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June 16, 2025

Mr. Todd Currin
2641 Brassfield Road
Creedmoor, North Carolina 27522

Mr. Currin:

This report concerns the soils and site investigations for septic system suitability on the Currin property (39.80 ac.) located on the north side of Brassfield just east of the intersection with Pope Road near Creedmoor in southern Granville County. The property identification number is 180502-77-8647.

The attached map was prepared using the property information 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 of the area and the USGS topographic maps were also used as general guides to the soils, landforms and streams.

The few soils areas that have potential for septic drain fields that are identified were estimated from hand auger borings made at selected locations and from field observations of soil related landforms and vegetation. The locations of all of the soils borings that were made as well as selected cultural features and drainage features were estimated using a Trimble mapping grade GPS receiver. The soil boring locations are shown by symbol on the attached plat. Additional follow-up investigations will be needed before the development potential of the areas for drain fields can be finalized.

Substantial areas were not investigated. Most of these areas occur on hill slopes and stream valleys that normally have a low probability of containing soils that can be used for drain fields.

SOILS GENERAL

The **USDA soils map** shows the soils on the property to be dominantly mapped in the Creedmoor (CrB , CrC) and Chewacla (ChA) soils mapping units by the Soil Survey of Granville County (USDA, 1997). A copy of the USDA soils map from the Granville County soil survey obtained from the GIS web site is attached with this report. Under the USDA classification system the Creedmoor soils will classify as having severe limitations for septic drain fields. The main potential limitation to use is the depth to structureless weathered sediments, depth to a seasonally perched wetness condition and the clayey subsoils, which have expansive properties. These soils are generally not permitted for septic systems in Granville County due to the severity of the limitations. The Chewacla soils will also classify as having severe limitations for septic drain fields. The main potential limitations to use are the depth to the seasonal high water table and flood hazard. Chewacla soils are generally not permitted for septic systems in Granville County due to the severity of the limitations. Special detailed investigations are required to locate "inclusions" of soils that have favorable properties for septic drain fields in these mapped units if there are any such areas present.

Mr. Todd Currin
April 5, 2025
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SOIL SUITABILITY

Brief descriptions of the soils areas as mapped by these investigations and suitability classifications based on State Sewage Disposal regulations (15A NCAC 18E .0102-.1713) are as follows:

SOILS AREA 2: These soils will dominantly classify suitable for modified septic system drain fields. These soils generally have grayish brown and light yellowish brown sandy loam to loamy sand surface layers 6 to 10 inches thick. The underlying subsoils are yellowish brown sandy clay loam to sandy clay, which may be mottled with red and gray in the lower layers. The subsoils exhibit soil structure and are generally free of gray wetness mottles within the upper 24 to 30 inches or more of the soil profiles. For the most part these soils have potential for modified conventional septic system drain fields. At some locations shallow fill (at grade) installations using low profile infiltrator chambers will be required as well as the possible installation of up-slope interceptor drainage measures. The sewage loading rates (LTAR) are estimated to range from 0.25 to 0.35 gal./sq. ft. of trench bottom for conventional or modified conventional septic system drain fields.

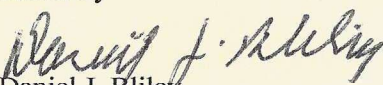
REMAINING AREAS: The soil boring made in these areas mainly classified unsuitable for conventional or modified conventional septic drain fields. These soils mainly have clayey subsoils that have a firm to very firm consistency indicative of expansive properties and are mottled with gray indicative of the presence of intermittent perched water during the wetter seasons or they occur on the flood plain of Beaver Creek and have a wetness and flood hazard limitation. It is likely that some isolated areas of soils with potential for drain fields are present, but it is also likely that such areas are small and isolated in occurrence and will be difficult to identify.

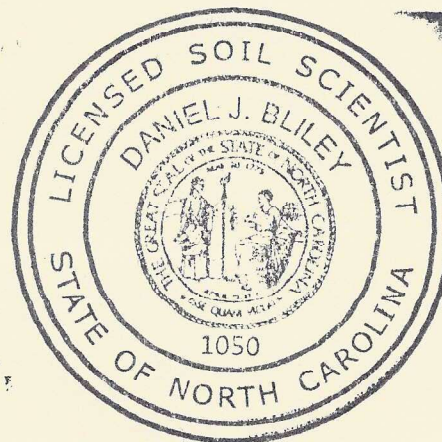
SUMMARY

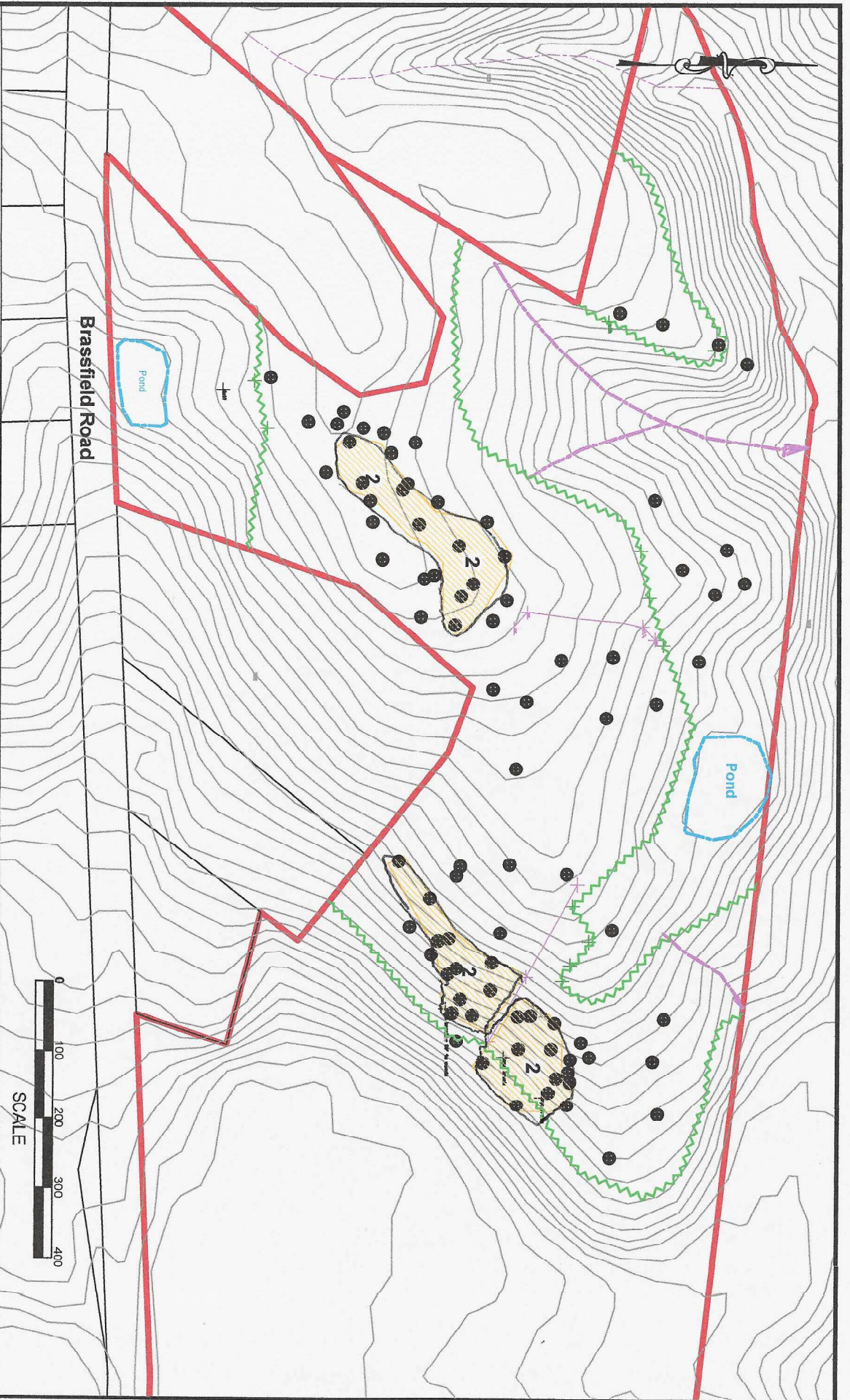
Two significant areas (Area 2) are identified on the property that have the potential for modified conventional septic system drain fields. At this point it appears that these areas each have the potential to support septic drain fields for three to four bedroom dwellings. Detailed field layouts of septic drain field systems will be required to determine the maximum potential of each of the areas. Site modifications such as the importation of approved fill materials will be required for most of the drain fields in these areas, which may necessitate additional area requirements above normal. This additional field work will be required before any permits for sewage disposal can be finalized. It is possible that the eastern most area (adjacent to the Beaver Creek bottomlands) can be divided into two separate sites (three bedroom each). The probably division line along the grassed waterway that cuts through the site (purple line). This will need to be verified by the additional field work.

Please call me if you have any questions regarding these investigations or this report.

Sincerely


Daniel J. Bliley
Licensed Soil Scientist





Legend



Suitable



Soil Boring Locations



Surface Drains-Waterways



Woods Line

Project: 39.80 ac. tract

Client: Todd Currin

CAD File: ToddCurrin

Scale: 1" = 200'

Date: June 15, 2025

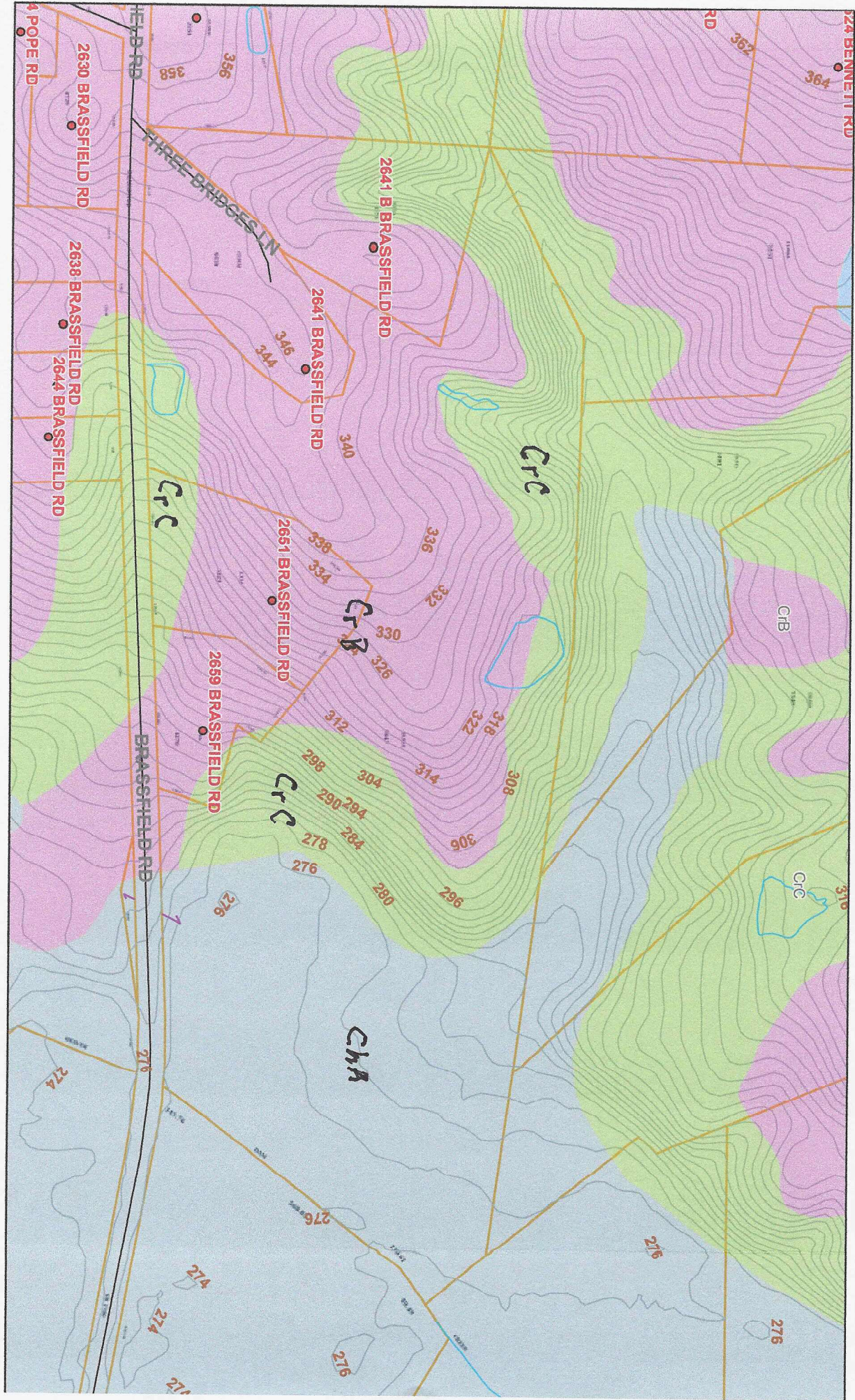
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USDA - Soils Granville County, NC



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