of lots. Additional considerations are required setbacks from various elements such as 75' from wells, 75' from streams and ponds, 5' property lines and 15' from top of embankments greater than two feet in depth, 15' from pools, among others.

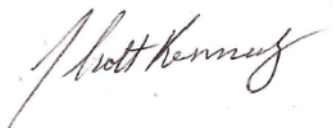
In conclusion this property appeared to have mostly provisionally suitable soils for a conventional systems. Please note this evaluation and description of the soil characteristics are directly applicable to the specific auger boring sites, while necessary soil observations were excavated according to soil landscape relationships, **soil conditions may vary from those described between soil observations.** This report is for the information and preliminary planning purposes only and neither guarantee nor imply that certain number permits will be granted final site approval or improvement permits by the local health department. Please note that an individual septic system permit will be required for each lot prior to obtaining building permits. This will involve the need for the property to be surveyed and at that time a detailed evaluation performed. Only after this is complete can a final determination be made concerning specific system locations.

I trust this report provides you with the information you needed. If I can be of any further assistance, please feel free to call.

Sincerely,



Michael Athanas  
South Carolina Professional Soil Classifier, #77  
North Carolina Licensed Soil Scientist # 1252



Scott Kennedy  
Soil Consultant