

Initial Application Date: 3-22-16

Application # 11050038292  
DRB # \_\_\_\_\_ CU # \_\_\_\_\_

**COMMERCIAL**

**COUNTY OF HARNETT LAND USE APPLICATION**

Central Permitting (Physical) 108 E. Front Street, Lillington, NC 27546 (Mailing) PO Box 65 Lillington NC 27546 Phone: (910) 893-7525 opt # 2 Fax: (910) 893-2793 www.harnett.org/permits

LANDOWNER: NUNEZ Concrete Mailing Address: 122 Tippet Rd

City: Angier State: NC Zip: 27501 Contact # 919-427-6027 Email: \_\_\_\_\_

APPLICANT\*: Gregory Development LLC Mailing Address: 9541 Industry Dr.

City: Raleigh State: NC Zip: 27603 Contact # 919-779-3522 Email: clint@gregory-development.com  
\*Please fill out applicant information if different than landowner

CONTACT NAME APPLYING IN OFFICE: Clint Gregory Phone # 919-291-7143

PROPERTY LOCATION: Subdivision: 122 Tippet Rd. Lot #: 3 Lot Size: 2.81A

State Road # 122 State Road Name: Tippet Map Book & Page: 98 / 262

Parcel: 04 06720104 49 PIN: 0673-35-594000

Zoning: Angier Flood Zone: MA Watershed: X Deed Book & Page: 3355 / 76 Power Company\*: \_\_\_\_\_

\*New structures with Progress Energy as service provider need to supply premise number \_\_\_\_\_ from Progress Energy.

SPECIFIC DIRECTIONS TO THE PROPERTY FROM LILLINGTON: \_\_\_\_\_  
Hwy 210 toward Angier -  
Turn Right on Tippet Rd  
3rd building on Right

**PROPOSED USE:**

- Multi-Family Dwelling No. Units: \_\_\_\_\_ No. Bedrooms/Unit: \_\_\_\_\_
- Business Sq. Ft. Retail Space: \_\_\_\_\_ Type: \_\_\_\_\_ # Employees: \_\_\_\_\_ Hours of Operation: \_\_\_\_\_
- Daycare # Preschoolers: \_\_\_\_\_ # Afterschoolers: \_\_\_\_\_ # Employees: \_\_\_\_\_ Hours of Operation: \_\_\_\_\_
- Industry Sq. Ft: 5000 Type: Commerc Storage # Employees: 4 Hours of Operation: 8 - 4
- Church Seating Capacity: \_\_\_\_\_ # Bathrooms: \_\_\_\_\_ Kitchen: \_\_\_\_\_
- Accessory/Addition/Other (Size \_\_\_\_\_ x \_\_\_\_\_) Use: \_\_\_\_\_

Water Supply:  County \_\_\_\_\_ Existing Well \_\_\_\_\_ New Well (# of dwellings using well \_\_\_\_\_) \*MUST have operable water before final  
Sewage Supply:  New Septic Tank (Complete Checklist) \_\_\_\_\_ Existing Septic Tank (Complete Checklist) \_\_\_\_\_ County Sewer

Comments: \_\_\_\_\_  
Soil Site Assesment by AWT Engineers  
1 mens room } 1 stall in each  
1 womens room

If permits are granted I agree to conform to all ordinances and laws of the State of North Carolina regulating such work and the specifications of plans submitted. I hereby state that foregoing statements are accurate and correct to the best of my knowledge. Permit subject to revocation if false information is provided.

Clint Gregory  
Signature of Owner or Owner's Agent

3-22-16  
Date

\*\*This application expires 6 months from the initial date if permits have not been issued\*\*

A RECORDED SURVEY MAP, RECORDED DEED (OR OFFER TO PURCHASE) AND PLAT ARE REQUIRED WHEN APPLYING FOR LAND USE APPLICATION

NAME: NUNEZ Condrate

APPLICATION #: 11050038292

**\*This application to be filled out when applying for a septic system inspection.\***

**County Health Department Application for Improvement Permit and/or Authorization to Construct**

IF THE INFORMATION IN THIS APPLICATION IS FALSIFIED, CHANGED, OR THE SITE IS ALTERED, THEN THE IMPROVEMENT PERMIT OR AUTHORIZATION TO CONSTRUCT SHALL BECOME INVALID. The permit is valid for either 60 months or without expiration depending upon documentation submitted. (Complete site plan = 60 months; Complete plat = without expiration)

910-893-7525 option 1

CONFIRMATION # \_\_\_\_\_

**Environmental Health New Septic System Code 800**

- **All property irons must be made visible.** Place "pink property flags" on each corner iron of lot. All property lines must be clearly flagged approximately every 50 feet between corners.
- Place "orange house corner flags" at each corner of the proposed structure. Also flag driveways, garages, decks, out buildings, swimming pools, etc. Place flags per site plan developed at/for Central Permitting.
- Place orange Environmental Health card in location that is easily viewed from road to assist in locating property.
- If property is thickly wooded, Environmental Health requires that you clean out the **undergrowth** to allow the soil evaluation to be performed. Inspectors should be able to walk freely around site. **Do not grade property.**
- **All lots to be addressed within 10 business days after confirmation. \$25.00 return trip fee may be incurred for failure to uncover outlet lid, mark house corners and property lines, etc. once lot confirmed ready.**
- After preparing proposed site call the voice permitting system at 910-893-7525 option 1 to schedule and use code **800** (after selecting notification permit if multiple permits exist) for Environmental Health inspection. Please note confirmation number given at end of recording for proof of request.
- Use Click2Gov or IVR to verify results. Once approved, proceed to Central Permitting for permits.

**Environmental Health Existing Tank Inspections Code 800**

- Follow above instructions for placing flags and card on property.
- Prepare for inspection by removing soil over **outlet end** of tank as diagram indicates, and lift lid straight up (*if possible*) and then **put lid back in place**. (Unless inspection is for a septic tank in a mobile home park)
- **DO NOT LEAVE LIDS OFF OF SEPTIC TANK**
- After uncovering **outlet end** call the voice permitting system at 910-893-7525 option 1 & select notification permit if multiple permits, then use code **800** for Environmental Health inspection. Please note confirmation number given at end of recording for proof of request.
- Use Click2Gov or IVR to hear results. Once approved, proceed to Central Permitting for remaining permits.

**SEPTIC**

If applying for authorization to construct please indicate desired system type(s): can be ranked in order of preference, must choose one.

- {  } Accepted      {  } Innovative      {  } Conventional      {  } Any  
 {  } Alternative      {  } Other \_\_\_\_\_

The applicant shall notify the local health department upon submittal of this application if any of the following apply to the property in question. If the answer is "yes", applicant **MUST ATTACH SUPPORTING DOCUMENTATION**:

- {  } YES    {  } NO    Does the site contain any Jurisdictional Wetlands?  
 {  } YES    {  } NO    Do you plan to have an irrigation system now or in the future?  
 {  } YES    {  } NO    Does or will the building contain any drains? Please explain. \_\_\_\_\_  
 {  } YES    {  } NO    Are there any existing wells, springs, waterlines or Wastewater Systems on this property?  
 {  } YES    {  } NO    Is any wastewater going to be generated on the site other than domestic sewage?  
 {  } YES    {  } NO    Is the site subject to approval by any other Public Agency?  
 {  } YES    {  } NO    Are there any Easements or Right of Ways on this property?  
 {  } YES    {  } NO    Does the site contain any existing water, cable, phone or underground electric lines?

If yes please call No Cuts at 800-632-4949 to locate the lines. This is a free service.

**I Have Read This Application And Certify That The Information Provided Herein Is True, Complete And Correct. Authorized County And State Officials Are Granted Right Of Entry To Conduct Necessary Inspections To Determine Compliance With Applicable Laws And Rules. I Understand That I Am Solely Responsible For The Proper Identification And Labeling Of All Property Lines And Corners And Making The Site Accessible So That A Complete Site Evaluation Can Be Performed.**

\_\_\_\_\_  
PROPERTY OWNERS OR OWNERS LEGAL REPRESENTATIVE SIGNATURE (REQUIRED)

3-22-16  
DATE



TOWN OF ANGIER

LAND USE PERMIT

55 NORTH BROAD ST WEST ANGIER, NC 27501-0278

Phone: 919-639-2071 FAX: 919-639-6130

DATE ISSUED: 10/28/2015

PERMIT #: 2015-000296

LOCATION NUNEZ CONCRETE

DISTRICT TAX MAP PARCEL#  
0673-35-5940.000

122 TIPPET ROAD

LOT ZONING DISTRICT  
GC

OWNER: NUNEZ CONCRETE, INC

TOTAL VALUATION  
\$ 0

CONTRACTOR:

SUBCONTRACTOR ID/NAME

SUBCONTRACTOR TYPE

TYPE CONSTRUCTION: LAND USE

OCCUPANCY GROUP: COMMERCIAL

FEE CODE

FEE

LAND USE COMMERCIAL

35.00

TOTAL PAID:

35.00

\*\*PAID IN FULL\*\*

TOTAL AMOUNT:

35.00

REMARKS:

ZONING COMPLIANCE PERMIT FOR NEW COMMERCIAL BUILDING  
"NUNEZ CONCRETE"

(SIGNATURE OF CONTRACTOR/OWNER)

*Dean Johnson*  
(ISSUED BY)

(DATE)

12/3/15

(DATE)



Agri-Waste Technology, Inc.

501 North Salem Street  
Suite 203

Apex, NC 27502  
919-859-0669

www.agriwaste.com

**Site Assessment  
For  
Tippet Road, Angier, NC**

Prepared For: Sean Johnson, Town of Angier

Prepared By: Sloan Griffin  
NCOWCICB Certified Installer/Inspector #40301  
L.S.S. #1333

Date: December 3, 2015

The property off Tippet Road in Angier, NC was evaluated by Sloan Griffin of AWT, Inc. for the potential of an onsite septic system to serve a commercial structure. The proposed facility is to serve three employees, and based on the minimal design flow of 100 gallons per day and a potential loading rate of 0.4 to 0.5 gallons per day per square foot, the space required for an onsite system appears to exist on the property based on the proposed building location, but a layout of the system may be required to confirm system and repair. The soils within the proposed septic area are suitable for an onsite septic area for a potential trench bottom depth of 24 inches.

Sloan Griffin

A handwritten signature in black ink, appearing to read 'Sloan Griffin', is written below the printed name.



Agri-Waste Technology, Inc.  
501 North Salem Street  
Suite 203  
Apex, NC 27502  
919-859-0669  
www.agriwaste.com

# *Soil Suitability for Domestic Sewage Treatment and Disposal Systems*

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#0673-35-5940.000  
Tippet Road  
Angier, NC 27501  
Harnett County

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Client: Clint Gregory, Gregory Development  
Prepared By: Sloan Griffin, L.S.S. #1333  
Report Date: December 28, 2015



Agri-Waste Technology, Inc.  
5400 Etta Burke Court, Suite 200  
Raleigh, NC 27606  
919.859.0669  
www.agriwaste.com

**Soil Suitability for Domestic Sewage Treatment and Disposal Systems  
Tippet Road, Angier, NC (Harnett County)**

Client: Clint Gregory, Gregory Development

Prepared By: Sloan Griffin, LSS #1333

Date: December 28, 2015

Soil suitability for domestic sewage treatment and disposal systems was evaluated on December 21, 2015, for a portion of the property located off Tippet Road in Angier, NC. The PIN for the property is #0673-35-5940.000. Sloan Griffin of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. The detailed soil evaluation of the land area will follow. A property reference map is in Attachment 1. A review of the soil and landscape characteristics that dictate soil suitability for domestic sewage treatment and disposal systems can be found in Attachment 2. The property is currently in cultivation with a slope towards the head of a drainage feature at the northeast corner of the property.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems

The aerial map in Attachment 3 details the approximate property boundaries, soil boring locations, soil types, and soil areas for septic systems. Approximately 7 soil borings were advanced within the provisionally suitable soils area on the property (Attachment 3). Though the property contained some drainage issues that raise concerns for septic systems, the majority of the property is suitable for onsite disposal. This evaluation was merely a preliminary review to determine what potential this land might have for domestic sewage treatment and disposal systems. Therefore, specific types of septic systems, exact locations of future drainfields and repair areas, plus buffers from property lines (current and potential future lot lines), building foundations, wells, etc. are not fully considered. These things will need to be more fully considered as the plans develop for the potential future of this site. It is possible that additional soil evaluations will be required once lot layouts are considered and developed for this property so that septic system types and the location of a septic drainfield can be more fully and appropriately considered.

Typical profile descriptions of the provisionally suitable soil for this property are in Attachment 4. The provisionally suitable soil borings had the following characteristics. Soil texture was provisionally suitable and was estimated to be loamy sand to sandy loam near the soil surface (A horizons) and sandy clay loam to sandy clay in the subsoil (B

horizons). Soil structure was provisionally suitable and was estimated to be granular near the soil surface (A horizons) and weak subangular blocky in the subsoil (B horizons). Subsoil mineralogy was provisionally suitable with friable to firm moist soil consistence, and non-sticky and non-plastic wet soil consistence. At the time of evaluation free moisture was observed in some of the borings between 33 inches and 36 inches due to prior rain event.

The major soil type on this property is Fuquay sand (map symbol FaB) and Bibb loam (map symbol Bb). The Harnett County Soil Survey indicates that severe limitations exist for septic systems installed in these soils types (Attachment 5).

The land area required for a conventional or shallow conventional septic system is calculated based on the size of the proposed home and the Long-Term Acceptance Rate (LTAR) of the soil. The LTAR range for the provisionally suitable soils on this property is 0.3 – 0.6 GPD/ft<sup>2</sup> based on the most restrictive soil texture in the subsoil. Table 1 below presents estimated conventional or shallow conventional septic system land area requirements for several home sizes and LTAR's on this property. The LTAR suggested by AWT for a majority of the provisionally suitable soil is 0.45 GPD/ft<sup>2</sup>, but the final LTAR for specific septic system types and septic drainfield locations will be set by the Harnett County Environmental Health Department. The detailed computations are in Attachment 6.

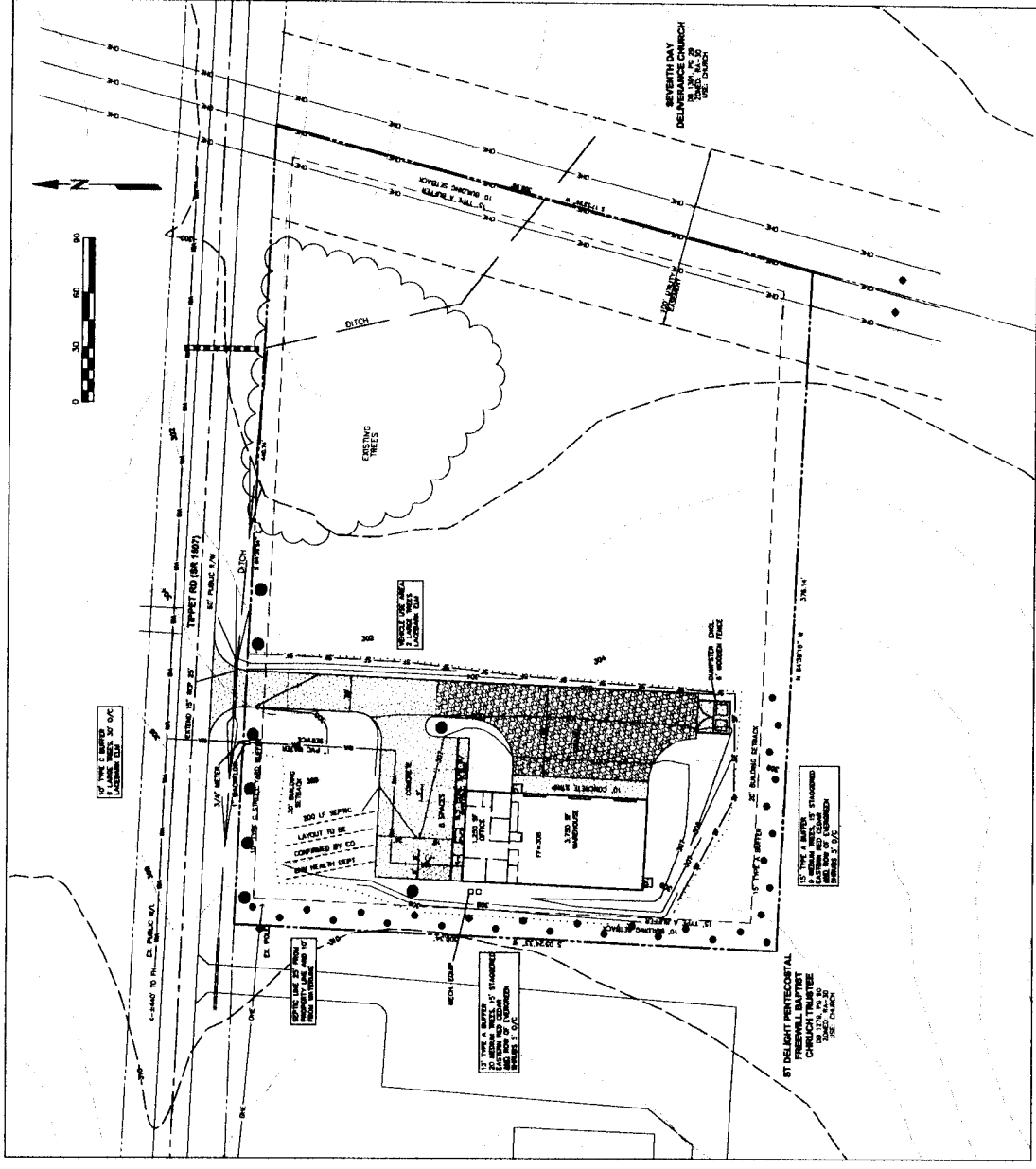
Table 1. Estimated Conventional Septic System Land Requirements (including repair area) for Several Home Sizes and Long-Term Acceptance Rates (LTAR) on this Property.

<u>Projected Flow</u>	<u>Long-Term Acceptance Rate (LTAR)</u>	<u>Area Required for Conventional Septic System</u>	<u>Minimum Area Required for Innovative Conventional Septic System</u>
	-----GPD/ft <sup>2</sup> -----	-----ft <sup>2</sup> -----	-----ft <sup>2</sup> -----
150 GPD	0.3 – 0.6	2,250– 4,500	1,687 – 3,375
150 GPD	0.45	3,000	2,250

Conclusions

Based on the results of this evaluation, the installation of conventional or shallow conventional septic systems seems probable on this property with some design considerations.

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.



**SITE PLAN**  
 SCALE: 1" = 30'

SITE DATA	
SUBDIVISION	RACHEL ADAMS FARM MAP88-282
RECORDED DEED	DEED BOOK 3355, PAGE 78
LOT NUMBER	3
ADDRESS	TIPPET RD (SR 1507)
MARKET CO PIN NO	0873-35-3940.000
ZONING	CC - GENERAL COMMERCIAL
AREA	2.81 ACRES
EXISTING USE	VACANT
PROPOSED USE	CONTRACTOR OFFICE/WAREHOUSE
CONSTRUCTION TYPE	1-4-3
OCCUPANCY TYPE	5-1
FRONT YARD SETBACK	30'
SIDE YARD SETBACK	10'
REAR YARD SETBACK	20'
PARKING REQUIRED	ONE SPACE PER 100 SF OFFICE ONE SPACE PER 400 SF EACH EMPLOYEE IN WAREHOUSE
PARKING PROVIDED	OFFICE 1250 SF - 5 SPACES WAREHOUSE (MP D) (INCL IN OFFICE) 8 SPACES
HANDICAP VAN ACCESS SPACES	3 SPACES (INCL IN TOTAL COUNTY)
DISTURBED AREA	0.76 ACRES
PROPOSED IMPERVIOUS AREA	0.41 ACRES
BUILDING HEIGHT	20'-3"
BUILDING FOOTPRINT	5,000 SF
100YR FLOOD PLAN	NONE ON THIS LOT
FEMA FLOOD MAP	3700084200 EFFECTIVE 10/3/2006
WATERSHED	N/A
HOURS OF OPERATION	STANDARD BUSINESS HOURS
IMPERVIOUS SURFACE COVERAGE	13.4%
HAZARDOUS MATERIALS DISITE	NONE
STORMWATER DETENTION	DISBURSMENT UNDER 1 ACRE

- SEE NOTES:**
1. ALL CONSTRUCTION PER TOWN OF ANGER ORDINANCE OR HARNETT COUNTY SPECIFICATIONS
  2. EROSION CONTROL:
    - EROSION CONTROL PER EROSION PERMIT REQUIRED.
    - EROSION CONTROL PER HARNETT COUNTY FIELD MANUAL.
    - EROSION MEASURES TO INCLUDE SILT FENCING ALONG LOW SIDE OF LIMITS OF DISTURBANCE. CHECK DAMS IN DITCH LINES AND CONSTRUCTION ENTRANCE.
  3. DUMPSTER TO BE SITED FROM STREET VIEW BY WOODEN FENCING MINIMUM OF ONE (1) FOOTING FROM DUMPSTER.
  4. NO SITE IRRIGATION SHALL BE PROVIDED.
  5. LANDSCAPE INSTALLATION AND MAINTENANCE PER ANGER ORD 74.2 AND 74.3
  6. ASPHALT, CONCRETE OR GRAVEL SECTIONS TO BE DESIGNED BY GEOTECHNICAL ENGINEER UPON TESTING OF EXISTING SUBGRADE.



**ATTACHMENT 2: Review of Rules Pertaining to Domestic  
Sewage Treatment and Disposal Systems**

Five categories of soil and landscape characteristics are evaluated to determine soil suitability for domestic sewage treatment and disposal systems and include: topography and landscape position, soil morphological characteristics, soil wetness conditions, soil depth, and restrictive horizons. The soil and landscape characteristics found in a particular location dictate the type(s) of domestic sewage treatment and disposal system that can be used on a parcel of land. The detailed rules can be found in Section .1900 – Sewage Treatment and Disposal Systems, but a general review of the five categories and other relevant rules can be found in the sections below.

#### .1940 TOPOGRAPHY AND LANDSCAPE POSITION

Uniform slopes less than 15 percent are considered suitable, uniform slopes between 15 and 30 percent are considered provisionally suitable, and slopes greater than 30 percent are considered unsuitable for domestic sewage treatment and disposal systems. Complex slope patterns and slopes dissected by gullies and ravines are considered unsuitable for domestic sewage treatment and disposal systems. Depressions and wetlands are also considered unsuitable for domestic sewage treatment and disposal systems.

#### .1941 SOIL MORPHOLOGICAL CHARACTERISTICS

Sandy and coarse loamy textured soils (sand, loamy sand, sandy loam, and loam) are considered suitable for domestic sewage treatment and disposal systems. Fine loamy and clayey textured soils (silt, silt loam, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay) are considered provisionally suitable for domestic sewage treatment and disposal systems.

Crumb, granular, and single-grained soil structures are considered suitable for domestic sewage treatment and disposal systems. Blocky soil structures are considered provisionally suitable for domestic sewage treatment and disposal systems. Platy, prismatic, and massive soil structures are considered unsuitable for domestic sewage treatment and disposal systems.

Slightly expansive clay mineralogy is considered suitable for domestic sewage treatment and disposal systems. Slightly expansive clay minerals exhibit loose, very friable, friable, or firm moist soil consistence. Expansive clay mineralogy is considered unsuitable for domestic sewage treatment and disposal systems. Expansive clay minerals exhibit very firm or extremely firm moist soil consistence. Organic soils are considered unsuitable for domestic sewage treatment and disposal systems.

#### .1942 SOIL WETNESS CONDITIONS

Soil wetness conditions are caused by seasonal high water table, perched water table, tidal water, seasonally saturated soils, or lateral water movement. Soil wetness conditions are indicated by soil colors, either in mottles or mass, with a chroma of 2 or less according to the Munsell color charts. Soil wetness conditions detected 48 inches in depth or deeper are considered suitable for domestic sewage treatment and disposal systems. Soil wetness conditions detected between 36 to 48 inches in depth are considered provisionally suitable for domestic sewage treatment and disposal systems. Soil wetness conditions detected 36 inches in depth or shallower are considered unsuitable for domestic sewage treatment and disposal systems.

#### **.1943 SOIL DEPTH**

Soil depths to rock, parent material, or saprolite greater than 48 inches are considered suitable for domestic sewage treatment and disposal systems. Soil depths to rock, parent material, or saprolite between 36 and 48 inches are considered provisionally suitable for domestic sewage treatment and disposal systems. Soil depths to rock, parent material, or saprolite less than 36 inches are considered unsuitable for domestic sewage treatment and disposal systems. Saprolite has a massive, rock-controlled structure, and retains the mineral arrangement of its parent rock in at least 50 percent of its volume. Saprolite only forms from metamorphic and igneous rock parent materials and is typically referred to as "rotten rock".

#### **.1944 RESTRICTIVE HORIZONS**

Restrictive horizons are capable of perching ground water or sewage effluent and are strongly compacted or cemented. Restrictive horizons resist soil excavation or augering. Soils with restrictive horizons three inches or more in thickness at depths greater than 48 inches are considered suitable for domestic sewage treatment and disposal systems. Soils with restrictive horizons three inches or more in thickness at depths between 36 and 48 inches are considered provisionally suitable for domestic sewage treatment and disposal systems. Soils with restrictive horizons three inches or more in thickness at depths less than 36 inches are considered unsuitable for domestic sewage treatment and disposal systems.

#### **.1950 LOCATION OF SANITARY SEWAGE SYSTEMS HARNETT COUNTY**

**ENVIRONMENTAL HEALTH DEPARTMENT** No area for domestic sewage treatment and disposal system installation (or repair in Harnett County) may be disturbed by clearing, excavation, filling, vehicle or equipment traffic, or storage of building materials.

#### **.1947 DETERMINATION OF OVERALL SITE SUITABILITY**

##### **.1948 SITE CLASSIFICATION**

All of the criteria for the five categories above are to be determined and classified as suitable, provisionally suitable, or suitable according to the respective rules described above. If all criteria are classified the same, that overall site classification will prevail. If there is a variation in the classification of several criteria, the most limiting classification will be used to determine the overall site classification.

A suitable classification generally indicates soil and landscape conditions favorable for the operation of a domestic sewage treatment and disposal system or slight limitations that can be readily overcome by proper design and installation. A provisionally suitable classification indicates soil and/or landscape conditions have moderate limitations for the operation of a domestic sewage treatment and disposal system, but modifications and careful planning, design, and installation can result in satisfactory system function. An unsuitable classification indicates severe soil and/or landscape limitations for the operation of a domestic sewage treatment and disposal system.

#### **SUMMARY**

Suitable/provisionally suitable landscapes and soils to a depth of 36 inches can, in general, be used for conventional gravity driven septic systems. Suitable/provisionally suitable landscapes

and soils to a depth of 24 –36 inches can, in general, be used for alternative septic systems such as shallow conventional and low pressure pipe systems, among others. All alternative systems for provisionally suitable landscapes and soils must be proposed to and approved by the Harnett County Environmental Health Department. Any landscapes or soils classified as unsuitable may be reclassified as provisionally suitable by the Harnett County Environmental Health Department after a site investigation by department personnel.

**ATTACHMENT 3: Property Map Detailing Soil Suitability  
for Septic Systems and Soil Types**

Soil Evaluation Map

Tippet Road  
Angier, NC 27501  
# 0673-35-5940  
Harnett County

- 36" or deeper
- 24" to 36"
- 18" to 24"
- 12" to 18"
- Less than 12"

Performed By: Sloan Griffin  
Drawn By: Sloan Griffin  
Date: 12/27/15



**ATTACHMENT 4: Typical Profile Descriptions of  
Provisionally Suitable Soil**







TABLE 13.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition; it does not eliminate the need for onsite investigation]

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
BaB----- Blaney	Severe: percs slowly, poor filter.	Severe: seepage.	Slight-----	Severe: seepage.	Good.
RaD----- Blaney	Severe: percs slowly, poor filter.	Severe: seepage, slope.	Moderate: slope.	Severe: slope, seepage.	Fair: slope.
CaB----- Candor	Slight-----	Severe: seepage.	Severe: too sandy.	Severe: seepage.	Poor: too sandy, seepage.
CfB----- Cecil	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight-----	Fair: too clayey, hard to pack.
CfD----- Cecil	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
Ch----- Chewacla	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: hard to pack, wetness.
Cp----- Congaree	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
CrB----- Creedmoor	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness, too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
CrD----- Creedmoor	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness, too clayey.	Moderate: wetness, slope.	Poor: too clayey, hard to pack.
DoA----- Dothan	Severe: wetness, percs slowly.	Moderate: seepage.	Moderate: wetness.	Slight-----	Good.
DoB----- Dothan	Severe: wetness, percs slowly.	Moderate: seepage, slope.	Moderate: wetness.	Slight-----	Good.
DuB----- Durham	Moderate: percs slowly.	Moderate: seepage.	Slight-----	Slight-----	Good.
FuB----- Fuquay	Moderate: percs slowly.	Moderate: slope.	Slight-----	Slight-----	Fair: too sandy.
GhB----- Gilead	Severe: wetness, percs slowly.	Moderate: slope.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.

TABLE 13.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
GhD----- Gilead	Severe: wetness, percs slowly.	Severe: slope.	Severe: wetness.	Moderate: slope.	Fair: slope, too clayey, wetness.
MfB----- Mayodan	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight-----	Fair: too clayey, hard to pack.
MfD----- Mayodan	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
MfE----- Mayodan	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
MrB: Mayodan-----	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight-----	Fair: too clayey, hard to pack.
Urban land.					
NaB----- Nason	Moderate: depth to rock, percs slowly.	Moderate: slope, seepage, depth to rock.	Severe: too clayey, depth to rock.	Moderate: depth to rock.	Poor: too clayey, hard to pack.
NaD----- Nason	Moderate: slope, depth to rock, percs slowly.	Severe: slope.	Severe: too clayey, depth to rock.	Moderate: slope, depth to rock.	Poor: too clayey, hard to pack.
PaF----- Pacolet	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
PfB----- Pinkston	Severe: depth to rock.	Severe: depth to rock, seepage.	Severe: depth to rock, seepage.	Severe: seepage, depth to rock.	Poor: area reclaim, small stones.
PfD----- Pinkston	Severe: depth to rock.	Severe: slope, depth to rock, seepage.	Severe: depth to rock, seepage.	Severe: seepage, depth to rock.	Poor: area reclaim, small stones.
PfF----- Pinkston	Severe: slope, depth to rock.	Severe: slope, depth to rock, seepage.	Severe: slope, seepage, depth to rock.	Severe: slope, seepage, depth to rock.	Poor: area reclaim, small stones, slope.
Pt. Pits					
Ro----- Roanoke	Severe: flooding, wetness, percs slowly.	Severe: seepage, flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.

TABLE 13.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
StA----- State	Moderate: wetness.	Severe: seepage.	Severe: seepage, wetness.	Moderate: wetness.	Fair: too clayey, thin layer.
TaB----- Tatum	Moderate: depth to rock, percs slowly.	Moderate: slope, seepage, depth to rock.	Severe: too clayey, depth to rock.	Moderate: depth to rock.	Poor: too clayey, hard to pack.
TaD----- Tatum	Moderate: slope, depth to rock, percs slowly.	Severe: slope.	Severe: too clayey, depth to rock.	Moderate: slope, depth to rock.	Poor: too clayey, hard to pack.
TaE----- Tatum	Severe: slope.	Severe: slope.	Severe: slope, too clayey, depth to rock.	Severe: slope.	Poor: slope, too clayey, hard to pack.
ToB----- Tetotum	Severe: wetness.	Severe: seepage, flooding, wetness.	Severe: seepage, wetness.	Severe: wetness.	Fair: too clayey, wetness.
Ud. Udorthents					
Ur. Urban land					
VaB----- Vaucluse	Severe: percs slowly.	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: too clayey.
VaD----- Vaucluse	Severe: percs slowly.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: too clayey, slope.
VaE----- Vaucluse	Severe: percs slowly, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
Wn----- Wehadkee	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
WsB----- White Store	Severe: wetness, percs slowly.	Severe: wetness.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
WsD----- White Store	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: depth to rock, wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack.
WwB----- Wickham	Slight-----	Moderate: seepage, slope.	Severe: seepage.	Slight-----	Fair: thin layer.

**Conventional Septic System Area Computation**Created by: SG  
Created on: 12/27/2015

Client Name: Gregory  
Number of Employees 6  
Design Flow (gal/day): 150 (25 gal/day/employee, minimum 100 gal/day)  
LTAR (gal/day/ft<sup>2</sup>) 0.3  
Trench Bottom Area (ft<sup>2</sup>): 500 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 166.6667

Minimum Field Area Required (ft<sup>2</sup>): 1500 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 1125 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 3750 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 2812.5 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 4500 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 3375 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: Gregory  
Number of Employees 6  
Design Flow (gal/day): 150 (25 gal/day/employee, minimum 100 gal/day)  
LTAR (gal/day/ft<sup>2</sup>) 0.6  
Trench Bottom Area (ft<sup>2</sup>): 250 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 83.33333

Minimum Field Area Required (ft<sup>2</sup>): 750 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 562.5 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 1875 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 1406.25 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 2250 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 1687.5 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: Gregory  
Number of Employees 6  
Design Flow (gal/day): 150 (25 gal/day/employee, minimum 100 gal/day)  
LTAR (gal/day/ft<sup>2</sup>) 0.45  
Trench Bottom Area (ft<sup>2</sup>): 333.3333 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 111.1111

Minimum Field Area Required (ft<sup>2</sup>): 1000 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 750 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 2500 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 1875 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 3000 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 2250 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.