PRELIMINARY SOIL AND SITE EVALUATION

Chatham County Parcel: 60852
Alston Chapel Road
Pittsboro, NC 27312

Prepared For:

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June 12, 2024

INTRODUCTION & SITE DESCRIPTION

This Preliminary Soil and Site Evaluation was performed on a 62.2-acre tract of land located on Alston Chapel Road Road, Pittsboro, North Carolina (Chatham County Parcel: 60852).

Thompson Environmental Consulting, Inc. (TEC) was retained to determine whether the soils are suitable for onsite subsurface wastewater treatment and disposal. The property was evaluated in accordance with North Carolina statutes for waste disposal ("Laws and Rules for Sewage Treatment and Disposal Systems", effective January 1, 2024).

INVESTIGATION METHODOLOGY & SITE PHYSICAL CHARACTERISTICS

Individual soil borings were evaluated, and soil color was determined with a Munsell Soil Color Chart. Observations of the landscape (slope, drainage patterns, etc.) as well as soil properties (depth, texture, structure, seasonal wetness, restrictive horizons, etc.) were recorded.

The project study area is currently undeveloped and vegetated with a mixed deciduous forest. Harlands Creek and unsuitable topographic features are located on the property and their approximate limits are shown in the attached Figure 1.

FINDINGS

A field survey was conducted between June 3 and June 10, 2024 with soil areas highlighted in the attached Figure based on the following findings:

Suitable for Conventional Type Systems. Soil areas classified as Provisionally Suitable for Conventional Systems may include Gravel, Accepted, Low-Profile Chamber, Alternative, Shallow-Placed, and Prefabricated Permeable Block Panel Systems and are denoted in the attached Figure as green polygons. While the particulars and costs between the system types can vary considerably, these are generally the preferred system types. This soil appeared adequate to support a long-term acceptance rate (LTAR) of 0.2 to 0.3 GPD/sq-ft.

Provisionally Suitable for Subsurface Drip Systems. Anaerobic Subsurface Drip Dispersal systems require a minimum of 18 inches of suitable soil and are substantially more costly to install than Conventional Type and Low-Profile Chamber Systems. These soil areas would be assigned an LTAR of 0.1 GPD/sq-ft and are depicted in the attached Figure as purple polygons.

Unsuitable. Soil areas or features classified as Unsuitable for Subsurface Drip systems had a restrictive horizon with 12 inches of the ground surface and are depicted in the attached Figure as red polygons.

DISCUSSION

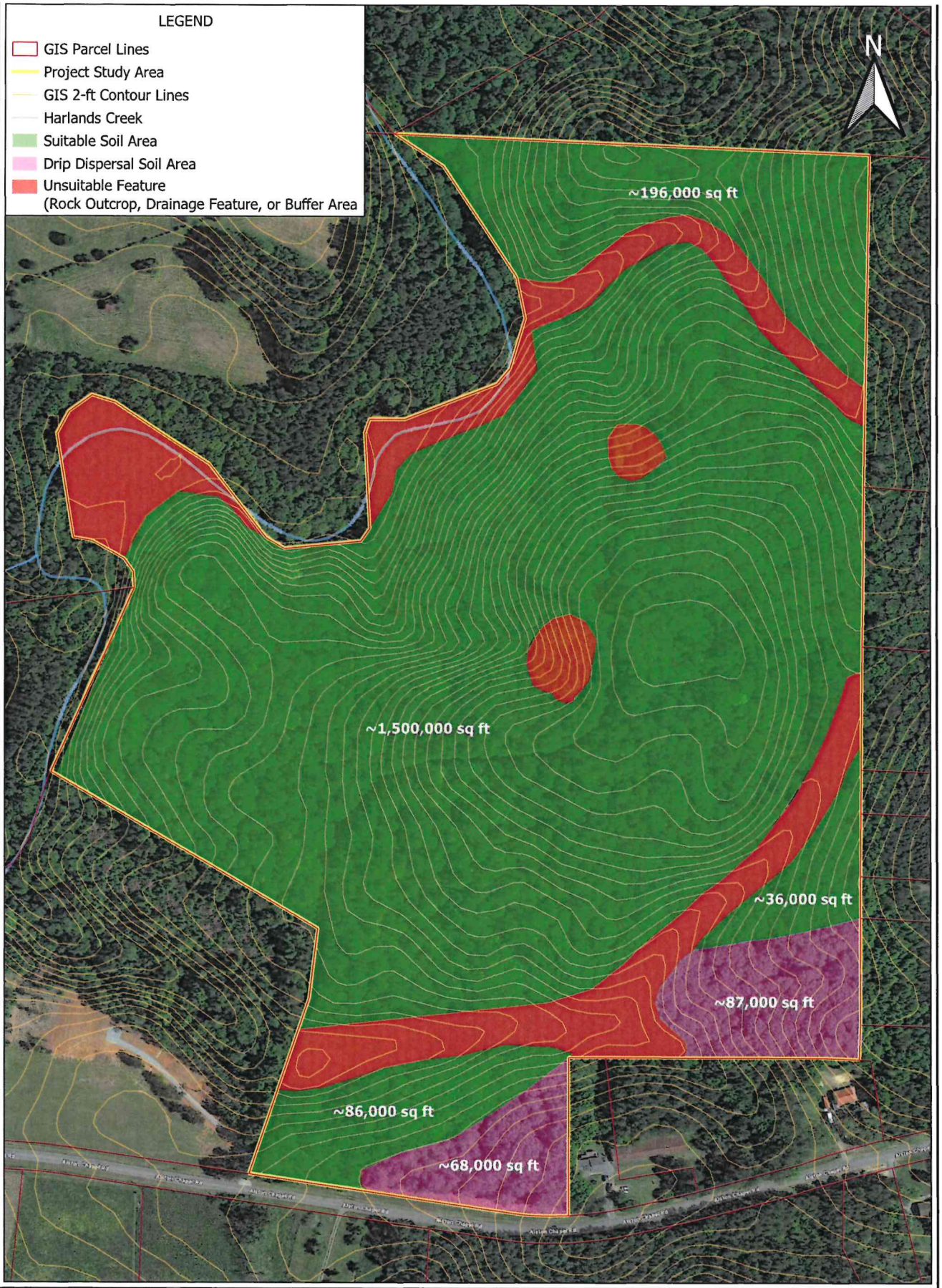
The soils located within the green polygons in the attached Figure 1 are "Provisionally Suitable" for Accepted System and Low-Profile Chamber drainfield products. It is estimated that between 7,000 to 10,500 square feet of suitable soil area would need to be allocated and left completely

available for the installation and required repair area for each septic system installation serving a 4-bedroom single family residence in these areas.

The soils located within the yellow polygons in the attached Figure 1 are "Provisionally Suitable" for Subsurface Anaerobic Drip Dispersal drainfield products. It is estimated that 10.000 square feet of suitable soil area would need to be allocated and left completely available for the installation and required repair area for each Subsurface Drip Dispersal system installation serving a 4-bedroom single family residence.

CONCLUSION

The findings presented herein represent TEC's professional opinion based on our Soil and Site Evaluation and knowledge of the current laws and rules governing on-site wastewater systems in North Carolina. Soils naturally change across a landscape and contain many inclusions. As such, attempts to quantify them are not always precise and exact. Due to this inherent variability of soils and the subjectivity when determining limiting factors, there is no guarantee that a regulating authority will agree with the findings of this report.



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Preliminary Soil and Site Evaluation

County Parcel: 60852
Alston Chapel Road
Pittsboro, NC 27312

Chatham County

Date:
June 2024

Scale:
0 100 200 ft

TEC Job #:
24-199

Figure
1