HAL OWEN & ASSOCIATES, INC.

## SOIL & ENVIRONMENTAL SCIENTISTS

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3 November 2017

910-915-2528

Donald Mangum PO Box 1023 Lillington, NC 27546

Reference: Soil Investigation and Septic Consulting

Recombination Map for Donald Mangum and Olivia Mangum

Dear Mr. Mangum,

A site investigation was conducted in October 2017 for the above referenced property, which is located on the eastern side of Norrington Road (S.R. 1130) in the Upper Little River Township of Harnett County, North Carolina. The purpose of this investigation was to determine the feasibility of modifying the existing septic system and repair area for the existing three-bedroom home to support a four-bedroom home. A soil and site investigation was conducted, and it appears that this lot (as recombined) is capable of supporting the septic needs of a four bedroom home. This report represents my professional opinion but does not guarantee or represent permit approval for any lot by the local Health Department.

Hal Owen & Associates Inc. reviewed the septic permit issued by the Harnett County Department of Environmental Services (Permit # 27765) and identified the existing septic system at the site. The home does not have a foundation drain, and it utilizes the public water supply. The existing septic system utilizes a 1000 gallon septic tank from which effluent flows to a distribution box to two 100-foot long accepted status (EZ-flow) drainlines. It appears that additions to the home have covered most of the top existing drainline, and only about 80 feet of the bottom drainline still meets regulatory requirements.

It appears the initial septic system can be modified to support the septic needs of a four bedroom home. The storage capacity of the existing septic tank is adequate, and it will not need to be modified. The existing distribution box can be used if it will accommodate three lines, otherwise a new distribution box should be set. The first (top) drainline should be plugged or disconnected from the distribution box, and the second drainline should be left in place. Two new 80-foot EZ-flow drainlines will need to be added in the right side-yard beside the existing home. The new drainlines should be installed on contour with trench bottom depths at 18 to 24 inches below surface. The modified system will utilize gravity distribution to three 80-foot accepted status drainlines and have a corresponding long term application rate of 0.5 gal/day/ft².

The repair septic system is proposed as a pump to a pressure manifold or serial distribution to 300 feet of accepted status drainlines utilizing a long term acceptance rate of 0.4 gal/day/ft<sup>2</sup>. The drainlines should be installed on contour with trench depths at 18 to 24 inches below surface.

## HAL OWEN & ASSOCIATES, INC.

This report and the attached septic system design information has been submitted to the Harnett County Health Department for review and the permitting process. I appreciate the opportunity to provide this service and hope to be allowed to assist you again in the future. If you have any questions or need additional information, please contact me at your convenience.



Sincerely,

Hal Owen

Licensed Soil Scientist

Soil Investigation and Septic Consulting Recombination Map for Donald Mangum and Olivia Mangum 3 November 2017

Figure 1. Map showing Septic Suitability of Soils and Proposed Septic System Design

