## HAL OWEN & ASSOCIATES, INC.

## SOIL & ENVIRONMENTAL SCIENTISTS

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8 March 2024

Justin Tahilramani

Reference: Preliminary Soil Investigation Simpson Rd; PIN 857820911850701

Dear Mr. Tahilramani,

A site investigation has been conducted for a portion of the above referenced property, located on the northern and southern side of Simpson Road in Moore County, North Carolina. The purpose of this investigation was to determine the site's ability to support subsurface sewage waste disposal systems. All sewage disposal ratings and determinations were made in accordance with the Rules for "Wastewater Treatment and Dispersal Systems", 15A NCAC 18E. This report represents my professional opinion as a Licensed Soil Scientist but does not guarantee or represent permit approval for any lot by the Local Health Department. An application for an approved wastewater system shall be made to the Local Health Department that specifies the proposed building size and location and the design and location of the septic system to be installed.

The soils were evaluated under moist soil conditions through the advancing of auger borings. This evaluation included observations of topography and landscape position, soil morphology (texture, structure, clay mineralogy, organics), soil wetness, soil depth, and restrictive horizons. Soils units shown on the attached map represent dominant soil types with similar profiles but may include minor components of contrasting soil types.

The soils shown as suitable on the attached map are adequate to support subsurface sewage waste disposal systems. Due to clayey textured subsoil characteristics, you should expect that 60 to 85 feet of accepted status drainline would be required for the initial system per bedroom in any proposed residences.

The soils shown as suitable for modified systems are limited in soil depth to the extent that systems that can be installed ultra shallow will likely be required. This requirement will necessitate the addition of approximately six inches of approved soil to completely cover the system. You should expect that 70 to 85 feet of accepted status drainline would be required for the initial system per bedroom in any proposed residences.

The soils shown as suitable for low profile chamber systems are limited in soil depth to the extent that low profile chamber type drainlines installed ultra shallow will likely be required. Due to ultra shallow trench depths, the addition of approximately six inches of approved soil will be necessary to completely cover the system. You should expect that approximately 135 feet of low profile chamber drainlines would be required for the initial system per bedroom in any proposed residences.

It is recommended that lots be designed to contain at least 25,000 square feet in areas dominated by suitable soils and serviced by public or community water supplies. Developing lots with individual wells will necessitate an additional 10,000 square feet at minimum.

The unsuitable soil area is so rated due to inadequate soil depth to excessive soil wetness conditions and/or unsuitable landscape position. This area will likely support building foundations, and homes could be sited in this area. Utilization of pump type systems will allow unsuitable soils to make up part of the lot area. However, it is necessary that **at least 10,000 square feet** of usable soil be incorporated into each lot in such a way that it will be **completely available** for waste disposal.

The soils underlying the investigated portion of this property appear capable of supporting the subsurface sewage waste disposal needs of three, four-bedroom residences. I appreciate the opportunity to provide this service and trust that you will feel free to call on me again in the future. If you have any questions or need additional information, please contact me at your convenience.

Sincerely,

Britt Wilson

Licensed Soil Scientist

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