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November 5, 2016

Mr. Frank Gombatz
FONVILLE MORRISSEY REAL ESTATE
7980 Arco Corporate Drive
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Frank:

This report concerns the preliminary soils and site investigations for septic system suitability on the Evelyn Bass property (10.01 acres) located on the south side of Dove Road about two miles southeast of Creedmoor in southern Granville county. The property identification number is 089504544354.

The attached sketch map shows the approximate locations of various soils areas on the property. This map was prepared using property information and aerial photography obtained from the Granville County GIS web site. The topographic contours (2 ft. interval-LIDAR) were obtained from the NC DOT GIS web site. The USDA soil survey maps and the USGS topographic map were also consulted as to the general nature of the soils, landforms and streams.

The locations of the individual soil borings as well as selected cultural features and drainage features were estimated using a Trimble mapping grade GPS receiver. This information can be used for discussions regarding the feasibility of developing the property using septic system drain fields for onsite sewage disposal. The soils occur in complex patterns relative to the criteria for the permitting of septic systems. Consequently additional detailed investigations and the field layout of drain field trench systems will be required before any permits for sewage disposal can be finalized.

GENERAL SOILS SUITABILITY

The soils on this property are mapped in the Creedmoor (CrB) Soil Series by the USDA, Soil Survey of Granville County. A copy of the local soils map from this publication that was obtained from the Granville County GIS is attached with this report. Under the USDA classification system Creedmoor soils are considered to have severe limitations for septic system drain fields. As a general rule these soils will also classify unsuitable under State On Site Sewage Disposal Regulations (15A NCAC 18A .1900-.1970). The main potential limitations to use are slow percolation rates and the presence of a seasonally perched water table. Detailed field investigations are necessary to locate "inclusions" ,if present, of soils that have favorable properties for the permitting of septic systems.

SOILS AREA 2: These soils will classify provisionally suitable to unsuitable for conventional septic system drain fields. These soils have sandy loam to loamy sand surface layers overlying friable yellowish brown sandy clay loam to sandy clay subsoils that exhibit soil structure and are free of seasonal wetness indicators or expansive clay layers within the upper 24 to more than 36 inches of the soil profiles. These soils have potential for sewage disposal. The unsuitable soils can be re-classified to provisionally suitable

SOIL MAPPING • SITE INVESTIGATION • LAND RESOURCE DATA EVALUATION

Licensed Soil Scientist

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by using modifications for conventional septic system drain fields or by using alternative septic system designs as prescribed under the State Sewage Disposal regulations. These modifications for conventional systems may involve the installation of approved fill over the proposed drain field site, the installation of up-slope interceptor drainage measures or the shallow placement of drain field trenches. The alternative septic systems may include the use of Low Pressure Pipe (Lpp) distribution or possibly the use of subsurface drip irrigation technology. The sewage loading rates (LTAR) for conventional trenches is estimated to range from 0.25 to 0.45 gal./sq. ft. of trench bottom. For alternative septic systems the LTAR is estimated to range from 0.10 to 0.15 gal./sq. ft. of drain field area.

SOILS AREA 3: These soils will dominantly classify unsuitable for conventional and most alternative septic systems. The main limitations to use are the depth to soil layers with expansive clay mineralogy, shallow soil depth, the depth to a seasonal water table and poor landscape position. Overall these soils are not recommended for sewage disposal. Some isolated small areas of soils similar to area 2 may be present, but are not considered to be extensive enough for practical use.

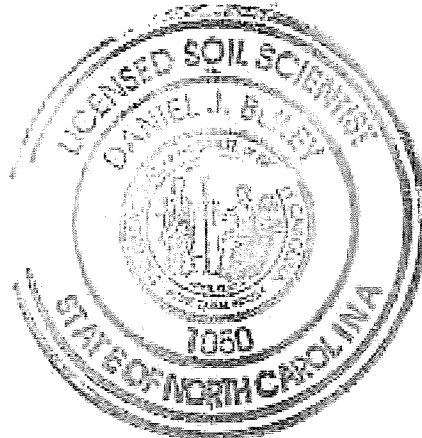
SUMMARY

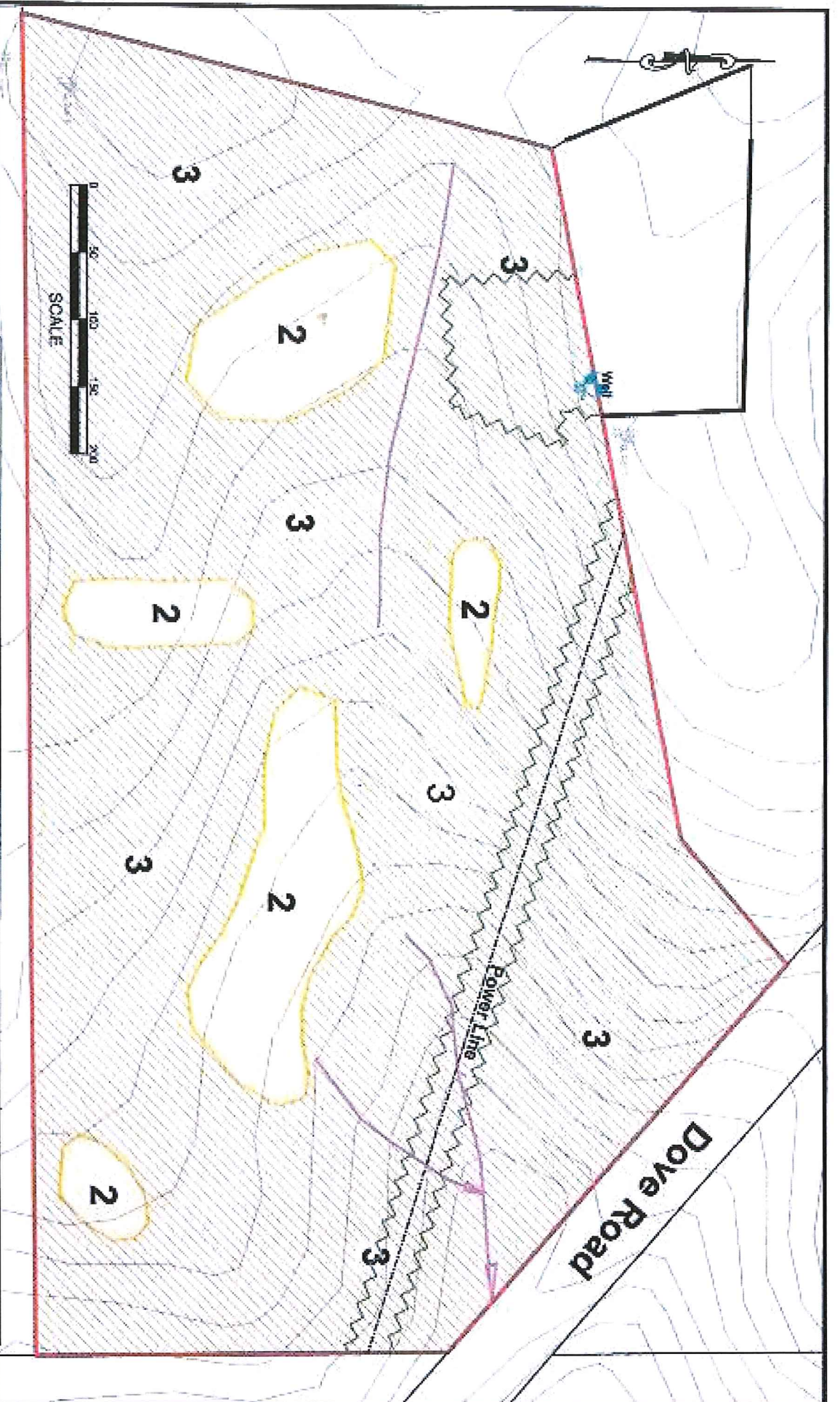
This property has potential for development using septic systems for onsite sewage disposal. It appears that sufficient areas of usable soils may be present to support drain fields for more than one dwelling subject to the necessary follow-up investigations, field layout of septic drain fields and design of effluent distribution systems.

Please call me if you want to discuss these investigations in more detail or if you want to discuss the development of the property.

Sincerely

Daniel J. Blakey
Daniel J. Blakey
Licensed Soil Scientist





Legend

- 2 Provisionally Suitable to Unsuitable
- 3 Unsuitable
- Surface Drains
- ~ Woods Line

Project:	10.16 acre tract
Client:	Evelyn Bass
CAD File:	EvelynBass
Scale:	1" = 100'
Date:	November 5, 2016

Daniel J. Biley

Soils and Land Use Consultant

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