

Southeastern Soil & Environmental Associates, Inc.

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July 10, 2023

Mr. Kirby LaForce
Triangle Land Partners
PO Box 5548
Cary, NC 27512

Re: Preliminary soil evaluation for subsurface waste disposal, BPR Real Estate Holdings Property, +/- 13.8 acres, PIN 0599-84-4961.000, Erwin Chapel Road, Harnett County, North Carolina

Dear Mr. LaForce,

A preliminary soils investigation has been completed for the above referenced property at your request. The property is located on Erwin Chapel Road as illustrated on the accompanying map. The purpose of the investigation was to determine the extent of soil areas that may have the ability to support subsurface waste disposal systems for a proposed residential subdivision. All ratings and determinations were made in accordance with "Laws and Rules for Sanitary Sewage Collection, Treatment, and Disposal, 15A NCAC 18A .1900".

Southeastern Soil and Environmental Associates, Inc. (SSEA) performed these soil evaluations in July 2023. SSEA traversed the property and observed landforms (slope, drainage patterns, etc.) as well as soil conditions through the use of hand auger borings and/or soil probes. From these observations and GPS location (accuracy may vary; **not based on a current survey**) the boundaries between usable and unusable soils has been **estimated** on the accompanying maps (scale as shown).

Two distinct soil patterns were observed in the field evaluations. They are described as follow:

Area "A": This area is dominated by soils that are **provisionally suitable** for subsurface waste disposal systems (**with the exception of minor drainageways that are too small to delineate at this scale**). Typically, these soils exhibited 4 or more inches of loamy sand underlain by sandy loams, sandy clay loams and/or sandy clays to depths of 40 or more inches. Soil wetness, depth, and mineralogy were typically suitable to depths of at least 20 inches. A typical 3-bedroom home (50' x 50' box) would require approximately 10,000 sq. ft. of this soil area for drainfields and repair areas (exclusive of setbacks from lot lines, houses, drainage features, etc.).

A typical 4-bedroom home (50' x 50' box) would require approximately 12,000 sq. ft. of this soil area. (Note: These square footage recommendations assume appropriate topography for a practical septic system layout on topographical contour. Space requirements could increase with difficult topography, irregular lot lines, etc.) Septic system types in these soil areas would typically be conventional/ innovative but could include (low pressure pipe, pump to conventional, low profile chamber, porous panel block, .1957b fill, pretreatment, French Drains, drip irrigation, etc.).

Area "B": Soils in these areas are **dominantly unsuitable** for conventional subsurface waste disposal due to poor topography, shallow soil depths to unsuitable saprolite or parent material, soil wetness [colors of chroma 2 (or less) and/or redox mottles that are less than 12 inches from the soil surface] and/or expansive clay mineralogy. Some of these areas contain "wetlands" that may be protected by the NC Division of Water Quality and/or the US Army Corps of Engineers. You should complete a wetland delineation prior to any site development to ensure exact locations of these protected areas.

The enclosed map is not based on a current survey [once surveyed, estimations of soil lines may change]. All points were flagged in the field for location by your professional land surveyor. Due to heavy vegetation and/or poor GPS accuracy, estimations of unsuitable soil lines (on maps provided) could vary after further evaluation.

Any site grading or soil removal in these suitable or provisionally suitable areas may alter the findings of this report and render sites unusable. Areas for septic disposal must remain undisturbed (no mechanical clearing, stripping, excavation or heavy traffic).

Because individual lots were not surveyed at the time of evaluation, this report does not address lot(s). This report is to be used as a guide for likely subdivision/lot design based on useable soils.

Prior to submittal of a final plat, Harnett County Environmental Health requires a certification of each lot's suitability for on-site waste disposal by a licensed Soil Scientist. In order to provide that analysis and certification, additional soil borings, testing and design will be required (once proposed individual lots are rough staked on the ground). This further analysis will determine whether each lot contains adequate soils that have the ability to assimilate waste under current rules and the type system required. Based on these individual lot evaluations, additional

requirements for lot density, lot size and/or configuration would be made to meet current regulatory criteria.

This report, of course, does not guarantee, constitute or imply any approval, or issuance of permit, as needed by the client from the local health department. Such approval is dependent on individual lot evaluations made after individual lots are staked in the field by the local health department. This report only represents my opinion as a licensed soil scientist. Because of the extreme variability of these soils, SSEA does not guarantee that permitting agencies will agree with these findings (nor permit the intended use).

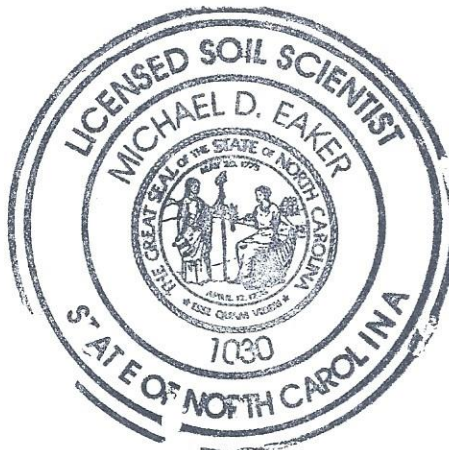
As with any property, a buyer of any proposed lot should obtain an appropriate septic improvement permit from the local County Health Department prior to making or completing financial obligations or commitments. (A permit from this agency is the only "guarantee" of a site's suitability).

Southeastern Soil and Environmental Associates, Inc. is pleased to be of service in this matter. We look forward to assisting in additional site analysis needs you may have in the future. Please feel free to call with any questions.

Sincerely,



Mike Eaker
President





Southeastern Soil & Environmental Associates, Inc.

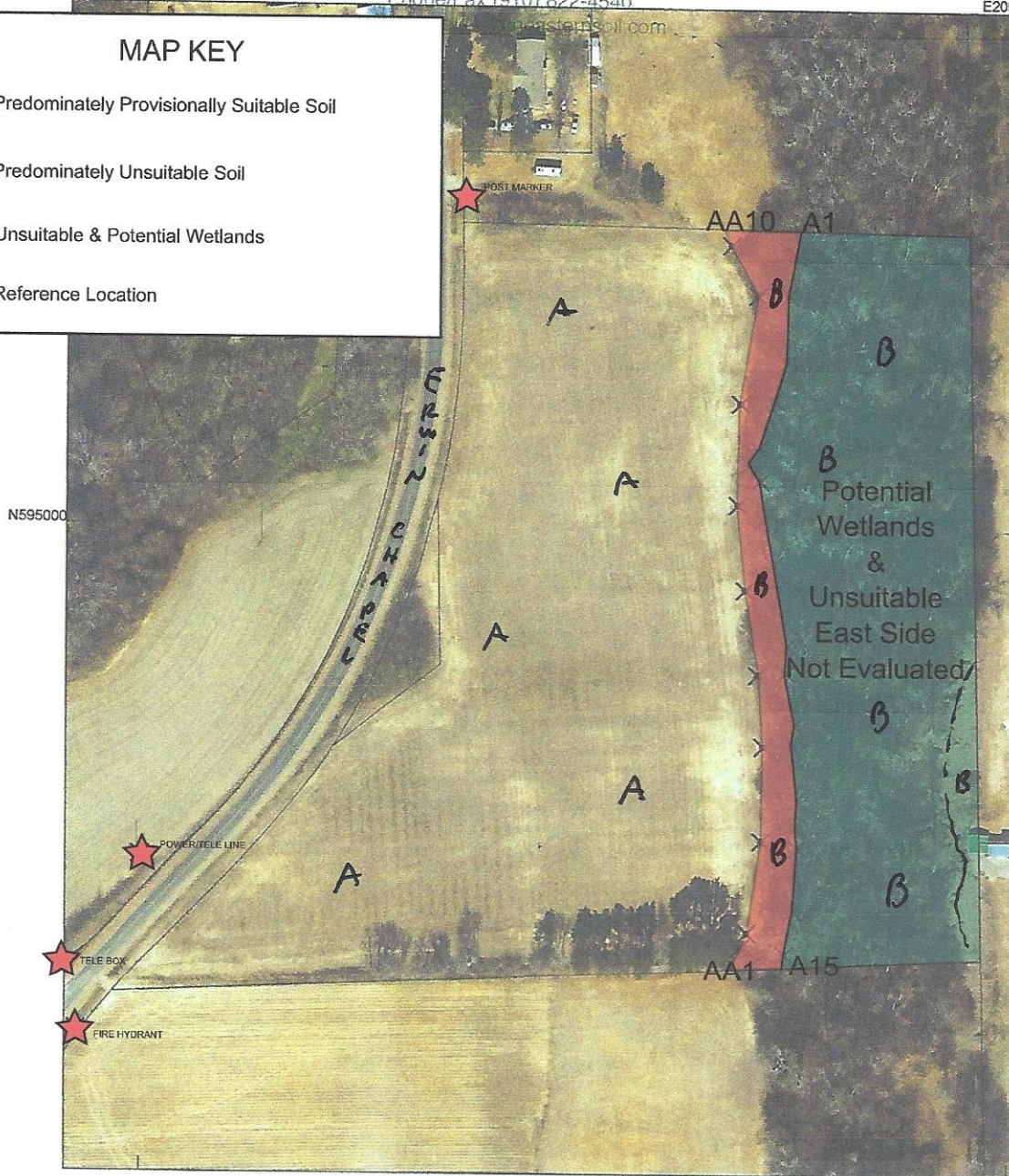
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MAP KEY

-  Predominately Provisionally Suitable Soil
-  Predominately Unsuitable Soil
-  Unsuitable & Potential Wetlands
-  Reference Location



Preliminary Soil Evaluation for Subsurface Waste Disposal & Preliminary Wetlands Delineation, BPR Real Estate, Erwin Chapel Rd., Harnett Co., NC

US State Plane 1983
North Carolina 3200
NAD 1983 (Conus)



Scale 1:2,400



Feet

BPR.SSF

7/6/2023

GPS Pathfinder® Office

