

*PREPARED FOR:*  
MS. SARAH O'BRIEN  
BRYAN PROPERTIES, INC.  
400 MARKET STREET, SUITE 115  
CHAPEL HILL, NORTH CAROLINA 27516

**SUNSET GROVE SUBDIVISION**  
**SITE EVALUATION FOR USE OF ON-SITE SEWAGE**  
**DISPOSAL SYSTEMS**  
OCTOBER 2015



*PREPARED BY:*  
**TIMMONS GROUP**  
YOUR VISION ACHIEVED THROUGH OURS. 

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October 23, 2015

Ms. Sarah O'Brien  
Bryan Properties, Inc.  
400 Market Street, Suite 115  
Chapel Hill, North Carolina 27516

**Re: Site Evaluation for Use of On-Site Sewage Disposal Systems for Sunset Grove Subdivision**  
*East of Mt. Gilead Church Road, Pittsboro, Orange County, North Carolina*

Ms. O'Brien:

At your request, Timmons Group, Inc., has completed a site evaluation for use of on-site sewage disposal systems for Sunset Grove Subdivision. The 107.82 acre site is located east of Mount Gilead Church Road in Pittsboro, Chatham County and will contain portions of the listed properties (*PIN 9773-60-6982.000, 9772-59-2771.000, 9772-59-4420.000*). The "Preliminary Septic Soil Suitability Unit Delineation Map" illustrates lots contained in Sunset Grove Subdivision and delineated units of suitable soil areas. The site evaluation was completed on various dates in 2006, 2007, 2014 and 2015.

#### **Status of Site Improvements and Vegetative Cover**

The entire tract is covered with forest vegetation of various ages and degrees of maturity. The only improvements observed on the site include remnants of an abandoned structure and cemetery near the east boundary of the site. A road leads to the observed improvements. Other improvements may be present but were not observed.

#### **Method of Evaluation and Soil Moisture Conditions**

Soils on the site were evaluated using a combination of hand auger borings and soil pits installed using a tracked excavator. Portions of the detailed evaluation were completed during drought conditions (2007), hence observed soil moisture was minimal during those periods. Outside of jurisdictional streams and wetlands, no standing water was observed at any location on the site.

#### **Soils Analysis**

According to the Chatham County Soil Survey, the site is covered by soils of the Badin-Nanford Complex, Cid-Lignum Complex, Georgeville Series, Georgeville-Badin Complex and Nanford-Badin Complex. Each of these soils has moderate limitations for septic system nitrification fields

due to slow percolation rates. Provisionally suitable soils represented by the above listed series have formed in Carolina Slate Belt rocks and other fine grained rocks.

Floodprone areas of the site were not evaluated due to their unsuitable landscape position. Additionally, several areas on the property were found to be unsuitable or potentially unsuitable for conventional nitrification fields due to improvements listed above, shallow depth to expansive or mixed-mineralogy clays, saprolite or bedrock, landscape position, compaction, gullies, remnant ditches from past land use activities and/or evidence of a shallow seasonal high water table. Soil suitability observations for each auger boring and soil pit are detailed on high visibility flagging. Former Mitchell Environmental staff utilized a color coding system to indicate the provisionally suitable soil depth ranges as follows:

- Red: 36"+
- Pink and Black stripe: 30" to < 36"
- Blue and White stripe: 24" to < 30"
- Yellow: 18" to <24"
- Orange and Yellow combination: 12" to < 18"
- Orange: < 12"

The attached map indicates the approximate boundary of provisionally suitable soil depth ranges on the site. Observed soils on this site exhibit various controlling textures including clay loam, silty clay loam, silty clay and clay. Conventional sewage systems for proposed lots should be designed for a long-term acceptance rate of 0.3 to 0.275 gpd/ft<sup>2</sup> for conventional trench systems and 0.15-0.075 gpd/ft<sup>2</sup> for nitrification fields that utilize pressure distribution and LPP or subsurface drip dispersal. Lots with insufficient area of soils useable for currently permissible subsurface septic systems will utilize surface application systems permitted through the DWR Non-Discharge Permitting Unit.

### **Proposed Use and Source of Water Supply**

Upon approval, the site will be subdivided into 56 lots for 3 to 5 bedroom, single-family homes. Individual septic systems will be installed on each lot. Potable water will be supplied by a connection to the Chatham County public water supply system.

**VI. Certification Statements**

**CERTIFICATION OF REVIEW BY LICENSED SOIL SCIENTIST**

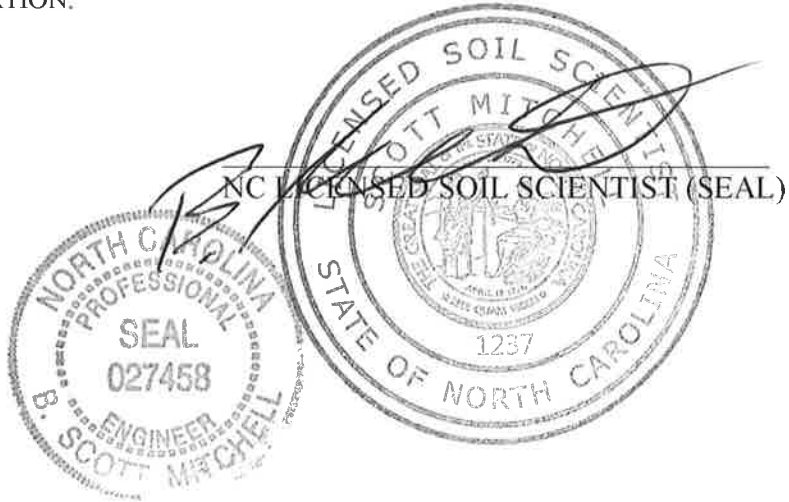
I HEREBY CERTIFY THAT LOTS 1 – 55A SHOWN ON THIS CONCEPT PLAN FOR Sunset Grove Subdivision HAVE BEEN REVIEWED AS APPROPRIATE AND WITH RESPECT TO MINIMUM LOT REQUIREMENTS SET FORTH IN 15A NCAC 18A .1900 – SEWAGE TREATMENT AND DISPOSAL SYSTEMS, 15A NCAC 02T – WASTE NOT DISCHARGED TO SURFACE WATERS AND 15A NCAC 02U – RECLAIMED WATER. AS OF THIS DATE, AND BASED ON THIS REVIEW OF EXISTING SITE CONDITIONS THE LOTS NUMBERED ABOVE ON THIS PLAT WILL PRESUMABLY MEET THESE REGULATIONS.

PRELIMINARY CERTIFICATION DOES NOT REPRESENT APPROVAL OR A PERMIT FOR ANY SITE WORK, NOR DOES IT GUARANTEE ISSUANCE OF AN IMPROVEMENT PERMIT FOR ANY LOT. FINAL SITE APPROVAL FOR ISSUANCE OF IMPROVEMENT PERMITS IS BASED ON REGULATIONS IN FORCE AT THE TIME OF PERMITTING AND IS DEPENDENT ON SATISFACTORY COMPLETION OF INDIVIDUAL SITE EVALUATIONS FOLLOWING APPLICATION FOR AN IMPROVEMENT PERMIT DETAILING A SPECIFIC USE AND SITING.


ANY CHANGE IN USE OR ANY SITE ALTERATION MAY RESULT IN SUSPENSION OR REVOCATION OF CERTIFICATION.

10-23-2015  
DATE

Sincerely,



Scott Mitchell, PE, LSS  
*NC Environmental Practice Group Leader*

  
Justin Milstein, SSIT  
*Environmental Scientist*