-

Ground Truth Soil Consulting, PLLC
1302 Roberts Road
Newport, NC 28570
(252) 725-1320

PRELIMINARY SOIL & SITE EVALUATION

Chadwick Tract
Old Winberry Rd
Carteret County, NC
PIN: 637904840347000
GT Job# 26-140

Stacy Reott
umlilwane@hotmail.com

INTRODUCTION

Ground Truth Soil Consulting, PLLC (Ground Truth) was employed to complete a Preliminary Soil & Site Evaluation of the above referenced tract. The Study Area encompassed approximately ~19-acres. The Study Area was wooded with a moderately dense to dense shrub layer. The focus of the work was to evaluate the current soil conditions in regard to supporting subsurface wastewater systems for single-family residences. This report is not meant to provide the accuracy needed to layout individual septic systems nor provide the accuracy needed to determine potential lot locations that would be served by septic systems. No lots or houses were staked at the time of the investigation. The property corners were not marked on the day of the evaluation.

INVESTIGATION METHODOLOGY

The field survey was conducted in May 2026, by John C. Roberts, LSS. Subsurface septic suitability was determined in accordance with the working copy of North Carolina statutes for waste disposal 15A NCAC 18E – Wastewater Treatment and Dispersal Systems, Version 2.1, September 30, 2024.

-

-

FINDINGS

Soils

The soil area rated as "Potentially Suitable for Fill Systems" was dominated by soils with usable soil depths ranging in depth from 12 to 15 inches (shown as orange in Figure 1). These soils typically exhibited a friable sandy loam texture with weak, medium, subangular blocky structure ranging in depth from 6 to 12 inches. Lower soil layers typically exhibited a friable or firm sandy clay loam texture with weak, moderate, subangular blocky structure to >30 inches. Soil wetness was the most limiting soil characteristic and was observed from 12 to 15 inches from the existing soil surface. Inclusions of soils with usable soil depths less than 12 inches can occur within this unit. Fill systems require clean, washed, sand to be imported to heights of 18 to 30 inches above current grade. Drainlines are then installed in the imported fill material. An LTAR of 0.3 GPD/sq-ft is anticipated for the fill system and will require a minimum of 400-ft of gravel drainline installed in a fill pad for a three-bedroom home. Based on soil and site characteristics, it is anticipated that approximately 13,000 to 15,000 sq-ft of soil rated as Potentially Suitable for Fill Systems would be needed to support the initial system and repair area for a three-bedroom home (360 GPD). These soils are considered marginal due to the soil wetness condition occurring at 12-15 inches below the existing surface but were the only somewhat potentially suitable soils observed in the study area. A gravel curtain drain installed around the septic system area may be needed to better control and/or divert lateral flow of subsurface water around the septic drainfield.

The soil areas rated as "Unsuitable for Subsurface Septic Systems" were dominated by soils with usable soil depths of <12 inches (shown as red-hatching in Figure 1). The main limitations were depth to soil wetness indicators within 12 inches of the surface and heavy textured clay subsoils. Other Unsuitable areas observed in the Study Area included concave landscapes and depressional areas.

Potential Development and General Considerations

The exact square footage of usable soils needed to obtain a septic permit cannot be given at this time due to soil variability and topographic features. At a minimum, the usable soil areas recommended above will need to be completely available to support a subsurface septic system, initial and repair areas. No other site features can be sited within the proposed septic system areas (houses, outbuildings, wells, driveways, patios, overhead and buried utilities, nor can excavation or filling activities, etc. be done in these areas. Water supply wells serving one residence, if needed, will need to be sited the maximum distance away from the septic system but no closer than 50 feet. Septic drainfield layouts would also be required to ensure adequate

usable soil exists to obtain a septic permit after the thick vegetation is mowed for better access to the potentially usable soil area.

CONCLUSIONS

The findings presented herein represent Ground Truth's professional opinion based on our Preliminary Soil & Site Evaluation and knowledge of the current laws and rules governing on-site wastewater systems in North Carolina. This report attempts to show potentially usable soil areas for subsurface wastewater systems and is submitted for general information and planning purposes only. House sites were not staked or proposed at the time of this investigation. Any proposed development of this property should avoid any adverse impacts to usable soil areas.

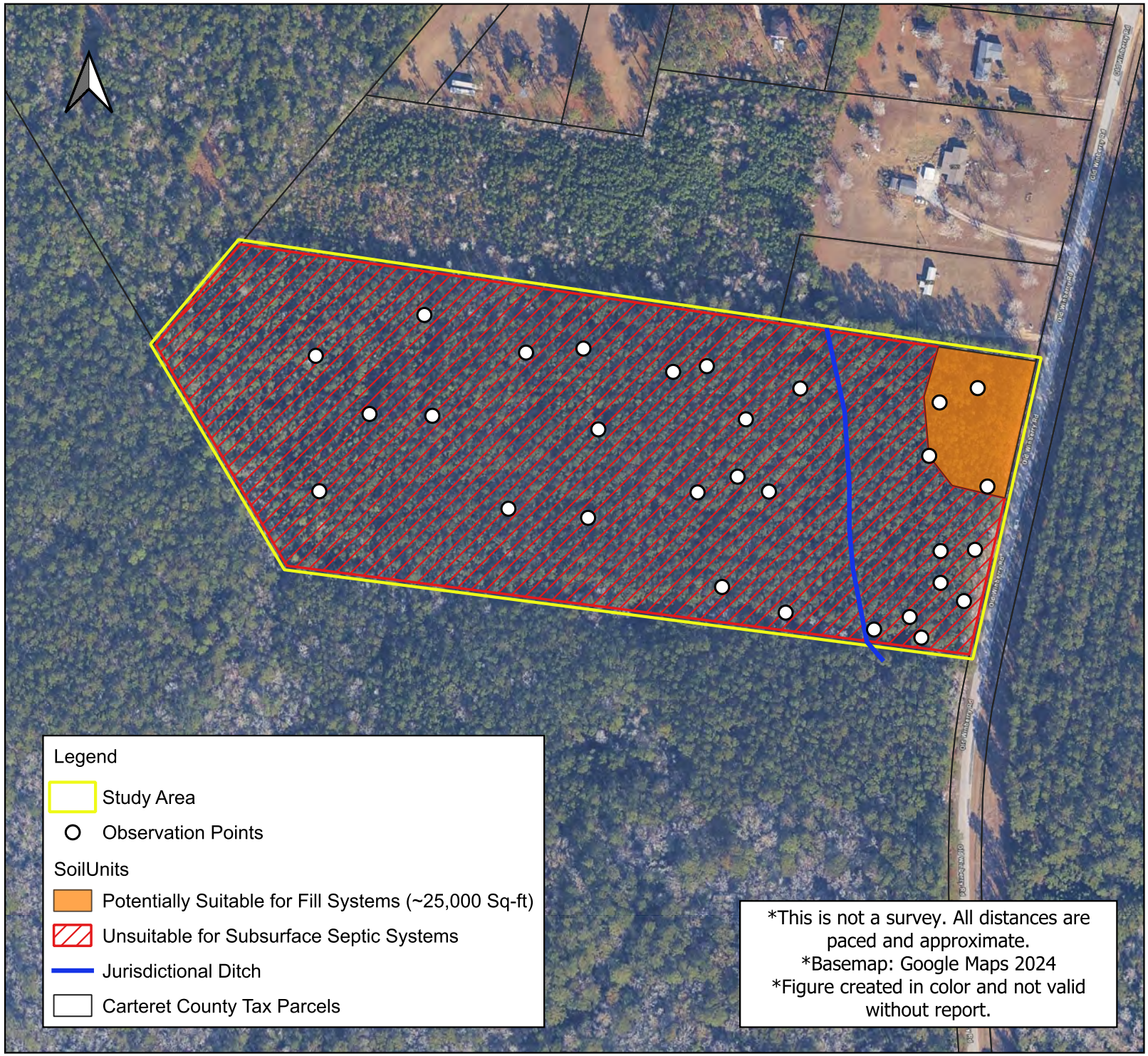
This report outlines the general location of potentially usable soils for on-site wastewater disposal and identifies current soil and site limitations. Ground Truth, a professional consulting firm in soil science and wastewater management, provides opinions but cannot guarantee the lifespan of any septic system. All recommendations on LTARs and trench depths are based on field observation, regulations, published data, standard practices, and professional interpretations; however, due to numerous uncontrollable variables that include how the system is installed and water usage by the system owner, Ground Truth cannot warrant the longevity of any septic system.

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. This report does not suggest or guarantee a septic permit can be obtained for this property. This report does not meet the requirements for Session Law (A2), AOWE, or EOP permits.

Sincerely,

John C Roberts

John C Roberts, LSS



Ground Truth Soil Consulting, PLLC

Chadwick Tract
Old Winberry Rd
PIN: 637904840347000

Preliminary Soil and Site Evaluation

Carteret County

Scale:
0 125 250 ft

Figure 1

Date: May 13, 2026

GT Job No. 26-140

LICENSED SOIL SCIENTIST JOHN C. ROBERTS 1292 STATE OF NORTH CAROLINA