0603-31

BAILEY BISHOP & LANE, INC.

Engineers *Surveyors* *Planners*

March 16, 2006

Joe Haltiwanger
Plan Examiner
P. O. Box 1529
Lake City, FL 32056

RE: TODD & SHEILA WIDERGREN RESISEDENCE; LOT 43, WOODBOROUGH SUBDIVISION; APPLICATION NO. 0603-31

Dear Mr. Haltiwanger:

This is in response to your correspondence (see attached) for the above referenced project.

1) The owner will provide this information.

2) The allowable soil type and required bearing capacity has been noted on sheet B4 of the plans.

3) The closet in the garage has been extended to enclose the HVAC unit and water heater (see sheet B1).

4) A. The door from the garage into the main house has been specified to be steel (see sheet B1).

   B. The HVAC unit and the supply and return ducts are located outside of the garage envelope and do not penetrate into the garage (see sheet B1).

   C. The walls and ceiling of the garage are to be covered with 5/8" Type 'X' gypsum wallboard (see sheet B1).

5) The electrical panel and its size were shown on the Electrical Plan (see sheet E1). The panel is located in the entry hall leading from the garage and the size is a 200 amp service. A grounded disconnect has been specified and is shown net to the meter.

If you have any questions or need additional information concerning any of these issues, do not hesitate to contact me.

Sincerely,

R. P. (Phil) Bishop, Jr., P.E.

xc. Todd Widergren

P. O. Box 3717	Lake City, FL 32056-3717	Ph. (386) 752-5640	FAX (386) 755-7771
P. O. Box 814	Port St. Joe, FL 32457	Ph. (850) 227-9449	FAX (850) 227-9650

From: The Columbia County Building Department
Plans Review
135 NE Hernando Ave.
P. O. Box 1529
Lake City, Florida, 32056-1529

Reference to a building permit application Number: 0603-31

Linda Roder Owner Todd & Sheila Widergren Lot 43 Woodborough Subdivision

On the date of March 13, 2006 application 0603-31 and plans for construction of a single family dwelling were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

Please include application number 0603-31 when making reference to this application.

US

1. Please provide a copy of a signed released site plan from the Columbia County Environmental Health Department which confirms approval of the waste water disposal system.
2. Please show compliance with the FBC-2004 Sections1802.6.The soil classification and design load-bearing capacity shall be shown on the construction document.
3. Please show the method the HVAC & WH appliances will be protected as required by the FMC-2004 sections 303.4 Protection from damage. Appliances shall not be installed in a location where subject to mechanical damage unless protected by approved barriers.
4. Please show compliance with the FRC-2004 sections R309 Garage: R309.1

A: Opening protection: Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors.

B: R309.1.1 Duct penetration. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage.

C: R309.2 Separation required. The garage shall be separated from the residence and its attic area by not less than ½-inch (12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch (15.9 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

5. On the electrical plan show the location of the electrical panel and include the total amperage rating of the electrical service panel also show the overcurrent protection device which shall be installed on the exterior of structures to serve as a disconnecting means. Conductors used from the exterior disconnecting means to a panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground.

6. Please have Bailey Bishop & Lane Inc. supply the following information, show all required connectors with uplift rating for the truss system and required number and size of fasteners for continuous tie from the roof to foundation. These connection points shall be designed by an architect or engineer using the engineered roof truss plans.

Thank you,

Joe Haltiwanger
Plan Examiner
Columbia County Building Department

Cal-Tech Testing, Inc.
• Engineering
• Geotechnical
• Environmental
LABORATORIES

P.O. Box 1625 • Lake City, FL 32056-1625
6919 Distribution Avenue S., Unit #5 • Jacksonville, FL 32257

Tel. (386) 755-3633 • Fax (386) 752-5456
Tel. (904) 262-4046 • Fax (904) 262-4047

Sealed Report

March 15, 2006

Todd Widergren
384 N. W. Palm Drive
Lake City, Florida 32055

Reference: Proposed Widergren Residence
Woodborough, Lot 43
Columbia County, Florida
Cal-Tech Project No. 06-158

Dear Mr. Widergren,

Cal-Tech Testing, Inc. has completed the subsurface investigation and engineering evaluation of the site for a residence to be constructed at Woodborough, lot 43 in Columbia County, Florida. Our work was authorized by you.

The purposes of our investigation were to evaluate the existing subgrade soils for an allowable bearing pressure of 2,000 pounds per square foot and to provide recommendations as appropriate.

Site Investigation

The site was investigated by performing three (3) Standard Penetration Test borings advanced to depths of 10 feet. The borings were performed at the approximate locations indicated on the attached Location Plan. These locations were selected on site by our personnel, and the building limits were staked.

The Standard Penetration Test (ASTM D-1586) is performed by driving a standard split-barrel sampler into the soil by blows of a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler 1 foot, after seating 6 inches, is designated the penetration resistance, or N-value; this value is an index to soil density or consistency.

Findings

The soil borings generally encountered three soil strata. The first layer consists of 3.0 to 4.0 feet of very loose to loose, tannish gray or grayish tan sand with silt (SP/SM). The N-values of this layer range from 2 to 6 blows per foot.

The second layer consists of 1.5 to 2.5 feet of very loose to loose, generally gray and orange, clayey sand (SC) or slightly clayey sand (SC). The N-values of this layer

range from 2 to 9 blows per foot. The third layer consists of an undetermined thickness of medium dense, generally gray, orange and red, clayey sand (SC) or slightly clayey sand (SC). The N-values of this layer range from 12 to 25 blows per foot.

Groundwater was not encountered at the time of our investigation, and we estimate the wet season water table will occur at a depth of more than 6 feet below the existing surface grade. For a more detailed description of the subsurface conditions encountered, please refer to the attached Boring Logs.

Discussion

We have performed a bearing capacity analysis for the bearing soils and understand the foundations will have widths of 20 inches and embedment of 16 inches. For this foundation and the site soils as encountered, we obtained an allowable bearing capacity of 2,000 pounds per square foot with a factor of safety of about 1.5 against a bearing capacity failure. It is therefore our opinion the site soils are suitable for shallow foundations and an allowable bearing capacity of 2,000 pounds per square foot.

Although the bearing soils are suitable for a bearing capacity of 2,000 pounds per square foot, the site soils appear generally to be very loose to loose to a depth of about 4 feet. For these conditions we recommend the foundation and floor slab areas be thoroughly proof-rolled using heavy, rubber-tired equipment. Additionally, we recommend foundation areas be proof-compacted to a minimum of 95% of the Modified Proctor maximum dry density to a depth of 2 feet below the bottoms of the foundations and floor slabs. Replacement soils, as required, should consist of clean, fine sand containing less than 10% passing the No. 200 sieve. This soil should be placed in maximum 12-inch loose lifts, and each lift should be proof-compacted to a minimum of 95% of the Modified Proctor maximum dry density.

Our evaluation and recommendations are based upon subsurface conditions encountered at this site and as presented within this report. However, subsurface conditions may exist that differ substantially from our findings. Should substantially different site conditions be encountered, we request that we be notified such that these conditions may be evaluated and recommendations can be provided as appropriate.

We appreciate the opportunity to be of service on this project and look forward to a continued association. Please do not hesitate to contact us should you have questions concerning this report or if we may be of further assistance.

Respectfully submitted,
Cal-Tech Testing, Inc.

Linda Creamer
President / CEO

John C. Dorman, Jr., Ph.D., P.E.
Geotechnical Engineer 3/15/06
526/12

B-1

Groundwater: N/A

Depth (ft.)	N-Value	Soil Description
0		
	2	Very Loose, Tannish Gray SAND with SILT (SP/SM)
	2	Very Loose, Light Grayish Tan SAND with SILT (SP/SM)
5	6	Very Loose to Loose, Tan and Orange, SLIGHTLY CLAYEY SAND (SC)
	18	Loose to Medium Dense, Gray and Orange, CLAYEY SAND (SC)
	24	Medium Dense, Gray, Orange and Red, CLAYEY SAND (SC)
10	12	

B-2

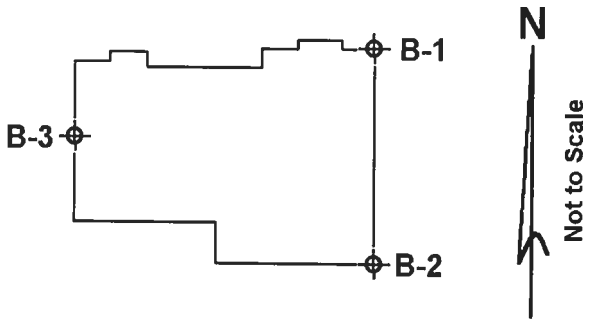
Groundwater: N/A

Depth (ft.)	N-Value	Soil Description
0		
	5	Tannish Gray SAND with SILT (SP/SM)
	4	Loose, Grayish Tan SAND with SILT (SP/SM)
5	9	Loose, Gray and Orange, CLAYEY SAND (SC)
	24	Medium Dense, Gray, Orange and Red, CLAYEY SAND (SC)
	24	Medium Dense, Gray and Orange, SLIGHTLY CLAYEY SAND (SC)
10	25	

B-3

Groundwater: N/A

Depth (ft.)	N-Value	Soil Description
0		
	6	Loose, Tannish Gray SAND with SILT (SP/SM)
	4	
5	7	Loose, Gray and Orange, CLAYEY SAND (SC)
	17	Medium Dense, Gray, Orange and Red, CLAYEY SAND (SC)
	22	
10	23	Medium Dense, Gray and Orange, SLIGHTLY CLAYEY SAND (SC)



Borings Logs and Location Plan: Proposed Widergren Residence
Columbia County, Florida