Columbia County Building Permit Application

For Office Use Only Application # 0608-32 Date Received 8/10/06 By CT Permit # 1211 / 25008

Application Approved by - Zoning Official BLK Date 8.08.06 Plans Examiner OK JTH Date 9-21-06

Flood Zone X (See Survey) Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3

Comments In

FAX: 561-964-944

Applicants Name Theodore R. Campbell Phone 561 964-9313

Address 8188 Palomino Dr. Lake Worth, FL 33467

Owners Name SAME Phone

911 Address 485 SW WINTHROP PLACE, Ft. White, FL 32038

Contractors Name SAME Phone 352 278 4949

Address ~~48~~

Fee Simple Owner Name & Address SAME

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address Thomas J. Twomey P.E. 2831 Exchange Ct. WPB FL. 33

Mortgage Lenders Name & Address NONE

Property ID Number 16-6S-16-03832-248 Estimated Cost of Construction 290,000

Subdivision Name Spring Run Lot 48 Block ___ Unit ___ Phase ___

Driving Directions 475 ~~North~~ out of Fort White TR West 238 (ELim Church Rd) TR North on Henderson, EAST on Winthrop Place to end, left half of Courtesan.

Type of Construction CBS SFD Number of Existing Dwellings on Property 0

Total Acreage 5.7 Lot Size ___ Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 474 ✓ Side 114 ✓ Side 128 ✓ Rear 189 ✓

Total Building Height 28' Number of Stories 1 Heated Floor Area 3,616 Roof Pitch 6/12

TOTAL 5,763

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Theodore R. Campbell

Owner Builder or Agent (Including Contractor)

Contractor Signature

Contractors License Number

Competency Card Number

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 10th day of Aug 20 06

Personally known ___ or Produced Identification

NOTARY STAMP/SEAL

GALE TEDDER
MY COMMISSION # DD 33[illegible]
EXPIRES: June 28, 2008
Bonded Thru Notary Public Underwriters

Notary Signature

Columbia County Building Department
Culvert Permit

Culvert Permit No.
000001211

DATE 09/26/2006 PARCEL ID # 16-6S-16-03832-248

APPLICANT THEODORE R. CAMPBELL PHONE 561.964.9313

ADDRESS 8188 PALOMINO DRIVE LAKE WORTH FL 33467

OWNER THEODORE & LEILANI CAMPBELL PHONE 561.964.9313

ADDRESS 485 SW WINTHROP PLACE FT. WHITE FL 32038

CONTRACTOR THEODORE CAMPBELL PHONE 561.964.9313

LOCATION OF PROPERTY 47-S TO C-238,TR TO HENDERSON,TR TO WINTHROP PLACE,TR GO TO THE VERY END, LEFT HALF OF THE CUL-DE-SAC.

SUBDIVISION/LOT/BLOCK/PHASE/UNIT SPRING RUN 48

SIGNATURE Theodore R Campbell

INSTALLATION REQUIREMENTS

[X] Culvert size will be 18 inches in diameter with a total lenght of 32 feet, leaving 24 feet of driving surface. Both ends will be mitered 4 foot with a 4 : 1 slope and poured with a 4 inch thick reinforced concrete slab.

INSTALLATION NOTE: Turnouts will be required as follows:
a) a majority of the current and existing driveway turnouts are paved, or;
b) the driveway to be served will be paved or formed with concrete.
Turnouts shall be concrete or paved a minimum of 12 feet wide or the width of the concrete or paved driveway, whichever is greater. The width shall conform to the current and existing paved or concreted turnouts.

[ ] Culvert installation shall conform to the approved site plan standards.

[ ] Department of Transportation Permit installation approved standards.

[ ] Other _____

ALL PROPER SAFETY REQUIREMENTS SHOULD BE FOLLOWED DURING THE INSTALATION OF THE CULVERT.

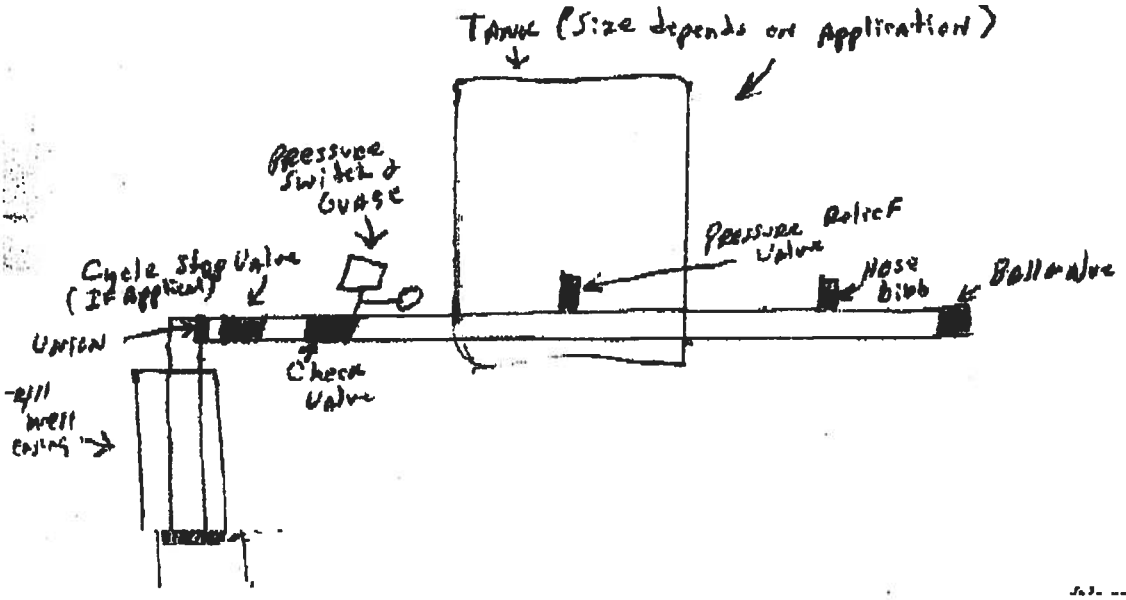
135 NE Hernando Ave., Suite B-21
Lake City, FL 32055
Phone: 386-758-1008 Fax: 386-758-2160

Amount Paid 25.00

COLUMBIA COUNTY FLORIDA

NORTH FLORIDA
WATER SYSTEMS, INC.
11814 N.W. 202nd ST.
ALACHUA, FLORIDA 32615

Columbia County well diagram



COLUMBIA COUNTY 9-1-1 ADDRESSING

P. O. Box 1787, Lake City, FL 32056-1787
PHONE: (386) 758-1125 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide Addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE REQUESTED: 8/10/2006 **DATE ISSUED:** 8/11/2006

ENHANCED 9-1-1 ADDRESS:

485 SW WINTHROP PL

FORT WHITE FL 32038

PROPERTY APPRAISER PARCEL NUMBER:

16-6S-16-03832-248

Remarks:

LOCATED ON LOT 48 SPRING RUN S/D UNREC

Address Issued By: _____

Columbia County 9-1-1 Addressing / GIS Department

NOTICE: THIS ADDRESS WAS ISSUED BASED ON LOCATION INFORMATION RECEIVED FROM THE REQUESTER. SHOULD, AT A LATER DATE, THE LOCATION INFORMATION BE FOUND TO BE IN ERROR, THIS ADDRESS IS SUBJECT TO CHANGE.

370

COLUMBIA COUNTY
9-1-1 ADDRESSING
APPROVED

Theodore R. & Leilani S. Campbell
P.O. Box 20486
West Palm Beach, Florida 33416-0486
Fax 561-964-9448 Voice 561-964-9313

Date: 8/27/06

Page: (1) of (2)

0608-32

****

To: _____ Fax no. 386-758-2160

Att: Joe Haltiwanger

From: Ted + Lori Campbell

Subject: no range allowed in the in law quaters.

Inst:2006019009 Date:08/10/2006 Time:13:44
Doc Stamp-Deed : 0.70
DC,P.DeWitt Cason,Columbia County B:1092 P:1056

Inst:2006010280 Date:04/28/2006 Time:10:05
Doc Stamp-Deed : 0.70
DC,P.DeWitt Cason,Columbia County B:1081 P:2599

Above Space Reserved for Recording
[If required by your jurisdiction, list above the name & address of: 1) where to return this form; 2) preparer; 3) party requesting recording.]

Quitclaim Deed

Date of this Document: 4/26/06

Reference Number of Any Related Documents: _____

Grantor:

Name: VC Properties LLC
Street Address: 8188 Palomino Drive
City/State/Zip: Lake Worth, FL 33467

Grantee:

Name: Theodore R. & LeiLani S. Campbell
Street Address: 8188 Palomino Drive
City/State/Zip: Lake Worth, FL 33467

Abbreviated Legal Description (i.e., lot, block, plat *or* section, township, range, quarter/quarter *or* unit, building and condo name): (SpringRun S/D unrecorded AKA Lot 48)

Assessor's Property Tax Parcel/Account Number(s): 16-6S-16-03832-248

THIS QUITCLAIM DEED, executed this _____ day of _____, 20 06, by first party, Grantor, VC Properties LLC, whose mailing address is PO Box 20486, West Palm Beach, FL 33416, to second party, Grantee, Theodore R & LeiLani S. Campbell, whose mailing address is PO Box 20486, West Palm Beach, FL 33416.

WITNESSETH that the said first party, for good consideration and for the sum of _____ Dollars ($_____) paid by the said second party, the receipt whereof is hereby acknowledged, does hereby remise, release and quitclaim unto the said second party forever, all the right, title, interest and claim,

which the said first party has in and to the following described parcel of land, and improvements and appurtenances thereto in the County of Columbia, State of Florida to wit: Beg NW COR OF NE¼ OF NE¼, RUN W 335.05 FT, SE'LY ALONG CURVE 51.31 FT, E 142.67 FT, N 754.40 FT TO POB (AKA Lt 45 Spring Run S/D UNREC) ORB632-196, 746-1153

See Exhibit "A" for Correct Legal

IN WITNESS WHEREOF, the said first party has signed and sealed these presents the day and year first written above. Signed, sealed and delivered in the presence of:

Signature of Witness: William R. Scott

Print Name of Witness: William R. Scott

Signature of Witness: Charles Alba

Print Name of Witness: Charles Alba

Signature of Grantor: Theodore R. Campbell

Print Name of Grantor: Theodore R. Campbell

State of FLORIDA)
County of PALM BEACH)

On 4-26-06, before me, SOPHIE M. SPRINGER, appeared THEODORE R. CAMPBELL, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Sophie M. Springer
Signature of Notary

Affiant _____Known ✓ Produced ID
Type of ID _____
(Seal)

Inst:2006010280 Date:04/28/2006 Time:10:05
Doc Stamp-Deed : 0.70
_____DC,P.DeWitt Cason,Columbia County B:1081 P:2600

Sophie M. Springer
Commission # DD339310
Expires September 13, 2008
Bonded Troy Fain - Insurance, Inc 800-385-7019

Inst:2006019009 Date:08/10/2006 Time:13:44
Doc Stamp-Deed : 0.70
_____DC,P.DeWitt Cason,Columbia County B:1092 P:1057

Exhibit "A"

Columbia County Property Appraiser

DB Last Updated: 6/19/2006

2006 Proposed Values

Parcel: 16-6S-16-03832-248

Tax Record | Property Card | Interactive GIS Map | Print

Owner & Property Info

Search Result: 1 of 1

Owner's Name	CAMPBELL THEODORE R & LEILANI	**Use Desc. (code)**	NO AG ACRE (009900)
Site Address	- - -	**Neighborhood**	16616.02
Mailing Address	P O BOX 20486 WEST PALM BEACH, FL 33416	**Tax District**	3
Description	BEG NW COR OF NE1/4 OF NE1/4, RUN W 335.08 FT, S 754.50 FT, E 134.66 FT, SE ALONG CURVE 51.39 FT, E 142.67 FT, N 754.40 FT TO POB. (AKA LOT 48 SPRING RUN S/D UNREC) ORB 632-186, 746-1153, 751-1479, 801-1546, WD 1010-1207 & QC DEED ORB 1081-2599	**UD Codes**	MKTA02
		Market Area	02
		Total Land Area	5.710 ACRES

Property & Assessment Values

Mkt Land Value	cnt: (1)	$32,000.00	**Just Value**	$32,000.00
Ag Land Value	cnt: (0)	$0.00	**Class Value**	$0.00
Building Value	cnt: (0)	$0.00	**Assessed Value**	$32,000.00
XFOB Value	cnt: (0)	$0.00	**Exempt Value**	$0.00
Total Appraised Value		$32,000.00	**Total Taxable Value**	$32,000.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vimp	Sale Qual	Sale RCode	Sale Price
4/28/2006	1081/2599	QC	V	U	01	$100.00
3/19/2004	1010/1207	WD	V	Q		$25,000.00
2/4/1995	801/1546	QC	V	U	01	$5,200.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
			NONE			

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
				NONE		

Land Breakdown

Lnd Code	Desc	Units
009900	AC NON-AG (MKT)	1.000 LT - (5.710

Inst:2006019009 Date:08/10/2006 Time:13:44
Doc Stamp-Deed : 0.70
_____DC,P.DeWitt Cason,Columbia County B:1092 P:1058

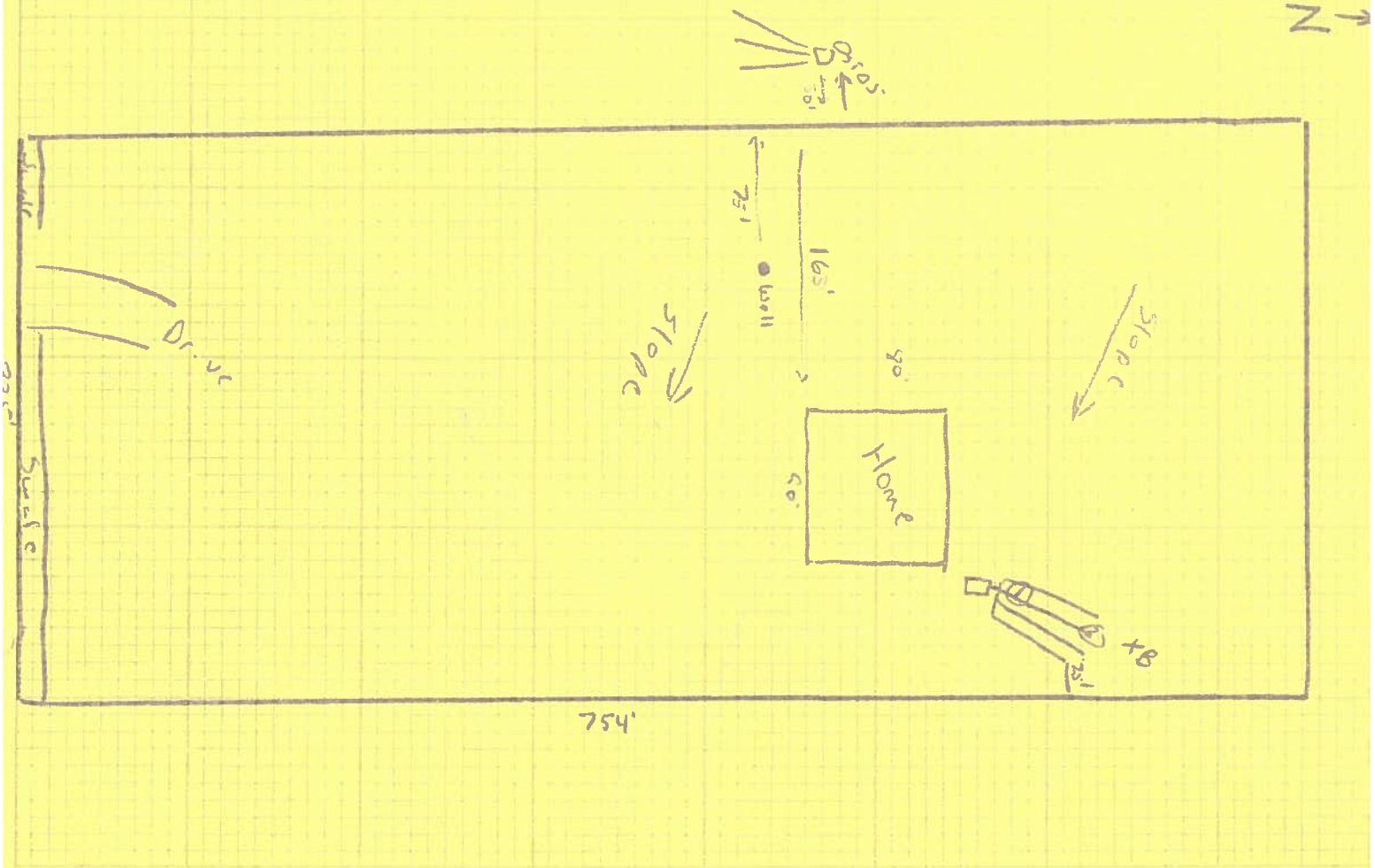
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 06-0696 N

PART II - SITE PLAN

Scale: Each block represents 5 feet and 1 inch = 50 feet.



Notes: _____

Site Plan submitted by: Jeff Swanson (Signature) AGENT (Title)

Plan Approved ✓ Not Approved _____ Date 8/4/06

By _____ Columbia County Health Departme

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

NOTICE OF COMMENCEMENT FORM
COLUMBIA COUNTY, FLORIDA

******THIS DOCUMENT MUST BE RECORDED AT THE COUNTY CLERKS OFFICE BEFORE YOUR FIRST INSPECTION.******

THE UNDERSIGNED hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

Tax Parcel ID Number 16-6S-16-03832-248

1. **Description of property: (legal description of the property and street address or 911 address)**
Beg NW Cor of NE1/4 of NE1/4, Run W 335.08 ft, SE Along Curve 51.39 ft E 142.67 ft N 754.40 ft to POB (AKA lot #48 Spring Run S/D Un Rec) ORB 632 P 186, 746 P 1153

2. **General description of improvement:** NEW Residence

3. **Owner Name & Address** Theodore R. & Leilani S. Campbell
8188 Palomino Dr. Lake Worth Fl. 33467 **Interest in Property** _____

4. **Name & Address of Fee Simple Owner (if other than owner):** _____

5. **Contractor Name** Owner **Phone Number** 561-964-9313
Address _____ Cell 561-722-9255

6. **Surety Holders Name** _____ **Phone Number** _____
Address _____
Amount of Bond _____

Inst:2006019010 Date:08/10/2006 Time:13:44
DC,P.DeWitt Cason,Columbia County B:1092 P:1059

7. **Lender Name** NONE
Address _____

8. **Persons within the State of Florida designated by the Owner upon whom notices or other documents may be served as provided by section 718.13 (1)(a) 7; Florida Statutes:**
Name _____ **Phone Number** _____
Address _____

9. **In addition to himself/herself the owner designates** _____ **of** _____ **to receive a copy of the Lienor's Notice as provided in Section 713.13 (1) – (a) 7. Phone Number of the designee** _____

10. **Expiration date of the Notice of Commencement (the expiration date is 1 (one) year from the date of recording, (Unless a different date is specified)** _____

NOTICE AS PER CHAPTER 713, Florida Statutes:
The owner must sign the notice of commencement and no one else may be permitted to sign in his/her stead.

Sworn to (or affirmed) and subscribed before 10 **day of** Aug, **20**06

Signature of Owner

GALE TEDDER
MY COMMISSION # DD 0 EXPIRES: June 28, 2008
Bonded Thru Notary Public Underwriters

NOTARY STAMP/SEAL

STATE OF FLORIDA COUNTY OF COLUMBIA
I HEREBY CERTIFY that the foregoing is a true copy of the original filed in this office.
P. DeWITT CASON, CLERK OF COURTS
By _____ Deputy Clerk
Date 8/10/06

Signature of Notary

DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $25,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

TYPE OF CONSTRUCTION

(X) Single Family Dwelling
( ) Two-Family Residence
( ) Farm Outbuilding
( ) Other_____
( ) New Construction
( ) Addition, Alteration, Modification or other Improvement

NEW CONSTRUCTION OR IMPROVEMENT

I Theodore R. Caskell, have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number_____

Theodore R. Caskell 8/10/06

Signature Date

FOR BUILDING USE ONLY

I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7).

Date_____ Building Official/Representative_____

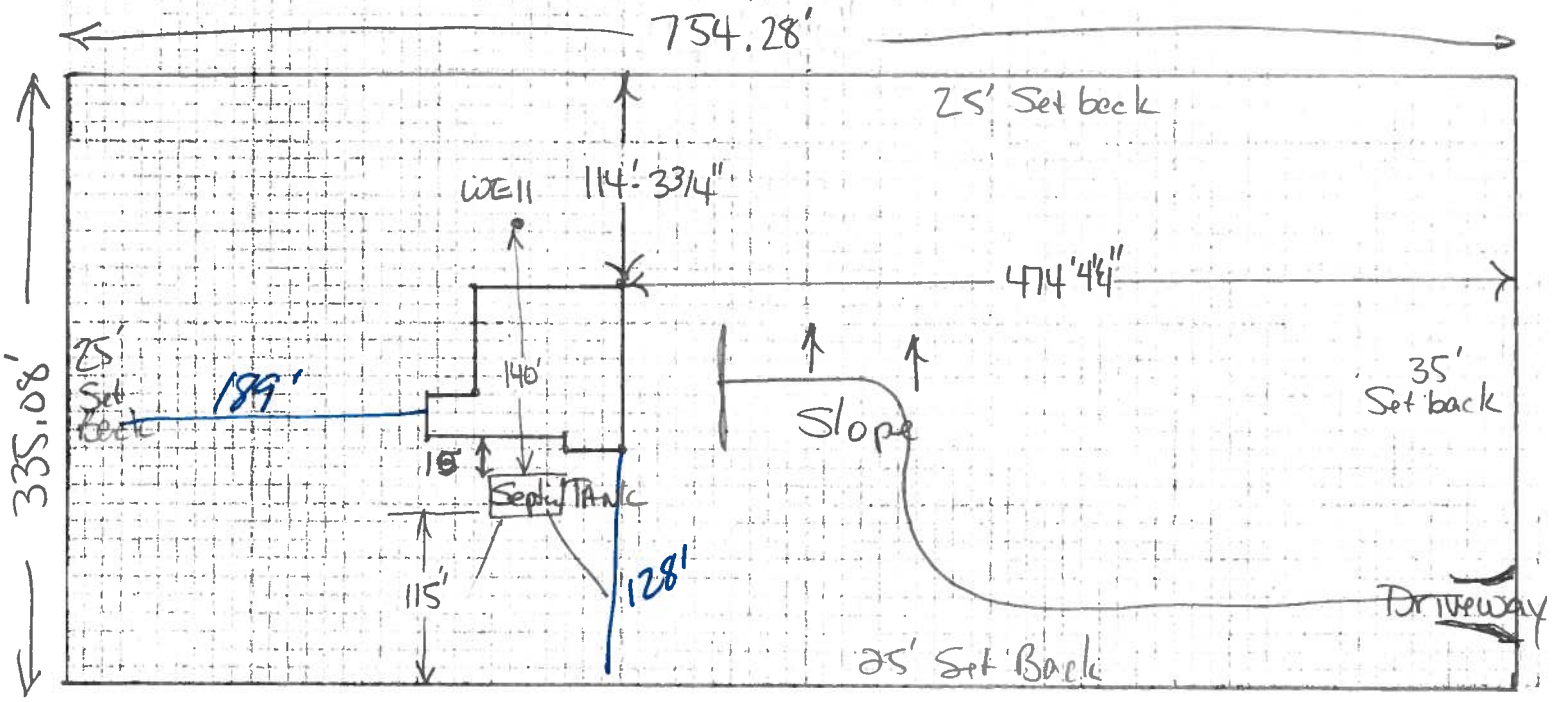
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number _____

PART II - SITE PLAN

Scale: Each block represents 10 feet and 1 inch = 100 feet.



Notes: _____

Site Plan submitted by: Theodore R. Campbell Signature _____ OWNER Title

Plan Approved _____ Not Approved _____ Date 6/19/06

By _____ County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

FORM 600A-2004 EnergyGauge® 4.0

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Swanson - Campbell Res.**	Builder:	
Address:		Permitting Office:	
City, State:	,	Permit Number:	
Owner:		Jurisdiction Number:	
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 18.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 10.30
4. Number of Bedrooms	3	b. Central Unit	Cap: 42.0 kBtu/hr
5. Is this a worst case?	Yes		SEER: 10.50
6. Conditioned floor area (ft²)	3616 ft²	c. Central Unit	Cap: 18.0 kBtu/hr
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)			SEER: 10.30
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT)	7a. (Dble, U=0.6) 204.0 ft²	a. Electric Heat Pump	Cap: 18.0 kBtu/hr
b. SHGC:			HSPF: 6.80
(or Clear or Tint DEFAULT)	7b. (SHGC=0.35) 665.0 ft²	b. Electric Heat Pump	Cap: 18.0 kBtu/hr
8. Floor types			HSPF: 6.80
a. Slab-On-Grade Edge Insulation	R=0.0, 302.0(p) ft	c. Electric Heat Pump	Cap: 42.0 kBtu/hr
b. N/A			HSPF: 7.50
c. N/A		14. Hot water systems	
9. Wall types		a. Natural Gas	Cap: 35.0 gallons
a. Concrete, Int Insul, Exterior	R=7.4, 3134.0 ft²		EF: 0.58
b. N/A		b. N/A	
c. N/A		c. Conservation credits	
d. N/A		(HR-Heat recovery, Solar	
e. N/A		DHP-Dedicated heat pump)	
10. Ceiling types		15. HVAC credits	MZ-C, PT,
a. Under Attic	R=30.0, 3653.0 ft²	(CF-Ceiling fan, CV-Cross ventilation,	
b. Under Attic	R=19.0, 514.0 ft²	HF-Whole house fan,	
c. N/A		PT-Programmable Thermostat,	
11. Ducts		MZ-C-Multizone cooling,	
a. Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 160.0 ft²	MZ-H-Multizone heating)	
b. 2 Others	320.0 ft		

Glass/Floor Area: 0.18 Total as-built points: 46167 Total base points: 46870 **PASS**

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 7-19-06

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points
.18	3616.0	20.04	13043.6	Double,U=0.55,SHGC=0.35	SE	0.0	0.0	172.0	21.14	1.00	3635.9
				Double,U=0.55,SHGC=0.35	SW	0.0	0.0	147.0	19.74	1.00	2901.5
				Double,U=0.55,SHGC=0.35	NW	0.0	0.0	142.0	12.28	1.00	1743.9
				Double,U=0.55,SHGC=0.35	NE	0.0	0.0	204.0	14.17	1.00	2891.4
				As-Built Total:				**665.0**			**11172.7**
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points
Adjacent	0.0	0.00	0.0	Concrete, Int Insul, Exterior			7.4	3134.0	0.67		2099.8
Exterior	3134.0	1.70	5327.8								
Base Total:	**3134.0**		**5327.8**	**As-Built Total:**				**3134.0**			**2099.8**
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points
Adjacent	0.0	0.00	0.0								
Exterior	0.0	0.00	0.0								
Base Total:	**0.0**		**0.0**	**As-Built Total:**				**0.0**			**0.0**
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X	SCM =	Points
Under Attic	3616.0	1.73	6255.7	Under Attic			30.0	3653.0	1.73 X	1.00	6319.7
				Under Attic			19.0	514.0	2.34 X	1.00	1202.8
Base Total:	**3616.0**		**6255.7**	**As-Built Total:**				**4167.0**			**7522.5**
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points
Slab	302.0(p)	-37.0	-11174.0	Slab-On-Grade Edge Insulation			0.0	302.0(p	-41.20		-12442.4
Raised	0.0	0.00	0.0								
Base Total:			**-11174.0**	**As-Built Total:**				**302.0**			**-12442.4**
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points
	3616.0	10.21	36919.4					3616.0	10.21		36919.4

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 50372.5			**Summer As-Built Points:**					**45271.9**
Total Summer Points	X System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
			(sys 1: Central Unit 18000 btuh ,SEER/EFF(10.3) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
			45272	0.23	(1.09 x 1.147 x 1.11)	0.331	0.902	4335.8
			(sys 2: Central Unit 42000 btuh ,SEER/EFF(10.5) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
			45272	0.54	(1.09 x 1.147 x 1.11)	0.325	0.902	9924.1
			(sys 3: Central Unit 18000 btuh ,SEER/EFF(10.3) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
			45272	0.23	(1.09 x 1.147 x 1.11)	0.331	0.902	4335.8
50372.5	**0.4266**	**21488.9**	**45271.9**	**1.00**	**1.388**	**0.328**	**0.902**	**18593.9**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	3616.0	12.74	8292.2	Double,U=0.55,SHGC=0.35	SE	0.0	0.0	172.0	12.39	1.00	2131.5	
				Double,U=0.55,SHGC=0.35	SW	0.0	0.0	147.0	13.52	1.00	1988.0	
				Double,U=0.55,SHGC=0.35	NW	0.0	0.0	142.0	17.52	1.00	2488.0	
				Double,U=0.55,SHGC=0.35	NE	0.0	0.0	204.0	17.15	1.00	3498.3	
				As-Built Total:				**665.0**			**10105.9**	
WALL TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =	Points		
Adjacent	0.0	0.00	0.0	Concrete, Int Insul, Exterior			7.4	3134.0	4.44	13915.0		
Exterior	3134.0	3.70	11595.8									
Base Total:	**3134.0**		**11595.8**	**As-Built Total:**				**3134.0**		**13915.0**		
DOOR TYPES	Area X	BWPM =	Points	Type				Area X	WPM =	Points		
Adjacent	0.0	0.00	0.0									
Exterior	0.0	0.00	0.0									
Base Total:	**0.0**		**0.0**	**As-Built Total:**				**0.0**		**0.0**		
CEILING TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM X WCM =	Points		
Under Attic	3616.0	2.05	7412.8	Under Attic			30.0	3653.0	2.05 X 1.00	7488.6		
				Under Attic			19.0	514.0	2.70 X 1.00	1387.8		
Base Total:	**3616.0**		**7412.8**	**As-Built Total:**				**4167.0**		**8876.5**		
FLOOR TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =	Points		
Slab	302.0(p)	8.9	2687.8	Slab-On-Grade Edge Insulation			0.0	302.0(p	18.80	5677.6		
Raised	0.0	0.00	0.0									
Base Total:			**2687.8**	**As-Built Total:**				**302.0**		**5677.6**		
INFILTRATION	Area X	BWPM =	Points					Area X	WPM =	Points		
	3616.0	-0.59	-2133.4					3616.0	-0.59	-2133.4		

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**27855.2**	**Winter As-Built Points:**					**36441.4**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 18000 btuh ,EFF(6.8) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
			36441.4	0.231	(1.069 x 1.169 x 1.10)	0.501	0.950	5507.2
			(sys 2: Electric Heat Pump 18000 btuh ,EFF(6.8) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
			36441.4	0.231	(1.069 x 1.169 x 1.10)	0.501	0.950	5507.2
			(sys 3: Electric Heat Pump 42000 btuh ,EFF(7.5) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
			36441.4	0.538	(1.069 x 1.169 x 1.10)	0.455	0.950	11650.7
27855.2	**0.6274**	**17476.3**	**36441.4**	**1.00**	**1.375**	**0.475**	**0.950**	**22611.0**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X	Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
3		2635.00	7905.0	35.0	0.58	3	1.00	1654.03	1.00	4962.1	
				As-Built Total:						**4962.1**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
21489	**17476**	**7905**	**46870**	**18594**	**22611**	**4962**	**46167**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum:.3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked cir breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 82.2

The higher the score, the more efficient the home.

1.	New construction or existing	New		12.	Cooling systems
2.	Single family or multi-family	Single family		a.	Central Unit	Cap: 18.0 kBtu/hr
3.	Number of units, if multi-family	1				SEER: 10.30
4.	Number of Bedrooms	3		b.	Central Unit	Cap: 42.0 kBtu/hr
5.	Is this a worst case?	Yes				SEER: 10.50
6.	Conditioned floor area (ft²)	3616 ft²		c.	Central Unit	Cap: 18.0 kBtu/hr
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)					SEER: 10.30
a.	U-factor:	Description Area		13.	Heating systems	
	(or Single or Double DEFAULT)	7a. (Dble, U=0.6) 204.0 ft²		a.	Electric Heat Pump	Cap: 18.0 kBtu/hr
b.	SHGC:					HSPF: 6.80
	(or Clear or Tint DEFAULT)	7b. (SHGC=0.35) 665.0 ft²		b.	Electric Heat Pump	Cap: 18.0 kBtu/hr
8.	Floor types					HSPF: 6.80
a.	Slab-On-Grade Edge Insulation	R=0.0, 302.0(p) ft		c.	Electric Heat Pump	Cap: 42.0 kBtu/hr
b.	N/A					HSPF: 7.50
c.	N/A			14.	Hot water systems	
9.	Wall types			a.	Natural Gas	Cap: 35.0 gallons
a.	Concrete, Int Insul, Exterior	R=7.4, 3134.0 ft²				EF: 0.58
b.	N/A			b.	N/A	
c.	N/A					
d.	N/A			c.	Conservation credits	
e.	N/A				(HR-Heat recovery, Solar	
10.	Ceiling types				DHP-Dedicated heat pump)	
a.	Under Attic	R=30.0, 3653.0 ft²		15.	HVAC credits	MZ-C, PT,
b.	Under Attic	R=19.0, 514.0 ft²			(CF-Ceiling fan, CV-Cross ventilation,	
c.	N/A				HF-Whole house fan,	
11.	Ducts				PT-Programmable Thermostat,	
a.	Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 160.0 ft²			MZ-C-Multizone cooling,	
b.	2 Others	320.0 ft			MZ-H-Multizone heating)	

I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.*

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

Theodore R. Campbell
Leilani S. Campbell
P.O. Box 20486
W.P.B., Fl 33416-0486
561-964-9313

TO: Joe Haltiwanger

RE: Campbell Residence
485 SW Winthrop Place
Fort White, Fl 32038
PAP# 16-6S-16-03832-248

Please be advised that we are are aware that a range will not be permitted in the in law quarters of our new residence.

Sincerely,

Theodore R. Campbell

Leilani S. Campbell

From: The Columbia County Building & Zoning Department
Plan Review
135 NE Hernando Av.
P.O. Box 1529
Lake City Florida 32056-1529

Reference to a building permit application Number: 0608-32

Owner/Builder Theodore Campbell property ID# 16-6s-16-03832-248

On the date of August 14, 2006 application 0608-32 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 0608-32 and when making reference to this application.

This is a plan review for compliance with the Florida Residential Code 2004 only and doesn't make any consideration toward the land use and zoning requirements.

To help ensure compliance with the Florida Residential Code 2004 the comments below need to be addressed on the plans.

1. Please make application for a 911 address by contacting the Emergency Management - 911 addressing Mr. Ronnie McCardel @ (386) 758-1125.

2. Please submit a letter form the potable water well contractor which will describe the equipment to be used to supply potable water to this dwelling. Include the size of pump motor, size of pressure tank and cycle stop valve if used.

3. The structural design by Mr. Thomas Twomey requires that the soil conditions have a load bearing capacity of 2,500 PSF. Therefore please follow the prescribed testing methods to reveal the soil load bearing capacities. Please have a registered professional conduct subsurface explorations at the project site upon which foundations are to be constructed, a sufficient number (not less than four, one boring on each corner of the building foundation) borings shall be made to a depth of not less than 10 feet (3048 mm) below the level of the foundations to provide assurance of the soundness of the foundation bed and its load-bearing capacity.

4. Show on the electrical plan the location of the electrical service overcurrent protection device. This device 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. The single family dwelling and the attached in-laws suite shall share the same electrical service (one electrical meter base) please show the location of the electrical panel include the amperage rating of this panel and a additional sub panels.

6-28-00

5. Columbia County Ordinance No. 98-1 prohibits cooking facilities to be located within an in-laws suite. Please remove the cooking range from the floor and electrical plans.

Joe Haltiwanger

Columbia County
Plan Examiner

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Environmental Engineering
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• Rockledge, FL
• Sarasota, FL
• St. Augustine, FL
• Tampa, FL
• West Palm Beach, FL

September 20, 2006

Mr. Theodore R. Campbell
P.O. Box 20486
West Palm Beach, FL 33416

Reference: **Report of Geotechnical Consulting Services**
Proposed Single-Family Residence
Spring Hill Subdivision, Campbell Residence, Lot 48
485 SW Winthrop Road
Ft. White, Columbia County, FL
UES Project No: 28491-001-02 UES Report No: 56974.1

Dear Mr. Campbell:

Universal Engineering Sciences, Inc. has completed a subsurface exploration and engineering evaluation for the proposed single-family residence at the subject parcel. Our services were performed in accordance with the scope of services summarized in our UES Proposal No. G3121 dated August 29, 2006.

This Report contains the results of our exploration, our engineering interpretations and evaluations, and our recommendations for geotechnical site preparation, and foundation design and construction.

Objectives

The objectives of our services on this project were to explore the prevailing site subsurface conditions beneath the area of the proposed building footprint, to evaluate the subsurface response to anticipated structural loadings, and to provide foundation design/construction and geotechnical building site preparation recommendations for the proposed structure.

Project Information

The project parcel is located off SW Henderson Terrace, just northwest to the intersection of State road 47 and County Road 238 at 485 SW Winthrop in Ft. White, Columbia County, FL. The parcel is identified as Lot 48, and has plan dimensions of approximately 350 by 750 feet
.
Our office was not provided with Foundation Plans or any other construction-related information other than that discussed herein. If our understandings and assumptions of project issues are incorrect our conclusions and recommendations will not be considered valid until we have had the opportunity to review all pertinent issues.

We understand that the proposed construction on the subject parcel will include a single-family residence. We have assumed a reinforced masonry stem wall under single-story frame construction will be used for this project. We have assumed that exterior and interior load bearing walls will be

used for the building, and that individual load bearing columns will be limited to exterior porch areas. Considering the above scenario, we assumed the following structural loading conditions. Ground floor slab loads not exceeding 100 psf, maximum 3 klf on wall footings and maximum 10 kips on individual footings.

We understand the proposed building footprint has been cleared and leveled. Our office was not provided a current topographic survey of the parcel. The above constitutes all of the project information provided to our office at the time of this Report preparation.

We note that, our authorized scope of services and this Report do not address any other project elements, such as earth retaining walls, sidewalks, at-grade driveways areas or slope stability issues that may be part of the overall project site plan. Since other site improvements could have detrimental effects on the performance of a foundation system at this site, UES, or another qualified geotechnical consultant, should be consulted to review the entire site development plan and conduct additional services as required to minimize any impact of associated improvements on foundation performance.

Site Conditions

We understand the proposed building footprint has been cleared and leveled with as much as 5 feet of structural fill. Exposed surface soils, away from the fill areas, were observed to be mostly sandy with varying degrees of silt and clay content, and moist.

Surface organic soils, surface debris, unusual ground depressions, and rock outcroppings were not observed on the project site. There are no large trees on the parcel in close proximity to the proposed building footprint. The presence of buried underground service and storm water drain lines or any other utility service lines was not apparent during our site visit.

Subsurface Exploration

The field geotechnical testing activities were started and completed on August 29, 2006. Field tests for this geotechnical study included four soil test borings performed at the locations shown on the attached Boring Location Plan. We understand that the test locations were selected in the general area of the proposed building footprint.

If the proposed building location, footprint layout or floor elevation is changed from that provided to our office for the performance of the field exploration program and preparation of this Report, our conclusions and recommendations will not be considered valid until we have had the opportunity to review all pertinent issues.

Soil test borings were advanced to maximum depths of 15 feet below site grade. The standard penetration test method was used to advance the borings. Penetration tests were performed in accordance with ASTM Procedure D-1586, Penetration Test and Split-Barrel Sampling of Soils. This test procedure generally involves driving a 1.4-inch I.D. split-tube sampler into the soil profile in six inch increments for a minimum distance of 18 inches using a 140-pound hammer free-falling

30 inches. The total number of blows required to drive the sampler the second and third 6-inch increments are an indication of in-place soil strength and consistency.

Representative portions of the soil samples recovered were transported to our soils laboratory. The soil samples were visually classified by an experienced Geotechnical Engineer. The results of the classification and stratification are shown on the attached Boring Logs and summarized below. It should be noted that soil conditions might vary between soil test boring locations and between the soil strata interfaces which are shown on the Boring Logs. The soil boring data reflect information from specific test locations only.

Karst Topography

About 10% of the earth's land (and 15% of the United States) crust is composed of, or underlain by, soluble limestone. When limestone interacts with underground water, over time, the water dissolves the limestone to form karst topography, a mix of caves, underground channels, and rough and undulating ground surfaces. The underground water of karst topography carves channels and caves that become susceptible to collapse from the surface. When enough limestone is eroded from underground, a sinkhole may develop. Sinkholes can range in size and depth from a few feet to over 300 feet. The topography of North Central Florida is characteristic of karst terrain, with sinkholes caused by natural climatic variability, as well as, man-made activities, such as, the drop in groundwater levels from well pumping.

Per contract scope of services, our exploration was confined to the zone of soil likely to be stressed by the proposed single-story construction. Our work did not address the potential for surface expression of deep geological conditions, such as sinkhole development related to karst activity. This evaluation requires a more extensive range of field services than performed in this study.

Subsurface Findings

Four soil test borings (B-1 to B-4) were performed within the anticipated footprint location of the proposed residence, and the findings are presented in the attached Boring Logs and summarized below. The soil test borings were extended to maximum depths of 15 feet below existing site grades.

The soil test borings generally encountered very loose to loose sands [SP/SP-SM] to depths of 2 to 5 ½ feet followed by very loose to medium dense clayey sands to depths of 6 to 11 feet below ground surface. Below the clayey sands was soft to stiff clay [CH] to the boring termination depths. Two of the soil borings, B-1 and B-2, encountered a layer of structural sandy fill overlying natural sand layers. The thickness of the sandy fill soils was noted between 3 to 5 feet.

The groundwater level was not apparent in any of the open boreholes at the time of our exploration. Fluctuations of groundwater level conditions on this project parcel should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

Laboratory Soil Tests

Soil samples recovered from the soil test borings were placed in plastic containers and returned to our soils laboratory, where the Geotechnical Engineer visually examined and classified the samples, and reviewed the field stratifications. Laboratory soil tests are performed to aid in the classification of the soils, and to help in the evaluation of engineering characteristics of the soils. Representative soil samples, recovered from the soil borings, were selected for percent fines testing, moisture content and Atterberg Limits determination. The test procedures are described below. The test results are presented in the Boring Logs and a summarized in Table 1 below.

Percent Passing No. 200 Sieve - Certain recovered soil samples were selected to determine the percentage of fines. In this test the soil sample was dried and washed over a No. 200 mesh sieve. The percent of soil by weight passing the sieve is the percentage of fines or portion of the sample in the silt and clay size range. This test was conducted in accordance with ASTM Procedure D-1140, Amount of Material in Soils Finer Than the #200 Sieve.

Moisture Content - Certain recovered soil samples were selected to determine the moisture content. This test was conducted in accordance with ASTM Procedure D-2216. The soil moisture content is the ratio of the weight of water in the soil mass to the dry weight of the soil mass. Moisture content is measured by drying the moist material to a constant mass in a drying oven controlled at 105 degrees Celsius and to use this value as the mass of water in the test specimen. The moisture content is expressed as a percent of the oven dried soil mass.

Table 1 - Laboratory Soil Test Results

Test Location	Sample Depth	Type of Test	Test Results	Soil Description
B3	4 to 6 feet	% Finer #200	29 %	Clayey Sand
		Moisture Content	13 %	
B3	6 to 8 feet	% Finer #200	89 %	Clay
		Moisture Content	45 %	
		Atterburg Limits	LL=100, PI=76	
B3	10 to 15 feet	% Finer #200	59 %	Sandy Clay
		Moisture Content	32 %	
		Atterburg Limits	LL=70, PI=39	

Atterberg Limits - Certain recovered soil samples were selected for Atterberg Limits testing to determine the soil plasticity characteristics. The soil's Plasticity Index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the Liquid Limit (LL) and the Plastic Limit (PL). The LL is the moisture content at which the soil will flow as a heavy viscous fluid. The PL is the lowest moisture content at which the soil is sufficiently plastic so as to be manually rolled into a 1/8-inch diameter thread. The test is conducted in accordance with ASTM Procedure D-4318, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

Technical Discussion

Recommendations for foundation design are dependent on the amount of total settlement and more importantly differential settlement between various structural elements that can be safely tolerated by the individual structures.

Total and/or differential settlements beyond specified tolerable limits often dictate the use of deep foundations, or appropriate deep subsurface improvement techniques in order to support the structure on a shallow foundation system. It is important that the amount of total and differential settlement that can be tolerated by the proposed building structure be established by the Structural Engineer. It should be noted that differential settlement underneath a structure is a function of the uniformity or variability of the subsurface conditions within the zone of influence of the foundations. The more uniform the subsurface conditions, the less the differential settlement.

It should further be noted that the estimated magnitudes of total and differential settlements are dependent on foundation loading conditions among other factors, and that we have made certain assumptions regarding those loading conditions in this Report. If unusually heavy foundation loading conditions are expected for some of the proposed project elements, or if our estimates vary significantly from actual anticipated conditions, we should be so advised so that we may revisit our engineering evaluations and foundation settlement estimates. If the anticipated total and differential settlements estimated above exceed the tolerable limits as set forth by the Structural Engineer, we should be so advised so that we may consider other foundation system alternatives.

Another geotechnical consideration for the design and construction of the proposed residential structure is the presence of near-surface active clay soils which change volume; i.e., shrink and swell, with variations in moisture content. The laboratory tests indicate that these soils may have a high potential for shrink/swell volume changes. As such, both natural variations, such as rainfall, and man-made variations, such as landscape details and irrigation habits, can affect the upward and downward movement of these clays.

Our local experience has found that clay layers are often laterally discontinuous, which makes it more difficult to ascertain their presence on a given project parcel with a few soil test borings. If at the time of construction the builder encounters or suspects that clay soils may be near the grade slab or foundation bearing elevations, UES should be contacted to prepare appropriate recommendations.

The sand-clay mixtures and very clayey sandy soils may require stringent moisture control during compaction, particularly during rainy periods. Footings that are excavated through the upper layer of compacted sand fill soils into the native clayey sands, should be visually inspected and tested to verify the in-place density and condition of the subgrade bearing soils.

Shallow Foundation System

In general, a shallow foundation must meet three requirements for successful design and performance: environmental factors, settlement, and bearing capacity.

Environmental Factors - Environmental factors include soil shrinking and swelling, sinkholes, frost heave and hurricane scour. In our professional opinion, the potential for hurricane scour and frost heave is low, based on a scale of low/moderate/high, considering the relative geographic location of the project parcel. Subsurface soil shrink/swell was considered in our engineering evaluation and recommendations. As previously stated, assessment of sinkhole potential was not a contracted scope of service and was not considered.

Settlement - Another requirement of a shallow foundation is the ability of the structure to tolerate the estimated settlement. Among others, the following parameters are necessary in order to estimate settlement: footprint bearing pressure, stress reduction factor, thickness of each compressible underlying stratum, modulus of each stratum, and foundation dimensions.

Cut operations at the two-story residence site will result in subsurface stress relief over those areas of the proposed building footprint. The placement and compaction of fill soils at the building site, above the current ground surface grades, will result in vertical deflections (settlements) of the underlying subsurface soils. As much as ¼ inch of area settlement may be anticipated for each 12 inches of granular compacted fill soil.

The allowable amount of settlement that a structure may tolerate is dependent on several factors including: uniformity of settlement, time rate of settlement, structural dimensions, and properties of the structural materials. Generally, total or uniform settlement does not damage a structure but may affect drainage and utility connections. These can generally tolerate movements of one inch and more for building construction. In contrast, differential settlement affects a structure's frame and is limited by the structural flexibility.

Using the recommended maximum average bearing pressure, the assumed maximum structural loads outlined later in this report, the anticipated fill loading and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structure could be on the order of one inch or less.

Differential settlements result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Because of the general uniformity of the subsurface conditions and the recommended site preparation and earthwork construction techniques outlined in this report, we anticipate that differential settlements of the structure should be within tolerable limits (½ inch or less over a horizontal distance of 20 feet).

Concrete slab-on-grade (grade slab or ground floor slab), construction on this project is technically feasible. A concrete grade slab differs from a concrete structural slab in that the former fully relies on the underlying soils for structural support. The base soils beneath the slab-on-grade must be carefully selected and compacted so as to provide uniform and solid support beneath the slab section.

The placement and compaction of fill soils, above the current ground surface grades, will result in vertical deflections (settlements) of the underlying subsurface soils. As much as ¼ inch of area settlement may be anticipated for each 12 inches of granular compacted fill soil. We anticipate most of those settlements will occur during fill placement activities.

Bearing Capacity - The bearing capacity is the ability of the soil mass to carry load without failure, within the soil matrix. Bearing capacity failure occurs usually as a shear failure of the soil supporting the footing. Bearing capacity failures are usually sudden and catastrophic. Analytical techniques for soil bearing capacity estimation generally apply to sands, clays and silts. Foundation allowable bearing pressures and bearing elevations must be adjusted so as to provide appropriate margins of safety against bearing capacity failure.

Shallow foundations designed with allowable bearing capacities of 2,000 psf or less, and adequate depth of embedment, should provide satisfactory performance for a typical residential structure.

Geotechnical Recommendations

Basis for Recommendations: The recommendations provided below are based on the project information described in this Report, the available field test data, our evaluation as described in this Report and our past experience with foundation engineering in North Central Florida.

If project information, design concepts, foundation elevation, or building location change, we must be advised of these changes in writing, and must be provided with the opportunity to review our evaluation and recommendations as presented in this Report in light of the new project information.

Geotechnical Site Preparation:

1. Geotechnical site preparation should be initiated by clearing and grubbing the footprint of the proposed building and extending 10 feet outside the perimeters. Tree stumps, major root systems, trees/shrubs/low vegetation, and any buried structures should be removed in their entirety from beneath the proposed building construction area.

2. **Following site clearing and grubbing operations, all portions of the building pad with clay soils present which are above an elevation of 4 feet from expected base of foundation level should be undercut to that grade.** Sandy soils resulting from undercutting activities may be stockpiled for use as backfill material.

   Building footprint areas not requiring undercutting operations should be proof-rolled. This operation will serve to both proof-roll and compact the subgrade soils, and should be observed by the UES Geotechnical Engineer, or his representative. This surface proof-rolling will help locate any surficial zones of especially loose or soft soils not encountered in the soil test borings, and will help provide more uniformity in the sandy subsurface soil profile. Unusual or unanticipated conditions identified during this process will be addressed by the UES Geotechnical Engineer.

3. Weak or questionable surficial soils identified during proof-rolling/compaction operations should be excavated and removed from the project areas, and should be replaced with granular fill soils. Granular soils used for this purpose should meet the material and placement specifications outlined below.

4. Subgrade compaction operations should be run until an in-place soil density of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of 2 feet below the final subgrade, prior to building pad construction. If necessary to achieve the recommended soil compaction at depth, the entire project areas may be undercut 12 inches, the exposed subgrade soils compacted, and then the areas backfilled using 6-inch lifts to final subgrade elevation.

5. Compaction operations should extend to the limits of the cleared/grubbed project areas. Compaction of the existing, near-surface very loose and loose sandy soils will provide for uniformity of foundation/slab settlements, and improve the soils' bearing capacity conditions.

6. Due to the potential for stormwater and irrigation water to collect in foundation undercut zones; we recommend that appropriate positive drainage measures be implemented on this project. The Project Designer should consider the use of perimeter underdrains to help direct groundwater flow away from undercut zones beneath the building's foundation systems.

   Positive surface gradients of at least 2 percent should be designed and constructed away from the foundations for a minimum distance of 5 feet. The sand backfill should be topped with at least 6 inches of clayey sand within this surface gradient zone. Landscape areas which trap water adjacent to the foundations should be avoided.

Structural Fill Soil Placement:

1. Fill soils for building pad construction should consist of inorganic, non-plastic sand containing less than 10 percent material passing the number 200 sieve.

2. Fill soils should be placed with loose lift thicknesses of not more than 12 inches. The moisture content of the fill soils should be within 2% of the optimum moisture content based on ASTM D-1557.

3. Representative samples of the fill soils should be collected for classification and compaction testing. The maximum dry density, optimum moisture content, gradation, and plasticity should be determined. These tests are needed for quality control of the compacted fill.

4. Fill soils should be compacted to 95% of a modified Proctor maximum dry density. Density tests should be performed on compacted fill soils. A minimum of one test should be performed for each 2,500 square feet of fill area per lift of fill soils, with a minimum of three tests per lift.

5. UES geotechnical engineering personnel should be involved during all earthwork activities to verify that procedures and results are as recommended and as anticipated.

Shallow Foundation System:

1. A conventional shallow foundation system may be used for support of the proposed building

construction on this project with the understanding that some aesthetic cracking and other minor architectural type nuisance issues may occur during the useful life of the structure. Foundation loads should be transferred directly to prepared sandy soils as described above. Shallow foundation construction should start following the completion of all geotechnical site preparation and fill placement activities.

2. Shallow foundation systems may include strip (wall) footings, isolated footings beneath columns, thickened edge monolithic footing/slab, and floating grade slabs. The specific shallow foundation type(s) should be selected considering project structural constraints and installation costs, and this should be the Building Designer's decision.

3. It is our project experience in this area that clay soils with moderate to high potential for shrink/swell volume changes can be present at random locations in the near-surface soil profile. For this reason, we recommend that foundation design on this project incorporate an allowance for increased resistance to differential movement caused by volume changes of the underlying clays.

   If the proposed building frame can not tolerate the estimated magnitudes of differential settlements over a lateral distance of 20 feet, and/or the Owner desires to provide additional reduction of the potential effects of shrink/swell clays on the structure, we recommend the Building Designers consider the use of grade beam foundations, for support of load bearing walls on this project. The deeper concrete section, and top and bottom steel configuration of a typical grade beam foundation, should help mitigate differential settlement concerns. A modulus of subgrade reaction of 100 pounds per cubic inch (pci) may be used for grade beam foundation design.

4. Shallow foundations should bear directly and continuously on the prepared sandy soils, and should be designed with a maximum allowable bearing pressure of 2,000 psf or less.

5. Shallow foundations should be designed with a minimum depth of embedment (bottom of footing below adjacent exterior finished grade) of 1.5 feet.

6. In order to prevent localized shear failure of the bearing soils, individual and strip footings should have minimum footing widths of 24 and 18 inches, respectively. Even though the recommended average soil bearing pressure may not be achieved, these minimum width recommendations should control the size of the foundations.

7. The bottom of footing excavations should be compacted using a vibratory, walk-behind plate compactor, or jumping jack type compactor, to achieve 95% of ASTM D-1557 at a depth of 12 inches below the foundation bearing elevation.

8. If questionable soil bearing conditions are encountered while performing footing excavations, the UES Geotechnical Engineer should be contacted immediately. Footings that are excavated into the native clayey sands should be visually inspected and tested to verify the in-place density and condition of the subgrade bearing soils. These soils may require

stringent moisture control during compaction, particularly during rainy periods.

9. Foundation excavation bottoms should be level or suitably benched, and free of any loose soils that have been disturbed by seepage or the construction process. Loosened bearing soils should be recompacted prior to placement of reinforcing steel.

10. Footing excavations should be cut to final grade and footings constructed as soon as possible to minimize potential damage to bearing soils as result of exposure to the environment.

11. Shallow foundations may be cast directly against the exposed, vertical and horizontal, excavation faces. Shallow foundation construction should occur in the dry.

12. Excavations within compacted granular soils should be expected to remain vertical and stable while open only for short periods of time. Excavation collapse due to rainfall or other on-site activities should be repaired to design bearing level prior to reinforcing steel placement.

13. Exterior site grades should result in stormwater and surface water run-off flow away from the building exteriors, both during and after construction, to reduce the possibility of subsurface soil erosion beneath the exterior footings. Also, roof runoff should be directed to a gutter and down spout system with discharge collected into tight lines which discharge as far as practical from the foundation areas.

14. The UES Geotechnical Engineer, who is familiar with the foundation design and construction assumptions, as well as the intent of the geotechnical recommendations, should observe all shallow foundation excavation work, and be involved with the field geotechnical observations during construction.

Ground Floor Slab:

Slab-on-grade construction may be used on this project site with the understanding that some aesthetic cracking and other minor architectural type nuisance issues may occur during the useful life of the structure.

1. Ground floor slab construction should be scheduled as late as possible in the project so as to allow for any fill soil settlement that may occur. Slab-on-grade construction should occur in the dry. Construction joints should be provided at column and wall interfaces, and throughout the slab, so as to minimize the potential for slab cracking.

2. Fill soils placed *in the 12 inches directly* beneath grade slabs should consist of clean sand with less than 10% passing the number 200 sieve. Fill soils beneath grade slabs should be compacted to a minimum of 95% of modified proctor maximum dry density. Field density tests should be performed on fill soils so as to document the quality of the fill placement.

3. For monolithic slabs, the thickened edge section should have a minimum width of 12 inches and be embedded a minimum of 18 inches below adjacent exterior finished grade.

Report Limitations

This Report has been prepared for the exclusive use of Theodore R. Campbell, and other members of the design/construction team, for the specific project discussed in this Report. This Report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied.

If Universal Engineering Sciences is not afforded the opportunity to participate in construction related aspects of foundation installation as recommended in this Report, we cannot accept responsibility for the interpretation of the recommendations made in this Report or for foundation performance of the completed structure. The nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate our recommendations as provided in this Report.

Closure

If you have any questions concerning this Report or if we can be of further assistance, please contact our office. We look forward to the opportunity to assist you during the remaining design and construction phases of this project.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization Number 549

Jeffrey S. Pruett, P.E.
Regional Manager
Florida P.E. No. 50775

Eduardo Suarez, P.E.
Project Engineer
Florida P.E. No. 60272
Date: 9.20.06

JSP/ES:es (2)

Attachments: Boring Location Plan,
Boring Logs,
Key to Boring Logs
ASFE "Important Information About Your Geotechnical Engineering Report"

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	28491-001-02
REPORT NO.:	56974
PAGE:	A-2

PROJECT: CAMPBELL RESIDENCE
485 S.W. WINTHROP ROAD
FT. WHITE, COLUMBIA COUNTY, FLORIDA

BORING DESIGNATION: **B-1** SHEET: 1 of 1
SECTION: 16 TOWNSHIP: 6S RANGE: 16E

CLIENT: TED CAMPBELL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

GS ELEVATION(ft): NA
WATER TABLE (ft): NE
DATE OF READING: NA
EST. WSWT (ft):

DATE STARTED: 8/29/06
DATE FINISHED: 8/29/06
DRILLED BY: R. WOODARD
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Very loose brown and tan SAND [SP] (Fill)						
	X	1-1-1	2									
	X	1-1-2	3			Very loose tan...						
5	X	1-1-1	2			Very loose dark brown SAND, with silt [SP-SM]						
	X	1-1-1	2			Firm brown, orange and gray sandy CLAY [CL]						
	X	2-3-3	6									
10	X	4-5-5	10			Stiff...						
						Firm brown and tan CLAY, with trace of sand [CH]						
	X	1-2-3	5									
15						Boring Terminated at 15'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	28491-001-02
REPORT NO.:	56974
PAGE:	A-3

PROJECT: CAMPBELL RESIDENCE
485 S.W. WINTHROP ROAD
FT. WHITE, COLUMBIA COUNTY, FLORIDA

CLIENT: TED CAMPBELL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-2** SHEET: 1 of 1
SECTION: 16 TOWNSHIP: 6S RANGE: 16E

GS ELEVATION(ft): NA
WATER TABLE (ft): NE
DATE OF READING: NA
EST. WSWT (ft):

DATE STARTED: 8/29/06
DATE FINISHED: 8/29/06
DRILLED BY: R. WOODARD
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Very loose tan SAND [SP] (Fill)						
		1-2-2	4									
		1-2-1	3			Very loose dark brown SAND, with silt and roots [SP-SM]						
5		1-2-1	3			Very loose brown very clayey SAND [SC]						
		2-2-2	4			Firm gray and orange sandy CLAY [CL]						
		2-2-1	3			Soft gray and orange CLAY, with trace of sand [CH]						
10		2-2-3	5			Firm...						
15		1-2-3	5			Firm...						
						Boring Terminated at 15'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.: 28491-001-02
REPORT NO.: 56974
PAGE: A-4

PROJECT: CAMPBELL RESIDENCE
485 S.W. WINTHROP ROAD
FT. WHITE, COLUMBIA COUNTY, FLORIDA

CLIENT: TED CAMPBELL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-3** SHEET: 1 of 1
SECTION: 16 TOWNSHIP: 6S RANGE: 16E

GS ELEVATION(ft): NA
WATER TABLE (ft): NE
DATE OF READING: NA
EST. WSWT (ft):

DATE STARTED: 8/29/06
DATE FINISHED: 8/29/06
DRILLED BY: R. WOODARD
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Very loose light brown SAND [SP]						
		1-2-1	3			Very loose brown and orange clayey SAND [SC]						
		2-6-8	14			Medium dense gray and orange...						
5							29	13				
		6-8-8	16									
		7-6-5	11			Stiff gray and orange CLAY, with trace of sand [CH]	89	45	100	76		
		5-6-4	10									
		4-5-6	11			Stiff...	59	32	70	39		
10												
		2-3-4	7			Firm...						
15						Boring Terminated at 15'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	28491-001-02
REPORT NO.:	56974
PAGE:	A-5

PROJECT: CAMPBELL RESIDENCE
485 S.W. WINTHROP ROAD
FT. WHITE, COLUMBIA COUNTY, FLORIDA

CLIENT: TED CAMPBELL

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-4** SHEET: 1 of 1
SECTION: 16 TOWNSHIP: 6S RANGE: 16E

GS ELEVATION(ft): NA
WATER TABLE (ft): NE
DATE OF READING: NA
EST. WSWT (ft):

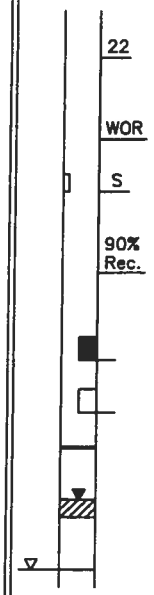
DATE STARTED: 8/29/06
DATE FINISHED: 8/29/06
DRILLED BY: R. WOODARD
TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0												
		1-1-0	1			Very loose light brown SAND [SP]						
		1-1-1	2			Loose brown, orange and gray clayey SAND [SC]						
5		1-2-3	5									
		2-2-3	5									
		3-4-2	6			Loose gray and orange clayey SAND, with lenses of clay [SC]						
10		3-4-6	10			Medium dense						
						Stiff gray and orange CLAY, with trace of sand [CH]						
15		2-3-3	6			Boring Terminated at 15'						

UNIVERSAL
ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS



22	Number of Blows of a 140–lb Weight Falling 30 in. Required to Drive Standard Spoon One Foot
WOR	Weight of Drill Rods
S	Thin–Wall Shelby Tube Undisturbed Sampler Used
90% Rec.	Percent Core Recovery from Rock Core–Drilling Operations
	Sample Taken at this Level
	Sample Not Taken at this Level
	Change in Soil Strata
	Free Ground Water Level
	Seasonal High Ground Water Level

RELATIVE DENSITY
(sand-silt)

Very loose – Less Than 4 Blows/Ft.
Loose – 4 to 10 Blows/Ft.
Medium Dense – 10 to 30 Blows/Ft.
Dense – 30 to 50 Blows/Ft.
Very Dense – More Than 50 Blows/Ft.

CONSISTANCY
(clay)

Very Soft – Less Than 2 Blows/Ft.
Soft – 2 to 4 Blows/Ft.
Firm – 4 to 8 Blows/Ft.
Stiff – 8 to 15 Blows/Ft.
Very Stiff – 15 to 30 Blows/Ft.
Hard – More Than 30 Blows/Ft.

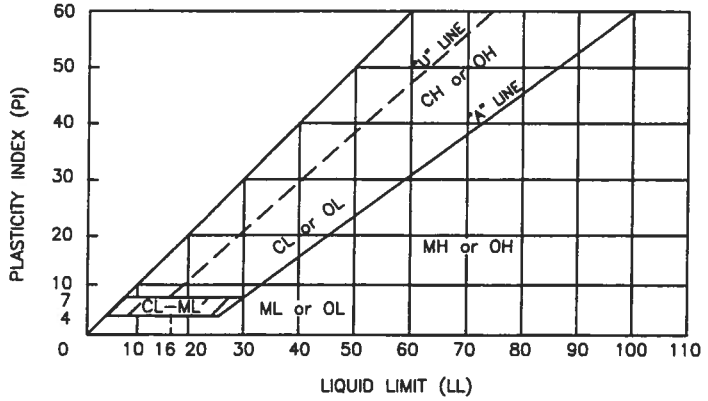
Based on Safety Hammer N–Values

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 200 sieve	CLEAN GRAVELS	GW	Well–graded gravels and gravel–sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel–sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel–sand–silt mixtures
			GC	Clayey gravels, gravel–sand–clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well–graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand–silt mixtures
			SC	Clayey sands, sand–clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomacaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly organic Soils			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3–in. (75mm) sieve.

PLASTICITY CHART



Important Information About Your Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely, on Your ASFE-Member Geotechncial Engineer for Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

IIGER06045.0M

COLUMBIA COUNTY BUILDING DEPARTMENT

Revised 10-01-05

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2004 and FLORIDA RESIDENTIAL CODE 2004 WITH AMENDMENTS ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE OCTOBER 1, 2005

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 16 OF THE FLORIDA BUILDING CODE 2004 BY PROVIDING CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS. FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEED AS PER FIGURE 1609 SHALL BE USED.

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

1. ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE ------- 100 MPH
2. ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE -------110 MPH
3. NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS; Two (2) complete sets of plans containing the following:

Applicant	Plans Examiner	
☑	☐	All drawings must be clear, concise and drawn to scale ("Optional " details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.
☑	☐	Designers name and signature on document (FBC 106.1). If licensed architect or engineer, official seal shall be affixed.
☑	☐	**Site Plan including:** a) Dimensions of lot b) Dimensions of building set backs c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements. d) Provide a full legal description of property.
☑	☐	**Wind-load Engineering Summary, calculations and any details required** Plans or specifications must state compliance with FBC Section 1609. The following information must be shown as per section 1603.1.4 FBC a. Basic wind speed (3-second gust), miles per hour (km/hr). b. Wind importance factor, Iw, and building classification from Table 1604.5 or Table 6-1, ASCE 7 and building classification in Table 1-1, ASCE 7. c. Wind exposure, if more than one wind exposure is utilized, the wind exposure and applicable wind direction shall be indicated. d. The applicable enclosure classifications and, if designed with ASCE 7, internal pressure coefficient. e. Components and Cladding. The design wind pressures in terms of psf (kN/m^2) to be used for the design of exterior component and cladding materials not specifally designed by the registered design professional.
		Elevations including:
☑	☐	a) All sides
☑	☐	b) Roof pitch
☑	☐	c) Overhang dimensions and detail with attic ventilation

☐ ☐ d) Location, size and height above roof of chimneys.
☑ ☐ e) Location and size of skylights
☑ ☐ f) Building height
☑ ☐ e) Number of stories

Floor Plan including:

☑ ☐ a) Rooms labeled and dimensioned.
☑ ☐ b) Shear walls identified.
☑ ☐ c) Show product approval specification as required by Fla. Statute 553.842 and Fla. Administrative Code 9B-72 **(see attach forms).**
☑ ☐ d) Show safety glazing of glass, where required by code.
☑ ☐ e) Identify egress windows in bedrooms, and size.
☐ ☐ f) Fireplace (gas vented), (gas non-vented) or wood burning with hearth, **(Please circle applicable type).**
☐ ☐ g) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails.
☐ ☐ h) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

☑ ☐ a) Location of all load-bearing wall with required footings indicated as standard or monolithic and dimensions and reinforcing.
☑ ☐ b) All posts and/or column footing including size and reinforcing
☐ ☐ c) Any special support required by soil analysis such as piling
☑ ☐ d) Location of any vertical steel.

Roof System:

☑ ☐ a) Truss package including:
1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
2. Roof assembly (FBC 106.1.1.2)Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

☐ ☐ b) Conventional Framing Layout including:
1. Rafter size, species and spacing
2. Attachment to wall and uplift
3. Ridge beam sized and valley framing and support details
4. Roof assembly (FBC 106.1.1.2)Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

☑ ☐ a) Masonry wall
1. All materials making up wall
2. Block size and mortar type with size and spacing of reinforcement
3. Lintel, tie-beam sizes and reinforcement
4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation shall be designed by a Windload engineer using the engineered roof truss plans.
6. Roof assembly shown here or on roof system detail (FBC 106.1.1.2) Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
7. Fire resistant construction (if required)
8. Fireproofing requirements
9. Shoe type of termite treatment (termiticide or alternative method)
10. Slab on grade
    a. Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)
    b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
11. Indicate where pressure treated wood will be placed
12. Provide insulation R value for the following:

a. Attic space
b. Exterior wall cavity
c. Crawl space (if applicable)

☑ ☐ b) Wood frame wall

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers) shall be designed by a Windload engineer using the engineered roof truss plans.
7. Roof assembly shown here or on roof system detail (FBC 106.1.1.2) Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termiticide or alternative method)
11. Slab on grade
    a. Vapor retarder (6Mil. Polyethylene with joints lapped 6 inches and sealed
    b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ ☐ c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

☐ ☐ a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer

☐ ☐ b) Floor joist size and spacing

☐ ☐ c) Girder size and spacing

☐ ☐ d) Attachment of joist to girder

☐ ☐ e) Wind load requirements where applicable

☐ ☐ **Plumbing Fixture layout**

Electrical layout including:

☑ ☐ a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified

☑ ☐ b) Ceiling fans

☑ ☐ c) Smoke detectors

☑ ☐ d) Service panel and sub-panel size and location(s)

☐ ☐ e) Meter location with type of service entrance (overhead or underground)

☐ ☐ f) Appliances and HVAC equipment

☐ ☐ g) Arc Fault Circuits (AFCI) in bedrooms

☐ ☐ h) Exhaust fans in bathroom

HVAC information

☑ ☐ a) Energy Calculations (dimensions shall match plans)

☑ ☐ b) Manual J sizing equipment or equivalent computation

☐ ☐ c)Gas System Type (LP or Natural) Location and BTU demand of equipment

☐ ☐ **Disclosure Statement for Owner Builders**

☐ ☐ ***Notice Of Commencement Required Before Any Inspections Will Be Done**

☐ ☐ **Private Potable Water**

a) Size of pump motor
b) Size of pressure tank
c) Cycle stop valve if used

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

1. **Building Permit Application:** A current Building Permit Application form is to be completed and submitted for all residential projects.

2. **Parcel Number:** The parcel number (Tax ID number) from the Property Appraiser (386) 758-1084 is required. A copy of property deed is also requested.

3. **Environmental Health Permit or Sewer Tap Approval:** A copy of the Environmental Health permit, existing septic approval or sewer tap approval is required before a building permit can be issued. (386) 758-1058 **(Toilet facilities shall be provided for construction workers)**

4. **City Approval:** **If the project is to be located within the city limits of the Town of Fort White**, prior approval is required. The Town of Fort White approval letter is required to be submitted by the owner or contractor to this office when applying for a Building Permit. **(386) 497-2321**

5. **Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.8 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.7 of the Columbia County Land Development Regulations. **CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.**
   A development permit will also be required. Development permit cost is **$50.00**

6. **Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit **($25.00)** must be made. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver **($50.00)**. All culvert waivers are sent to the Columbia County Public Works Department for approval or denial. **If the project is to be located on a F.D.O.T. maintained road, than an F.D.O.T. access permit is required.**

7. **911 Address:** If the project is located in an area where the 911 address has been issued, then the proper paperwork from the 911 Addressing Department must be submitted. (386) 752-8787

ALL REQUIRED INFORMATION IS TO BE SUBMITTED FOR REVIEW. YOU WILL BE NOTIFIED WHEN YOUR APPLICATION AND PLANS ARE APPROVED AND READY TO PERMIT. PLEASE DO NOT EXPECT OR REQUEST THAT PERMIT APPLICATIONS BE REVIEWED OR APPROVED WHILE YOU ARE HERE – TIME WILL NOT ALLOW THIS –PLEASE DO NOT ASK

PRODUCT APPROVAL SPECIFICATION SHEET

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING			
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG			
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING			
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES			
B. NON-STRUCT METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS			
B. WOOD ANCHORS			
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR ENVELOPE PRODUCTS			
A.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements. Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

APPLICANT SIGNATURE

DATE

R-1305 01-04

Columbia County 9-1-1 Addressing / GIS Department
P.O. Box 1787, Lake City, FL 32056
Telephone: (386) 758-1125 * Fax: (386) 758-1365 * E-mail: ron_croft@columbiacountyfla.com

9-1-1 Address Request Form

NOTE: ADDRESS ASSIGNMENT MAY REQUIRE UP TO 10 WORKING DAYS. IF THE ADDRESSING DEPARTMENT NEEDS TO CONDUCT ON SITE GPS LOCATION IDENTIFICATION, ADDITIONAL TIME MAY BE REQUIRED.

Date of Request: _____

Requester Last Name: _____

First Name: _____

Contact Telephone Number: _____

(Cell Phone Number if Provided): _____

Requested for Self: _____ or Requested for Company: _____
(check one)
If Address is Requested by a Company, Provide Name of Requesting Company:

_____

Parcel Identification Number: ____ - ____ - ____ - ____

If in Subdivision, Provide Name Of Subdivision:

_____

Phase or Unit Number (if any): _____ Block Number (if any): _____

Lot Number: _____

Attach Site Plan or you may use back of Request Form for Site Plan:

Requirements for Site Plan Are Listed on Back of Request From:
(NOTE: Site Plan Does NOT have to be a survey or to scale; FURTHER a Environmental Health Dept. Site Plan showing only a 210 by 210 cutout of a property will NOT suffice for Addressing Requirements.)

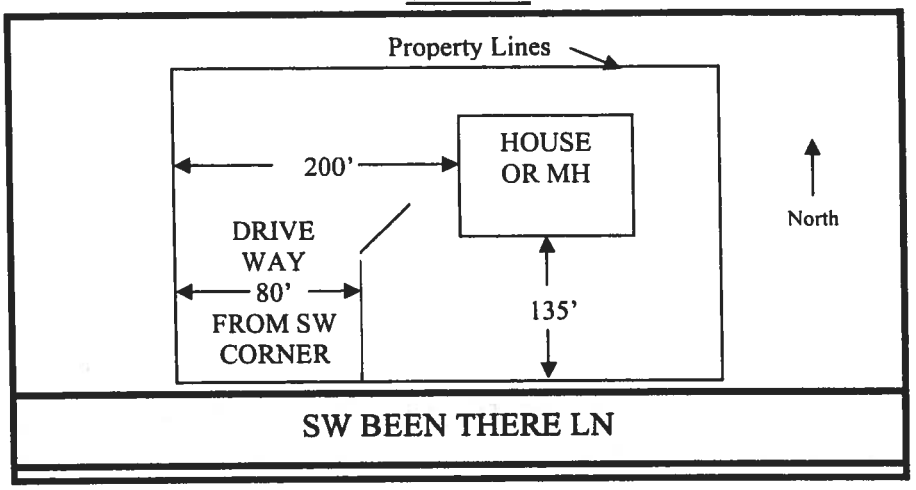
Addressing / GIS Department Use Only:

Date Received: _____ Date Assigned: _____

ID Number: _____

1. A PLAT, PLAN, OR DRAWING SHOWING THE PROPERTY LINES OF THE PARCEL.
2. LOCATION OF PLANNED RESIDENT OR BUSINESS STRUCTURE ON THE PROPERTY WITH DISTANCES FROM AT LEAST TWO OF THE PROPERTY LINES TO THE STRUCTURE (SEE SAMPLE BELOW).
3. LOCATION OF THE ACCESS POINT (DRIVEWAY, ETC.) ON THE ROADWAY FROM WHICH LOCATION IS TO BE ADDRESSED WITH A DISTANCE FROM A PARALLEL PROPERTY LINE AND OR PROPERTY CORNER (SEE SAMPLE BELOW).
4. TRAVEL OF THE DRIVEWAY FROM THE ACCESS POINT TO THE STRUCTURE (SEE SAMPLE BELOW).

SAMPLE:



SITE PLAN BOX:

UNIV
ENGINEER
Consultants in: G
Construction Mate

Mr. Theodore R. Campb
P.O. Box 20486
West Palm Beach, FL 3

Reference: **Report o**
Proposed
Spring Hi
485 SW
Ft. White
UES Proj

Dear Mr. Campbell:

Universal Engineering
evaluation for the prop
performed in accordance
dated August 29, 2006.

This Report contains the
and our recommendation

Objectives

The objectives of our
conditions beneath the ar
anticipated structural lo
building site preparation

Project Information

The project parcel is loca
road 47 and County Roac
is identified as Lot 48, ar
.
Our office was not provi
other than that discussed
our conclusions and reco
to review all pertinent is

We understand that the
residence. We have assur
will be used for this proj