

FOR OFFICE USE ONLY

Date Complete Application Rec'd: _____ / _____ / _____ By: _____

Chatham County Planning Department
P.O. Box 54
Pittsboro, NC 27312
Tel: (919) 542-8204
Fax: (919) 542-0527

Type of Review
☒ Sketch
☐ Preliminary
☐ Final

MAJOR SUBDIVISION APPLICATION

Name of Subdivision: WINDHAM - PHASE II

Subdivision Applicant: _____ Subdivision Owner: _____

Name: ERIC SCHWARTZ/LED, INC. Name: L.E.D., INC.

Address: P.O. BOX 1060 Address: P.O. BOX 1060
PITTSBORO, NC 27312 PITTSBORO, NC 27312

Phone: (W) (919) 545-2202 Phone: (W) (919) 545-2202

Phone: (H) (919) 542-3666 Fax: (919) 545-2204 Phone: (H) SAME Fax: (919) 545-2204

E-Mail _____ E-Mail _____

Township: NEW HOPE Zoning: RA-5 P. I. N. # 9771

Flood Map # 370299-0150-B Zone: X Parcel # 17532/17539

Watershed: CAPE FEAR (MULTIPLE SUB-WATERSHEDS) Existing Access Road: S.R. 1700

Total Acreage: 172.06 Total # of Lots: 32 Min. Lot Size: 2.4 AC.

Ph. I Acreage 49.11 Ph. I # of lots 10 (EXISTING) PB-97, PG-310 MIN. LOT SIZE WITHIN 2500' RIVER CORRIDOR = 3.0 AC.
Max. Lot Size: 8.8 AC.

Ph. II Acreage 122.95 Ph. II # of lots 22 Avg. Lot Size: SEE BELOW

Ph. III Acreage N/A Ph. III # of lots N/A • OVERALL = 5.38 AC.
• PH. II = 5.22 AC.

Type of new road: ☐ Private/ Length N/A ☒ Public/ Length 5600 LF WITHIN 2500' RIVER CORRIDOR = 5.76 AC.

Road Surface: ☒ paved ☐ gravel Water System: ☒ individual wells ☐ community wells ☐ public system name _____ Sewer System: ☒ septic systems ☐ community system ☐ public system name _____

List other facilities: commercial, recreation, etc., and the approximate acreage or square footage: _____

Eric Schwartz Date 7/11/05 Eric Schwartz Date 7/11/05
Signature of Applicant Signature of Owner

For Office Use Only:
Notes: _____

ADJACENT LAND OWNERS (Property owners across a road, easement, or waterway are considered adjacent land owners):

Legal notices are mailed to these owners, please type or write neatly, and include zip codes.

1. Mike + Sue Vanhoy 27 Pickett Lane Pittsboro N.C. 27312	11. Erin A. McDade / Carl Arneson 710 Olde Oaks Lane Pittsboro N.C. 27312
2. James + Joyce Pinnix Jr. 3022 Buckingham Way Apex N.C. 27502	12. Marty Stone / Laura Wertz 2304 Templeton Gap Dr Apex N.C. 27523
3. Herman Knieriem JR Mary K. Tripodi 101 Pickett Lane Pittsboro 27312	13. Charles + Jane Miller 489 Olde Oaks Lane Pittsboro NC 27312
4. Jaswant + Jaspreet Singh 107 Bradley Circle Durham NC 27713	14. Charles S. Jenny 145 Haw River Trail Pittsboro NC 27312
5. Ron + Donna Henke 289 Pickett Lane Pittsboro NC 27312	15. Page and Nadia Anderson 13 Surrey Lane Durham NC 27707
6. Harvey Skinner 342 Pickett Lane Pittsboro NC 27312	16. David Cook Sidney Copeland 400 Sky Lane Pittsboro 27312
7. Eric + Noel Schwartz 345 Pickett Lane Pittsboro NC 27312	17. Gang Nam Yoo 354 Sky Lane Pittsboro NC 27312
8. Tom + Debra Henzey 105 Chatburn Circle Cary NC 27513	18. United States of America P.O. Box 18807 Raleigh N.C. 27619
9. Lee + Karen Foust 240 Pickett Lane Pittsboro NC 27312	19. Theda Sawyer 528 North Pea Ridge RD Pittsboro NC 27312
10. Kris Balic Warren Williams 2021 Stonepond Lane Raleigh N.C. 27603	20. Todd + Monica Morgart 1901 Little Beaver Dam Ct Holly Springs NC 27540

Shaffer Soil Services
685 Sanford Road
Pittsboro, NC 27312
July 8, 2005

Don McCarl
Landco, Inc.
Pittsboro, NC 27312


Subject: Initial General Soils Report
Wyndham Subdivision – Phase 2; Lots 11-21
Pea Ridge Road
Chatham County, NC

Dear Don:

This general report is based on two days of field work on the above tract. The field work was performed with Larry Kingsley, Eric Schwartz, and Dave Klarmann and was performed to determine if each of the proposed 11 lots on this 55 +/- acre tract can support a 4-bedroom septic system.

Each of the 11 lots was reviewed for soils, topography, and drainage. The soils encountered were in the Georgeville, Herndon, Tatum, and Nason soil series. These soils are well-drained with a clayey subsoil. The Tatum and Nason soils are shallower to bedrock than the other soils, but in all cases on all lots depth to saprolite exceeds 24 inches in depth and for the vast majority of sites exceeds 30 inches in depth. With these soil characteristics, each of the proposed lots is suitable for a conventional or shallow conventional septic system. Of course, if the homesite is located at an elevation lower than the proposed septic system, a pump system must be employed. The typical loading rate used on these soil types in Chatham County is 0.30 gallons per square foot per day. The sites are on gently sloping to moderately sloping topography (slopes from 3 to 12 percent). There are no other limitations for use of these proposed sites for septic systems.

I will follow this report with a detailed report for each respective lot accompanied by the site sketch plan that you are to forward to me. Please let me know if you have any questions or need additional information.

Sincerely,

Karl A. Shaffer, L.S.S.
License No. 1009

Shaffer Soil Services
685 Sanford Road
Pittsboro, NC 27312

March 7, 2005

Mr. Eric Schwartz
Landco Realty Co.
P. O. Box 1060
Pittsboro, NC 27312

Subject: Site Evaluation *WINDHAM - PHASE II*
Landco Project- ~~Park Pointe West Phase 3~~
Pickett Property- Parcel No. 17532
Pea Ridge Road
Chatham County

Dear Eric:

On February 21 and March 3, 2005 I performed a site evaluation on the above named parcel of land for purpose of siting wastewater systems for eleven proposed lots. The property is approximately 60 acres in size and lies east of Pea Ridge Road and just south of Pickett Drive, about 1.5 miles south of U.S. Route 64. For this purpose, I advanced hand auger borings over each proposed lot as determined by the preliminary lot layout design that was provided by you. The borings were done on each lot until a satisfactory site was located for each septic system. Each lot is proposed for a 4-bedroom home. In each case an anticipated homesite was determined, and the soils downslope were evaluated for possibility of a gravity-fed conventional system. Where downslope soils were unsuitable, other areas on the lot were examined to determine the best possible septic system alternative.

I evaluated the soil and site conditions as required by the State Division of Environmental Health and the Chatham County Board of Health. Soil profiles were evaluated for depth to seasonal high water table, depth to bedrock or other limiting layer, texture, structure, consistence, color, clay mineralogy, slope and topography, and where all conditions were determined to be either suitable or provisionally suitable, available space as required by 15 A NCAC 18A . 1945. The tract consists of smooth gently sloping uplands with slopes ranging from 2 to 10 percent, and it is dissected by sideslopes and drainageways with slopes ranging from 10 to over 40 percent.

An attached GPS-based map shows the location of the soil borings for each lot that were classified as suitable or provisionally suitable as per health department rules. The GPS map depicts the proposed septic sites with respect to the proposed property lines for the subdivision. Sufficient soil borings (4 to 7 on each proposed site) were performed to adequately assess the predominant soil conditions as to make a recommendation for a subsurface wastewater treatment system. Each boring has been field flagged with the corresponding number as seen on the attached GPS-based map. These flags are blue with white stripes. Each area proposed contains suitable area to site a 4-bedroom home, and each area includes the required repair area for compliance with the section .1900 rules. Adequate area is based on an assumed hydraulic loading rate of 0.30 gallons per day .

per square foot, and may require on several lots the use of innovative trench designs which allow 25% space reduction.

Findings:

The findings for each lot are as follows:

²²
Lot ~~2~~ This lot is on the northwest corner of the property. Borings numbered 1A-1, 1A-2, 1A-3, 1A-4, and 1A-5 represent the septic site for this lot. These soils are in the Georgeville and Tatum soil series. Detailed descriptions of these soils can be found in the report attachment. These soils classify as provisionally suitable for septic systems. The soil depth for borings 1A-1, 1A-2, and 1A-5 is deeper (consistently deeper than 34 inches) than the other 2 borings. As such, the primary septic system should remain on the upslope part of this area. This will be a conventional system. The lower part of the area (soils borings 1A-3 and 1A-4) range in depth from 28 to 30 inches and should be reserved for the repair system, which will be a shallow conventional system.

²³
Lot ~~2~~ This lot is due south of lot 1. Borings numbered 3-1, 3-2, 3-3, 3-4, and 3-5 represent the septic site for this lot. Soil types are Georgeville and Nason (see attachment for soil details). The downslope portion of this area (represented by borings 3-1, 3-2, and 3-5) has the deeper soils and thus should be used for the primary system, which will be a conventional or shallow conventional system. The repair area will require a shallow conventional system.

²⁴
Lot ~~2~~ This lot is due south of lot 2. Borings numbered 4-1, 4-3, 4-4, 4-5, and 4-6 represent the septic site for this lot. These soils are in the Nason and Tatum soil series, with soil depth ranging from 26 to 32 inches. This site will require a shallow conventional septic system for both the primary and repair areas.

²⁵
Lot ~~2~~ This lot is along the northern edge of the property and centrally located east-west. The primary and repair septic sites are split to provide sufficient area. The primary system is defined by soils borings numbered 1-10, 1-11, 4A-1, and 1-13. These soils are in the Nason and Tatum soil series, with depth ranging from 25 to 32 inches. This site will require a shallow conventional septic system. The repair area is defined by soils borings numbered 5-4, 5-5, 5-7, and 5-8. These soils are in the Nason and Tatum soil series, with depth ranging from 26 to 28 inches. This site will require a shallow conventional septic system with additional soil backfill.

²⁶
Lot ~~2~~ This lot is due south of lot 4. Borings numbered 6-2, 6-3, 6-4, 6-5, and 6-6 represent the proposed septic site for this lot. These soils are in the Georgeville and Tatum soil series, with depths ranging from 30 inches to over 36 inches. As the slopes in this area exceed 10 percent and may approach 20 percent, a shallow placement system will likely be required for this site.

²⁷
Lot ~~2~~ This lot is south and west of lot 5. Borings numbered 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, and 8-7 represent the proposed septic site for this lot. These soils are in the Georgeville, Tatum, and Nason soil series, with depths ranging from 25 to over 36 inches. This lot can use a conventional system for the primary with a shallow conventional system for the repair area.

²⁸
Lot ~~2~~ This lot lies due east of lot 6. Borings numbered 9-1, 9-2, 9-3, and 9-4 represent the proposed septic site for this lot. These soils are in the Georgeville soil series and are consistently deeper than 36 inches. This site will support a conventional septic system.

²⁹
Lot ~~8~~: This lot is at the northeastern corner of the tract. Borings numbered 8A-1, 8A-2, 8A-3, 8A-4, 8A-5, and 8A-6 represent the proposed septic site for this lot. Borings 8A-1 through 8A-4 are Georgeville soils and are consistently deeper than 34 inches. This portion should be dedicated for the primary septic site. Borings 8A-5 and 8A-6 are Tatum soils and are 25 to 28 inches in depth. This upper area will require a shallow conventional septic system with soil backfill, and should be reserved for the repair area.

³⁰
Lot ~~9~~: This lot lies due south of lot 8. Borings numbered 12-1, 12-2, 12-3, 12-4, 12-5, and 12-6 represent the proposed septic area for this lot. These soils are in the Nason soil series, with depths ranging from 29 to over 34 inches. This site will accommodate a conventional or shallow conventional septic system.

³¹
Lot ~~10~~: This lot lies due south of lot 9. Borings numbered 11-6, 11-8, 11-9, 11-10, 11-11, and 11-12 represent the septic area for this lot. These soils are in the Georgeville and Nason soil series, with depths ranging from 24 inches to over 36 inches. A conventional system should be used for the primary septic system with a shallow conventional system needed for the repair area.

³²
Lot ~~11~~: This lot lies at the southeast corner of the tract. Borings numbered 10-1, 10-2, 10-3, and 10-4 represent the septic area for this lot. These soils are in the Georgeville series and are consistently deeper than 34 inches. This site will accept a conventional septic system.

SUMMARY:

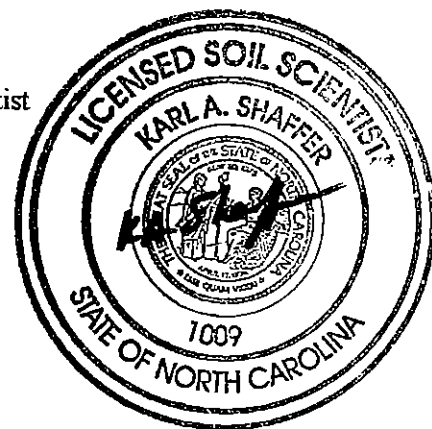
All proposed lots as shown on the attached site plan have suitable soils for a conventional or shallow conventional septic site to support a 4-bedroom home, including the repair area.

This report represents my professional opinion. The recommendations given in this report will not insure that permits would be either issued or denied for any particular part of the tract or any given number of lots, and likewise will not insure that a specific type and size of wastewater system will be allowed. These decisions will be made by the staff of the local health department. Also, this report does not indicate any guarantee that an installed system will function properly for a specified amount of time. Proper function of wastewater systems is dependent on installation procedures as well as owner maintenance. In a clayey soil such as exists on your property, installation should take place under relatively dry conditions to minimize the effect of soil clogging and smearing which would reduce the soil permeability. You may wish to supply a copy of this report to the Health Department representative when making application for the site permits.

If you have any questions concerning this report or require further assistance, please do not hesitate to contact me. Thank you for the opportunity to perform this service for you.

Sincerely,

Karl A. Shaffer
Karl A. Shaffer
NC Licensed Soil Scientist
Certificate No. 1009



Attachments: Soil descriptions

~~Site map~~

~~Invoice~~

SOILS DESCRIPTIONS

GEORGEVILLE SOIL SERIES – Landco project

3/5/05

(This profile description defines the average set of conditions for the Georgeville soils encountered on this tract.)

0 - 7 inches: dark brown (10YR4/3) loam; moderate medium granular structure; very friable; nonsticky, nonplastic, few small gravels; abrupt smooth boundary; common fine and medium roots.

7- 12 inches: yellowish red (5 YR 5/6) clay loam; moderate fine subangular blocky structure; friable; slightly sticky, nonplastic; clear smooth boundary; common fine roots.

12 - 30 inches: red (2.5 YR 5/8) silty clay; moderate medium subangular blocky structure; firm, sticky, slightly plastic; gradual smooth boundary; few fine roots.

30 - 36 inches: red (2.5 YR 5/8) and yellowish red (5 YR 5/8) silty clay with common (up to 20%) pockets and streaks of yellowish brown, light brown, and light gray partially weathered rock; weak medium subangular blocky structure; firm; sticky, slightly plastic; gradual wavy boundary.

36 – 48+ inches: mottled yellowish red (5 YR 5/8), strong brown (7.5 YR 6/6) and light yellowish brown (10 YR 6/4) silty clay loam saprolite (soft weathered bedrock that is easily augered out -soft Cr horizon) mixed with red silty clay subsoil material; friable; slightly sticky, non-plastic; few small areas of light gray (10 YR 6/2) parent material.

NOTES:

Clay mineralogy: **In suitable range (non-expansive)**

Water Table: **over 48 inches**. NOTE: The borings may exhibit low-chroma colors (less than 2) below a depth of 24 inches which are indicative of partially weathered parent material.

Depth to restrictive horizon: ranges from **30 to over 36 inches in the area of the proposed septic fields. The restrictive horizon consists of saprolite from metamorphic rock, which is massive (structureless). Pockets of parent material may be noted as shallow as 25 inches, however, within the proposed drainfield areas, the depth at which the parent material (saprolite) predominates any soil horizon is consistently deeper than 30 inches. There is typically a gradual boundary between the well-structured soil clayey B horizon material and the obvious saprolite; a gradual boundary indicating that this change takes place over a depth of 6 to 12 inches.**

Design loading rate: **The soil is a group 4 soil, and should be acceptable for a design LTAR of 0.30 GPD/FT². This rate will be assigned by the representative of the county health department.**

For a 4-bedroom design, the following design features would result from the above recommended loading rate:

0.30 LTAR for 480 GPD = 1600 ft² = 533 linear feet of 3-foot wide trench

Note: All systems can reduce lateral length by 25% by using an innovative trench design such as the trademark names EEEZZZ Lay or Infiltrator, which are state-approved systems.

TATUM SOIL SERIES – Landco project

3/5/05

(This profile description defines the average set of conditions for the Tatum soils encountered on this tract.)

0 - 5 inches: dark brown (10YR4/3) loam; moderate medium granular structure; very friable; nonsticky, nonplastic, few small gravels; abrupt smooth boundary; common fine and medium roots.

5- 10 inches: yellowish red (5 YR 5/6) clay loam; moderate fine subangular blocky structure; friable; slightly sticky, nonplastic; clear smooth boundary; common fine roots.

10 - 26 inches: red (2.5 YR 5/8) silty clay; moderate medium subangular blocky structure; firm, sticky, slightly plastic; gradual smooth boundary; few fine roots.

26 - 30 inches: red (2.5 YR 5/8) and yellowish red (5 YR 5/8) silty clay with common (up to 20%) pockets and streaks of yellowish brown, light brown, and light gray partially weathered rock; weak medium subangular blocky structure; firm; sticky, slightly plastic; gradual wavy boundary.

30 – 46+ inches: mottled yellowish red (5 YR 5/8), strong brown (7.5 YR 6/6) and light yellowish brown (10 YR 6/4) silty clay loam saprolite (soft weathered bedrock that is easily augered out -soft Cr horizon); pockets of red silty clay subsoil mixed in – up to 40% by volume; friable; slightly sticky, non-plastic; few small areas of light gray (10 YR 6/2) parent material.

NOTES:

Clay mineralogy: **In suitable range (non-expansive)**

Water Table: **over 46 inches**. NOTE: The borings may exhibit low-chroma colors (less than 2) below a depth of 24 inches which are indicative of partially weathered parent material.

Depth to restrictive horizon: ranges from 26 to 33 inches in the area of the proposed septic fields, with 29 inches being an average depth for planning purposes. The restrictive horizon consists of saprolite from metamorphic rock, which is massive (structureless). Pockets of parent material may be noted as shallow as 20 inches, however, within the proposed drainfield areas, the depth at which the parent material (saprolite) predominates any soil horizon is consistently deeper than 24 inches. There is typically a gradual boundary between the well-structured soil clayey B horizon material and the obvious saprolite; a gradual boundary indicating that this change takes place over a depth of 6 to 12 inches. As these soils are shallower than the Georgeville soils, a shallow placement septic system will be required.

Design loading rate: The soil is a group 4 soil, and should be acceptable for a design LTAR of 0.30 GPD/FT². This rate will be assigned by the representative of the county health department.

For a 4-bedroom design, the following design features would result from the above recommended loading rate:

0.30 LTAR for 480 GPD = 1600 ft² = 533 linear feet of 3-foot wide trench

Note: All systems can reduce lateral length by 25% by using an innovative trench design such as the trademark names EEEZZZ Lay or Infiltrator, which are state-approved systems.

NASON SOIL SERIES – Landco project

3/5/05

(This profile description defines the average set of conditions for the Nason soils encountered on this tract.)

0 - 7 inches: dark brown (10YR4/3) loam; moderate medium granular structure; very friable; nonsticky, nonplastic, few small gravels; abrupt smooth boundary; common fine and medium roots.

7- 12 inches: strong brown (7.5 YR 5/6) clay loam; moderate fine subangular blocky structure; friable; slightly sticky, nonplastic; clear smooth boundary; common fine roots.

12 – 24 inches: strong brown (7.5 YR 5/8) silty clay; moderate medium subangular blocky structure; firm, sticky, slightly plastic; gradual smooth boundary; few fine roots.

24 - 30 inches: strong brown (7.5 YR 5/8) and yellowish red (5 YR 5/8) silty clay with common (up to 20%) pockets and streaks of yellowish brown, light brown, and light gray partially weathered rock; weak medium subangular blocky structure; firm; sticky, slightly plastic; gradual wavy boundary.

30 – 44+ inches: mottled yellowish red (5 YR 5/8), strong brown (7.5 YR 6/6) and light yellowish brown (10 YR 6/4) silty clay loam saprolite (soft weathered bedrock that is easily augered out -soft Cr horizon); friable; slightly sticky, non-plastic; few small areas of light gray (10 YR 6/2) parent material.

NOTES:

Clay mineralogy: **In suitable range (non-expansive)**

Water Table: **over 44 inches.** NOTE: The borings may exhibit low-chroma colors (less than 2) below a depth of 24 inches which are indicative of partially weathered parent material. Also, where some of the adjacent areas which contain Cid and Orange soils, the water table may approach 30 inches on the periphery of the Nason soils areas. For the sites defined, the seasonal high water table is consistently deeper than 30 inches.

Depth to restrictive horizon: ranges from 24 to 32 inches in the area of the proposed septic fields. The restrictive horizon consists of saprolite from metamorphic rock, which is massive (structureless). Pockets of parent material may be noted as shallow as 22 inches, however, within the proposed drainfield areas, the depth at which the parent material (saprolite)

predominates any soil horizon is consistently deeper than 24 inches. There is typically a gradual boundary between the well-structured soil clayey B horizon material and the obvious saprolite; a gradual boundary indicating that this change takes place over a depth of 6 to 12 inches.

Design loading rate: The soil is a group 4 soil, and should be acceptable for a design LTAR of 0.30 GPD/FT². This rate will be assigned by the representative of the county health department.

For a 4-bedroom design, the following design features would result from the above recommended loading rate:

0.30 LTAR for 480 GPD = 1600 ft² = 533 linear feet of 3-foot wide trench

Note: All systems can reduce lateral length by 25% by using an innovative trench design such as the trademark names EEEZZZ Lay or Infiltrator, which are state-approved systems.

