Columbia County Building Permit Application APPLICANT #2 Revised 9-23-04

For Office Use Only Application # 0603-04 Date Received 3/1/06 By JW Permit # 24297

Application Approved by - Zoning Official BLK Date 09.03.06 Plans Examiner OK JTH Date 3-17-06

Flood Zone X Per PLAT Development Permit N/A Zoning PRRD Land Use Plan Map Category A-3

Comments JOE PLEASE SEE DETACH GARAGE ON BLUEPRINTS* LAST 2 PAGES
* SEE JW - for briefing: - NOC -

Applicants Name JAMES A. BEACH Phone 386-719-6630 CELL# 561-371-0996

Address 3889 N.W. ARCHER ST APT#101 LAKE CITY, FLA. 32055

Owners Name JAMES + SALLY BEACH Phone 386-719-6630

911 Address 479 S.W. HILL CREEK DR. LAKE CITY, FLA. 32025

Contractors Name JAMES A. BEACH Phone 386-719-6630

Address 3889 N.W. ARCHER ST. APT #101 LAKE CITY FLA. 32055

Fee Simple Owner Name & Address

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address WAYLAND STRUCT. ENGINEERING 8200 SW 16th PLACE GAINESVILLE, FLA 32607

Mortgage Lenders Name & Address N/A

Circle the correct power company – Fl. Power & Light – (Clay Elec.) – Suwannee Valley Elec. – Progressive Energy

Property ID Number 05-5S-17-09116-133 Estimated Cost of Construction 35,000.

Subdivision Name HILLS AT ROSE CREEK Lot 33 Block ____ Unit ____ Phase ____

Driving Directions 41-SOUTH TURN ON TO TUSTENUGGEE, TURN LEFT ON HILL CREEK DR. 1/4 MILE ON LEFT

Type of Construction DETACHED GARAGE Number of Existing Dwellings on Property 0

Total Acreage 1.89 Lot Size 1.35 Do you need a Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 217' Side 26 Side 50 Rear 26

Total Building Height 19' Number of Stories 1 Heated Floor Area 800 sq FT Roof Pitch 5/12

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.

James A. Beach
Owner Builder or Agent (Including Contractor)

Contractor Signature
Contractors License Number
Competency Card Number
NOTARY STAMP/SEAL

GALE TEDDER
MY COMMISSION # DD 283586
EXPIRES
Bonded Thru Notary Public Underwriters

STATE OF FLORIDA
COUNTY OF COLUMBIA

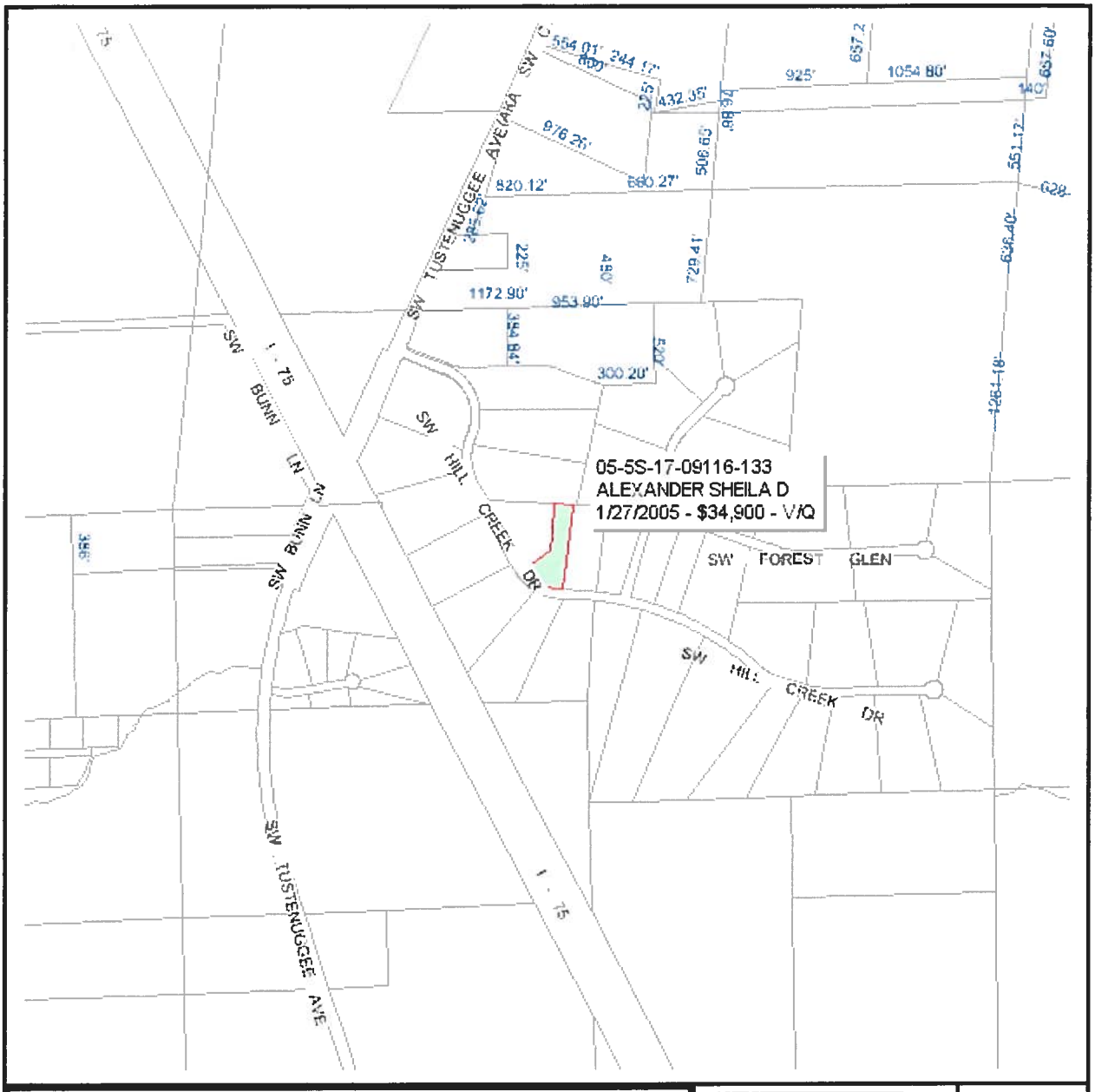
Sworn to (or affirmed) and subscribed before me

this 1st day of March 2006.

Personally known____ or Produced Identification DL

Gale Tedder
Notary Signature

CK#



Columbia County Property Appraiser

J. Doyle Crews, CFA - Lake City, Florida - 386-758-1083

PARCEL: 05-5S-17-09116-133 - VACANT (000000)

LOT 33 HILLS AT ROSE CREEK S/D PHASE 3. WD 1036-2426, WD 1036-2426, WD 1054-650.

Name:	BEACH JAMES A & SALLY F	LandVal	$30,000.00
Site:		BldgVal	$0.00
Mail:	4783 WAVERLY WOODS TER LAKE WORTH, FL 33487	ApprVal	$30,000.00
		JustVal	$30,000.00
Sales	7/27/2005 $55,000.00 V / Q	Assd	$30,000.00
Info	1/27/2005 $34,900.00 V / Q	Exmpt	$0.00
		Taxable	$30,000.00

This information, GIS Map Updated: 8/3/2005, was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

'T, A CHORD BEARING OF N21°17'14"W. AND A CHORD LENGTH OF 433.91
OF 485.05 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE
IRVATURE OF A CURVE TO THE LEFT, HAVING: A RADIUS OF 25.00 FEET,
ET, A CHORD BEARING OF S.67°23'39"W. AND A CHORD LENGTH OF 35.36
OF 39.27 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE
'VATURE OF A CURVE TO THE LEFT, HAVING: A RADIUS OF 25.00 FEET, A
, A CHORD BEARING OF S.22°36'21"E. AND A CHORD LENGTH OF 35.36
OF 39.27 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE
RVATURE OF A CURVE TO THE RIGHT, HAVING: A RADIUS OF 360.00 FEET,
FEET, A CHORD BEARING OF S.21°17'14"E. AND A CHORD LENGTH OF 520.70
OF 582.06 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE
IGLE OF 51°57'20", A TANGENT LENGTH OF 146.18 FEET, A CHORD BEARING
ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 272.04 FEET TO
A DISTANCE OF 638.84 FEET TO THE POINT OF CURVATURE OF A
TRAL ANGLE OF 62°01'15", A TANGENT LENGTH OF 180.33 FEET, A CHORD
; THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 324.74
THE RIGHT, HAVING: A RADIUS OF 1930.00 FEET, A CENTRAL ANGLE OF
G OF S.85°50'24"E. AND A CHORD LENGTH OF 209.08 FEET; THENCE ALONG
HE END OF SAID CURVE; THENCE CONTINUE ALONG SAID CURVE HAVING:
TANGENT LENGTH OF 71.33 FEET, A CHORD BEARING OF S.80°37'06"E. AND
SAID CURVE, AN ARC LENGTH OF 142.59 FEET TO THE POINT OF REVERSE
'5.00 FEET, A CENTRAL ANGLE OF 83°24'09", A TANGENT LENGTH OF 22.28
OF 33.26 FEET, THENCE ALONG THE ARC OF SAID CURVE, AN ARC
URVE, THENCE N18°05'44"E, A DISTANCE OF 570.81 FEET, THENCE
, A DISTANCE OF 802.59 FEET TO THE POINT OF BEGINNING. COLUMBIA

KEY MAP

NOT TO SCALE

SUBJECT PROPERTY

'CE WITH THE RETRACEMENT OF
IVIDED BY CLIENT
5'27"W., FOR THE NORTHERLY

MAY BE SUBJECT TO FLOODING
INED FOR ZONE 'A' SOME PORTIONS
TO BE OUTSIDE THE 500 YEAR FLOOD
N. 1988 COMMUNITY PANEL NO. 120070
SUBJECT TO CHANGE.

IR UTILITIES WERE LOCATED FOR

A TITLE COMMITMENT OR A TITLE

ROAD FRONT OF EACH LOT AND (7.5') SEVEN
INES ARE HEREBY CREATED AND PROVIDED FOR
AND UNDERGROUND UTILITIES AND DRAINAGE
BUILDING SITE, ONLY THE OUTSIDE BOUNDARY
SEMENT.
RECORDED ON THIS PLAT THAT MAY
Y
S OF THE MINIMUM TECHNICAL STANDARDS

S APPROVED ON JULY 02, 2003.

FLOOD NOTICE:

THE FOLLOWING LOTS ARE AFFECTED BY THE 100 YEAR FLOOD ELEVATION

THE 100 YEAR FLOOD ELEVATION IS 86.50 FEET FOR LOTS: 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, AND 16

THE 100 YEAR FLOOD ELEVATION IS 108.50 FEET FOR LOTS: 27 AND 28

THE 100 YEAR FLOOD ELEVATION IS 105.50 FEET FOR LOT 22 AND 23

NOTICE:
THIS PLAT AS RECORDED IN ITS GRAPHICAL FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY OTHER GRAPHICAL OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

*ASEMENTS SHALL ALSO BE FOR THE CONSTRUCTION,
SION SERVICES; PROVIDED, HOWEVER, NO SUCH
F CABLE TELEVISION SERVICES SHALL INTERFERE
GAS OR OTHER PUBLIC UTILITY. IN THE EVENT THAT
PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE*

DEVELOPE
A BAR S LAND AN
CATTLE COMPANY
386-752-5035
3814 S. 1st STREE
LAKE CITY, FL 320

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

( ) Single Family Dwelling
( ) Two-Family Residence
( ) Farm Outbuilding
(X) Other DETACHED GARAGE
(X) New Construction · SFD.
( ) Addition, Alteration, Modification or other Improvement

NEW CONSTRUCTION OR IMPROVEMENT

I James Beach, 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_____

James A. Beach — 3/1/2006

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 3/1/06 Building Official/Representative David Lemmon

STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 06-0021N

PART II - SITE PLAN

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

See attached

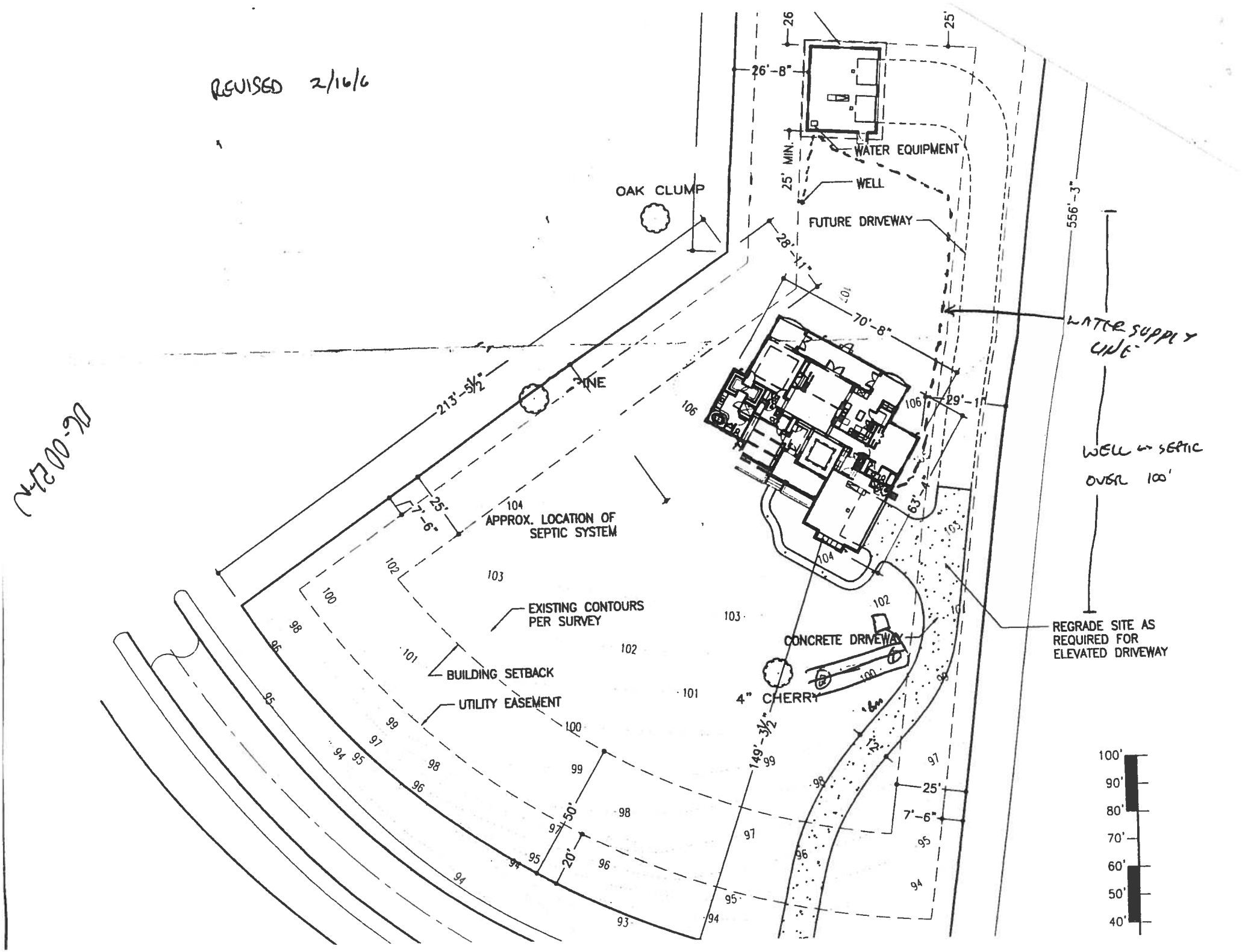
Notes: _____

Site Plan submitted by: James A. Beach (Signature) Owner (Title)

Plan Approved _____ Not Approved _____ Date 1/9/2006

By Mark S Davis County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT.


REVISED 2/16/6
N-7-00-20
26'-8"
25'
26
25' MIN.
WATER EQUIPMENT
WELL
OAK CLUMP
FUTURE DRIVEWAY
28'-11"
556'-3"
WATER SUPPLY LINE
70'-8"
213'-5½"
PINE
106
29'-1"
WELL & SEPTIC OVER 100'
63'-4"
25'
7'-6"
104
APPROX. LOCATION OF SEPTIC SYSTEM
103
EXISTING CONTOURS PER SURVEY
102
100
98
96
101
BUILDING SETBACK
UTILITY EASEMENT
95
99
97
94
CONCRETE DRIVEWAY
4" CHERRY
149'-3½"
REGRADE SITE AS REQUIRED FOR ELEVATED DRIVEWAY
50'
20'
93
25'
7'-6"
100'
90'
80'
70'
60'
50'
40'

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 05-5S-17-09116-133 PERMIT NUMBER 000024957

1. Description of property: (legal description of the property and street address or 911 address)
Sub Division Hills @ Rose Creek, Lot #33, Phase 3
Has Plat Book 7, Page 194-197 Public Records of Columbia Co. Fla.
479 SW Hill Creek Dr Lake City, Fla. 32025

2. General description of improvement: Construct Detatchen Garage

3. Owner Name & Address James + Sally Beach 3889 NW Archer St Apt #101
Lake City, Fla 32055 Interest in Property OWNER

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

5. Contractor Name Phone Number
Address

6. Surety Holders Name
Address
Amount of Bond

Inst:2006008546 Date:04/06/2006 Time:15:24
DC,P.DeWitt Cason,Columbia County B:1079 P:2583

7. Lender Name Phone Number
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 JAMES A. BEACH Phone Number 561-371-0996
Address 3889 NW Archer St. Apt #101 Lake City, Fla. 32055

9. In addition to himself/herself the owner designates N/A 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 day of April 6, 2006
Produced FL ID

James A. Beach
Signature of Owner

NOTARY STAMP/SEAL
ROSE ANN AIELLO
MY COMMISSION # DD397594
EXPIRES: February 17, 2009
FL Notary Discount Assoc. Co.

Rose Ann Aiello
Signature of Notary Rose Ann Aiello

CERTIFICATE OF OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 05-5S-17-09116-133 **Building permit No.** 000024257

Use Classification DETACHED GARAGE **Fire:** 0.00

Permit Holder JAMES A. BEACH **Waste:** 0.00

Owner of Building JAMES A. BEACH **Total:** 0.00

Location: 479 SW HILL CREEK DRIVE

Date: 12/18/2006

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

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

Reference to a building permit application Number: 0603-03

James Beach Owner/Builder lot 33 of Hills at Rose Creek

On the date of March 9, 2006 application 0603-03 and plans for construction of a single family dwelling were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

Please include application number 0603-03 when making reference to this application.

1. The Structural design of the dwelling by Wayland Structural Engineering assumes that the allowable soil bearing pressure for the supporting foundation will be 2,000 pounds per square foot. 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.
2. Please confirm that the window (W002) in the bathroom will meet the requirements of the FRC-2004 section R308.4 Hazardous locations: Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and

showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface.

3. Please provide the header beam or the masonry lintel that will be used to span the 18' garage opening and show the attachment method to the foundation of the supports members.

4. In the garage area show the requirements as set forth is the FRC-2004 sections R309 garage and carports :

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

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

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

supporting the separation shall also be protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

The attic access (Pull down stairs) will also be required to meet the code requirements of section R309.2.

5. On the elevation drawing provide the total height of the structure from the existing grade to the roof highest ridge line.

6. Overcurrent protection 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.

Thank you,

Joe Haltiwanger
Plan Examiner
Columbia County Building Department

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

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

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

March 16, 2006

Jim Beach
3889 N.W. Archer Street, Apt. 101
Lake City, Florida 32055

Reference: Proposed Residence and Garage
479 S.W. Hill Creek Drive
Lake City, Columbia County, Florida
Cal-Tech Project No. 06-153

Dear Mr. Beach,

Cal-Tech Testing, Inc. has completed the subsurface investigation and engineering evaluation of the sites for a residence and detached garage to be constructed at the referenced address in Columbia County, Florida. Our work was performed in conjunction with and authorized by you.

We were provided a site plan and understand the residence and garage will be single-story and of masonry block construction. Support for the residence is to be provided by conventional, shallow spread footings. The garage will be supported by a monolithic foundation. Anticipated foundation loads were not provided; however, we assume column and wall loads for the residence will not exceed 25 kips and 2 kips per foot, respectively. Wall loads for the garage are assumed not to exceed 1 kip per foot.

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

Site Investigation

The building sites were investigated by performing six (6) Standard Penetration Test borings advanced to depths of 10.0 feet. Borings were performed at the approximate locations indicated on the attached Boring Location Plan. Boring locations were selected by our firm, and the building areas were staked on site.

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

Findings

The soil borings generally encountered four soil strata. The first layer consists of 1.0 to 2.5 feet of loose, generally dark gray, dark brownish gray or dark gray and brown, silty sand (SM) and sand with silt (SP/SM). The N-values of this layer are on the order of 6 to 8 blows per foot.

The second layer consists of 3.0 to 9.0 or more feet of loose to dense, generally gray, orange, red and/or tan, clayey sand (SC) and sand with clay (SP/SC). The N-values of this layer range from 5 to 42 blows per foot.

The third layer consists of 1.5 to 4.5 or more feet of very stiff, generally gray, tan, orange and/or brown, sandy clay (CH). The N-values of this layer range from 18 to 27 blows per foot.

The fourth layer consists of an undetermined thickness of medium dense, gray, tan, orange and brown, clayey sand (SC). The N-values of this layer are on the order of 25 to 27 blows per foot.

Groundwater was not encountered at the time of our investigation, and we estimate the wet season water table will occur at a depth of more than 6.0 feet below the existing surface grade. Note however that storm water will temporarily perch on clayey soils encountered near the ground surface.

For a more detailed description of the subsurface conditions encountered, please refer to the attached Boring Logs.

Discussion

We have performed a bearing capacity analysis for the immediate bearing soils and have assumed the foundations will have a minimum width of 20 inches and be embedded a minimum of 16 inches. For this foundation and the site soils as encountered, we obtained an minimum allowable bearing capacity of 2,000 pounds per square foot with a factor of safety of about 1.7 against a bearing capacity failure. It is therefore our opinion the subgrade soils within the proposed building areas are suitable for shallow foundations and/or monolithic foundations and an allowable bearing pressure of 2,000 pounds per square foot.

Based upon our findings, we recommend only normal, good practice site preparation procedures. These procedures include stripping the building areas to remove organics, particularly stumps, and proof-rolling to locate zones of loose soils than may be present. Bearing soils should be proof-compacted to a minimum of 95% of the Modified Proctor maximum dry density to a depth of at least 2 feet in foundation areas and 1 foot in floor slab areas.

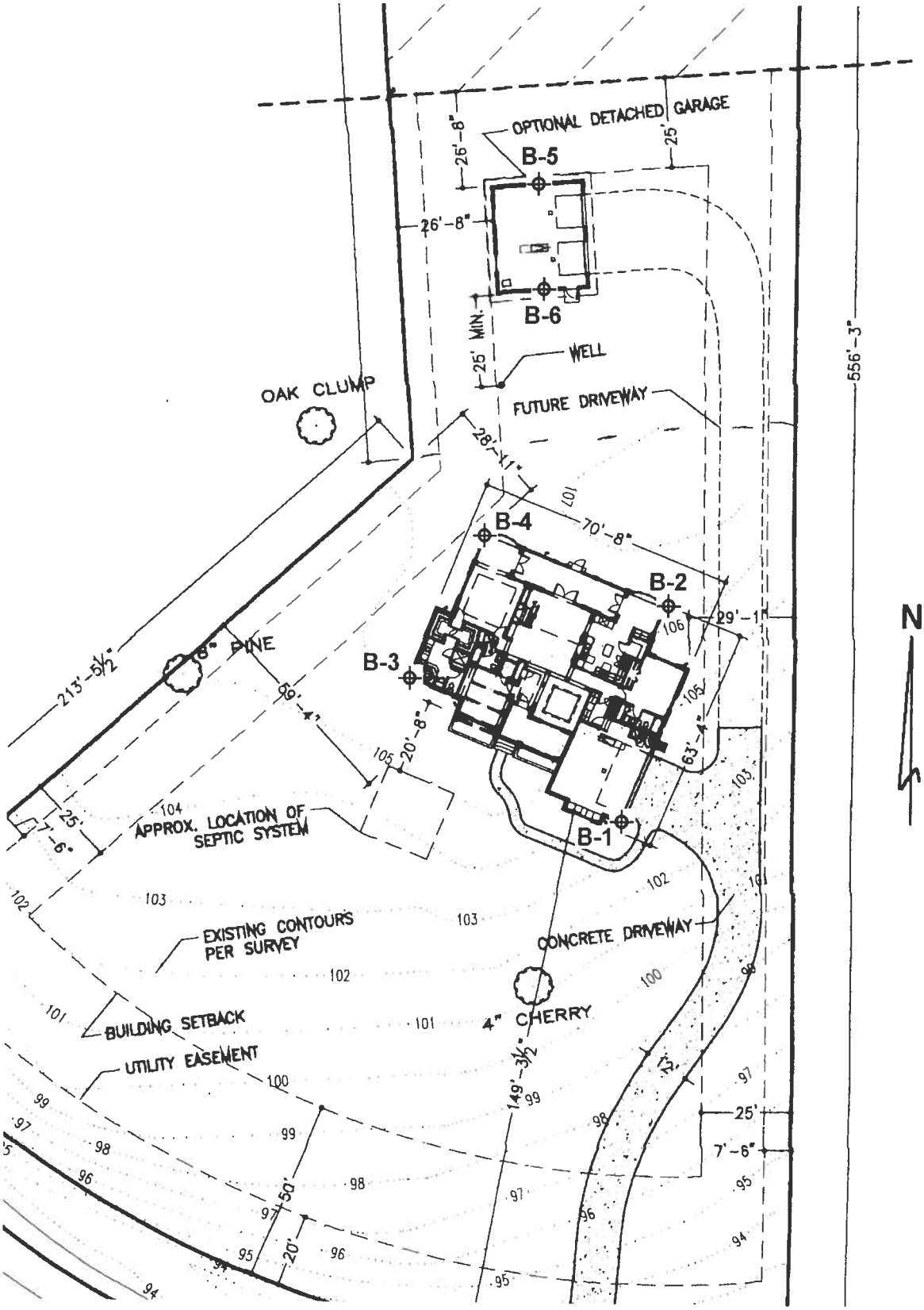
Our evaluation is based upon the subsurface conditions encountered and as presented within this report. However, subsurface conditions may exist that differ from our findings. We request that we be notified if substantially different subsurface conditions are encountered.

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

Respectfully submitted,
Cal-Tech Testing, Inc.

Linda Creamer
President / CEO

John C. Dorman, Jr., Ph.D., P.E.
Geotechnical Engineer
3/16/06
52612



Boring Location Plan: Proposed Beach Residence

B-1

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Brownish Gray, SILTY SAND (SM)
	7	Loose, Dark Grayish Tan, SLIGHTLY CLAYEY SAND (SC)
	12	Medium Dense, Tannish Gray and Orange, VERY CLAYEY SAND (SC)
5	18	Medium Dense, Gray, Tan and Orange, CLAYEY SAND (SC)
	24	Medium Dense, Gray and Light Orange, SLIGHTLY CLAYEY SAND,
	27	Trace Limerock (SC)
	27	Medium Dense, Tannish Gray, Orange and Brown, CLAYEY SAND (SC)
10		

B-2

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Gray and Brown, SILTY SAND (SM)
	6	Loose, Gray and Dark Tan, SILTY SAND (SM)
	6	Loose, Gray, Orange and Red, VERY CLAYEY SAND (SC)
5	31	Dense, Gray, Orange and Tan, CLAYEY SAND (SC)
	41	
	33	Dense, Gray and Tannish Orange, CLAYEY SAND (SC)
	18	Very Stiff, Greenish Gray CLAY (CH)
10		

B-3

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Brownish Gray, SILTY SAND (SM)
	8	Loose, Grayish Tan and Orange SAND with SILT (SP/SM)
	5	Loose, Dark Tannish Gray, CLAYEY SAND (SC)
5	19	Medium Dense, Gray and Orange, CLAYEY SAND (SC)
	32	Dense, Dark Gray, Light Gray and Tan, CLAYEY SAND (SC)
	42	Dense, Tan and Gray, SLIGHTLY CLAYEY SAND (SC)
	33	Dense, Tannish Gray SAND with CLAY (SP/SC)
10		

B-4

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Grayish Brown, SILTY SAND (SM)
	8	Loose, Dark Tannish Gray, SILTY SAND, Trace Clay (SM)
	20	Medium Dense, Dark Grayish Brown, CLAYEY SAND (SC)
5	27	Medium Dense, Dark brownish Gray, Light Gray and Orange, VERY CLAYEY SAND (SC)
	23	
	26	Very Stiff, Gray and Orange CLAY with SAND (CH)
	23	Very Stiff, Greenish Gray CLAY (CH)
10		

B-5

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Brownish Gray, SILTY SAND (SM)
	8	Loose, Dark Grayish Tan, CLAYEY SAND (SC)
	14	Medium Dense, Dark Grayish Tan, VERY CLAYEY SAND (SC)
5	15	
	16	Very Stiff, Gray, Dark Tan and Orange, SANDY CLAY (CH)
	27	Very Stiff, Gray and Orange CLAY (CH)
	25	Medium Dense, Grayish Tan and Light Gray, VERY CLAYEY SAND (SC)
10		

B-6

Water Table: N/A

Depth (ft)	N-value	Soil Description
0		Dark Gray, SILTY SAND (SM)
	7	Loose, Dark Grayish Tan, VERY CLAYEY SAND (SC)
	11	Medium Dense, Gray, Dark Tan and Orange, CLAYEY SAND (SC)
5	11	Medium Dense, Gray, Orange and Dark Brown, VERY CLAYEY SAND (SC)
	22	Very Stiff, Gray and Dark Brown, SANDY CLAY (CH)
	25	Medium Dense, Gray, Tan, Orange and Brown, CLAYEY SAND (SC)
	27	
10		

Boring Logs: Proposed Beach Residence

ocation: 4175W MILL CREEK DR. Project Name: PEACH RESIDENCE

s required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the oduct approval number(s) on the building components listed below if they will be utilized on the construction project for hich you are applying for a building permit on or after April 1, 2004. We recommend you contact your local produc pplier should you not know the product approval number for any of the applicable listed products. More information bout statewide product approval can be obtained at www.floridabuilding.org

ategory/Subcategory	Manufacturer	Product Description	Approval Number(s
. EXTERIOR DOORS			
1. Swinging	MASONITE INT.	EXTERIOR FRONT DOOR	FL 4068
2. Sliding			
3. Sectional	Clopay Bld. P.	SECTIONAL GARAGE DOOR	FL 3026
4. Roll up			
5. Automatic			
6. Other			
. WINDOWS			
1. Single hung	MI WINDOWS	CAPITOL LOW E FLANGE	FL 5438
2. Horizontal Slider			
3. Casement			
4. Double Hung			
5. Fixed			
6. Awning			
7. Pass -through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11 Dual Action			
12. Other			
. PANEL WALL			
1. Siding			
2. Soffits			
3. EIFS	KAYCAN LTD	SOFFITS	FL 4899
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block	HY LITE PROD.	GLASS BLOCK	FL 2025
8. Membrane	Glass Block W.	GLASS BLOCK	FL 4018
9. Greenhouse			
10. Other			
. ROOFING PRODUCTS			
1. Asphalt Shingles	ELK	ARCHITECT SHINGLES	FL 728
2. Underlayments	ATLAS R.	UNDERLAYMENT	FL 4064
3. Roofing Fasteners	SENCO PROD.	ROOF FASTNERS	FL 5135
4. Non-structural Metal Rf			
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
11. Wood shingles /shakes			
12. Roofing Slate			

13. Liquid Applied Roof Sys			
14. Cements-Adhesives – Coatings			
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
E. SHUTTERS			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
F. SKYLIGHTS			
1. Skylight			
2. Other			
G. STRUCTURAL COMPONENTS			
1. Wood connector/anchor			
2. Truss plates			
3. Engineered lumber			
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			
12. Sheds			
13. Other			
H. NEW EXTERIOR ENVELOPE PRODUCTS			
1.			
2.			

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) the performance characteristics which the product was teste and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspec

James A. Beach

Contractor or Contractor's Authorized Agent Signature

James A. Beach 3/01/20

Print Name Date

Location

Permit # **(FOR STAFF USE ONLY)**

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 84.6

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: 60.0 kBtu/hr
3.	Number of units, if multi-family	1			SEER: 13.00
4.	Number of Bedrooms	3	b.	N/A	
5.	Is this a worst case?	No			
6.	Conditioned floor area (ft²)	2484 ft²	c.	N/A	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)				
a.	U-factor:	Description Area	13.	Heating systems	
	(or Single or Double DEFAULT)	7a. (Dble, U=0.6) 219.0 ft²	a.	Electric Heat Pump	Cap: 60.0 kBtu/hr
b.	SHGC:				HSPF: 8.10
	(or Clear or Tint DEFAULT)	7b. (SHGC=0.35) 517.0 ft²	b.	N/A	
8.	Floor types				
a.	Slab-On-Grade Edge Insulation	R=0.0, 262.7(p) ft	c.	N/A	
b.	N/A				
c.	N/A		14.	Hot water systems	
9.	Wall types		a.	Electric Resistance	Cap: 50.0 gallons
a.	Concrete, Int Insul, Exterior	R=4.0, 1492.0 ft²			EF: 0.91
b.	Frame, Wood, Adjacent	R=13.0, 251.0 ft²	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, 2495.0 ft²	15.	HVAC credits	PT,
b.	Under Attic	R=19.0, 185.0 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: Garage	Sup. R=6.0, 188.0 ft		MZ-C-Multizone cooling,	
b.	N/A			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: James G. Beach Date: 3/1/2006

Address of New Home: 479 SW Hill Creek DR. City/FL Zip: Lake City, Fla. 32025

**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.

FORM 600A-2004 EnergyGauge® 4.1

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	WEB DESIGN - BEACH RES	Builder:	
Address:		Permitting Office:	
City, State:	,	Permit Number:	
Owner:		Jurisdiction Number:	
Climate Zone:	North		

1.	New construction or existing	New	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	3	
5.	Is this a worst case?	No	
6.	Conditioned floor area (ft²)	2484 ft²	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. (Dble, U=0.6) 219.0 ft²	
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (SHGC=0.35) 517.0 ft²	
8.	Floor types		
a.	Slab-On-Grade Edge Insulation	R=0.0, 262.7(p) ft	
b.	N/A		
c.	N/A		
9.	Wall types		
a.	Concrete, Int Insul, Exterior	R=4.0, 1492.0 ft²	
b.	Frame, Wood, Adjacent	R=13.0, 251.0 ft²	
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 2495.0 ft²	
b.	Under Attic	R=19.0, 185.0 ft²	
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 188.0 ft	
b.	N/A		
12.	Cooling systems		
a.	Central Unit	Cap: 60.0 kBtu/hr SEER: 13.00	
b.	N/A		
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 60.0 kBtu/hr HSPF: 8.10	
b.	N/A		
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 50.0 gallons EF: 0.91	
b.	N/A		
c.	Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)		
15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	PT,	

Glass/Floor Area: 0.21

Total as-built points: 31124

Total base points: 32840

PASS

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

PREPARED BY: _____

DATE: 2/27/06

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

OWNER/AGENT: James G. Beach

DATE: 3/1/2006

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	2484.0	20.04	8960.3	Double,U=0.55,SHGC=0.35	SW	0.0	0.0	114.0	19.74	1.00	2250.1
				Double,U=0.55,SHGC=0.35	NW	0.0	0.0	88.0	12.28	1.00	1080.8
				Double,U=0.55,SHGC=0.35	NE	0.0	0.0	219.0	14.17	1.00	3104.0
				Double,U=0.55,SHGC=0.35	SE	0.0	0.0	96.0	21.14	1.00	2029.3
				As-Built Total:				**517.0**			**8464.2**

WALL TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Adjacent	251.0	0.70	175.7	Concrete, Int Insul, Exterior	4.0	1492.0	1.15	1715.8
Exterior	1492.0	1.70	2536.4	Frame, Wood, Adjacent	13.0	251.0	0.60	150.6
Base Total:	**1743.0**		**2712.1**	**As-Built Total:**		**1743.0**		**1866.4**

DOOR TYPES	Area X	BSPM	= Points	Type	Area X	SPM	= Points
Adjacent	18.0	1.60	28.8	Adjacent Insulated	18.0	1.60	28.8
Exterior	0.0	0.00	0.0				
Base Total:	**18.0**		**28.8**	**As-Built Total:**	**18.0**		**28.8**

CEILING TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM X SCM	= Points
Under Attic	2484.0	1.73	4297.3	Under Attic	30.0	2495.0	1.73 X 1.00	4316.4
				Under Attic	19.0	185.0	2.34 X 1.00	432.9
Base Total:	**2484.0**		**4297.3**	**As-Built Total:**		**2680.0**		**4749.3**

FLOOR TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Slab	262.7(p)	-37.0	-9719.9	Slab-On-Grade Edge Insulation	0.0	262.7(p	-41.20	-10823.2
Raised	0.0	0.00	0.0					
Base Total:			**-9719.9**	**As-Built Total:**		**262.7**		**-10823.2**

INFILTRATION	Area X	BSPM	= Points	Area X	SPM	= Points
	2484.0	10.21	25361.6	2484.0	10.21	25361.6

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 31640.2			**Summer As-Built Points:**					**29647.1**
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 60000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Gar(AH),R6.0(INS)					
			29647	1.00	(1.09 x 1.147 x 1.00)	0.263	0.950	9244.6
31640.2	**0.4266**	**13497.7**	**29647.1**	**1.00**	**1.250**	**0.263**	**0.950**	**9244.6**

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	2484.0	12.74	5696.3	Double,U=0.55,SHGC=0.35	SW	0.0	0.0	114.0	13.52	1.00	1541.7
				Double,U=0.55,SHGC=0.35	NW	0.0	0.0	88.0	17.52	1.00	1541.9
				Double,U=0.55,SHGC=0.35	NE	0.0	0.0	219.0	17.15	1.00	3755.5
				Double,U=0.55,SHGC=0.35	SE	0.0	0.0	96.0	12.39	1.00	1189.7
				As-Built Total:				**517.0**			**8028.8**

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	251.0	3.60	903.6	Concrete, Int Insul, Exterior	4.0	1492.0	6.50	9698.0
Exterior	1492.0	3.70	5520.4	Frame, Wood, Adjacent	13.0	251.0	3.30	828.3
Base Total:	**1743.0**		**6424.0**	**As-Built Total:**		**1743.0**		**10526.3**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	18.0	8.00	144.0	Adjacent Insulated	18.0	8.00	144.0
Exterior	0.0	0.00	0.0				
Base Total:	**18.0**		**144.0**	**As-Built Total:**	**18.0**		**144.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	2484.0	2.05	5092.2	Under Attic	30.0	2495.0	2.05 X 1.00	5114.8
				Under Attic	19.0	185.0	2.70 X 1.00	499.5
Base Total:	**2484.0**		**5092.2**	**As-Built Total:**		**2680.0**		**5614.3**

FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Slab	262.7(p)	8.9	2338.0	Slab-On-Grade Edge Insulation	0.0	262.7(p	18.80	4938.8
Raised	0.0	0.00	0.0					
Base Total:			**2338.0**	**As-Built Total:**		**262.7**		**4938.8**

INFILTRATION	Area X	BWPM	= Points	Area X	WPM	= Points
	2484.0	-0.59	-1465.6	2484.0	-0.59	-1465.6

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,	PERMIT #:

BASE				AS-BUILT						
Winter Base Points:			**18229.0**	**Winter As-Built Points:**						**27786.6**
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 60000 btuh ,EFF(8.1) Ducts:Unc(S),Unc(R),Gar(AH),R6.0						
				27786.6	1.000	(1.069 x 1.169 x 1.00)	0.421	0.950	13887.4	
18229.0	**0.6274**	**11436.9**		**27786.6**	**1.00**	**1.250**	**0.421**	**0.950**	**13887.4**	

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	50.0	0.91	3	1.00	2663.96	1.00	7991.9	
				As-Built Total:						**7991.9**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
13498	**11437**	**7905**	**32840**	**9245**	**13887**	**7992**	**31124**

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 circ 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.	

WIND ENGINEERING

FOR

BEACH RESIDENCE
Lake City, Florida

w s e

WAYLAND

STRUCTURAL ENGINEERING

8200 SW 16th Place Gainesville, FL 32607

Phone/Fax 352-331-0727

FL COA #8236

Project Number
05170

January 12, 2006

For
James & Sally Beach
4783 Waverly Woods Terrace
Lake Worth, Florida 33463

TABLE OF CONTENTS

GREGORY S. WAYLAND, PE
FL PE #54396

WAYLAND STRUCTURAL ENGINEERING			Date:	1/12/2006
Gregory S. Wayland, PE	FL PE #54396	FL COA #8236	By:	GSW
8200 SW 16th Place Gainesville, FL 32607	Ph/Fax 352-331-0727		Page:	1
Project Name: **BEACH RESIDENCE**			For:	
WSE Project Number: 05170				
Project Location: Lake City, Florida				

STRUCTURAL SPECIFICATION

A. GENERAL

1. This STRUCTURAL SPECIFICATION shall be considered part of the contract documents for this project and shall be attached to the drawings prepared by: **W.E.B. DESIGNS** Date:
2. Roof truss layout, uplift loads and gravity loads relied upon for design of supporting walls, lintels, headers, footings, etc. prepared by: **MAYO TRUSS CO., Inc. Rt 2, Box 40 Mayo, FL** Date: 12/23/2005
3. Information and materials specified in this STRUCTURAL SPECIFICATION shall take precedence over that shown on the drawings.
4. Signing and sealing this document and/or the construction drawings by Wayland Structural Engineering certifies only the structural systems for this building, and is not a certification of the site plan, architectural, electrical, mechanical, plumbing or other systems that may be shown on the same drawing. WSE is not responsible for changes made to this document by others without written consent.
5. It is assumed that this building site is not located within a 100 year floodplain and is not designed for hydrostatic or moving water loads.
6. **CODE COMPLIANCE:** **This building is designed in compliance with the requirements of the Florida Building Code, 2004.** Structural members, cladding, fasteners and systems providing for the structural integrity of the building are designed to resist gravity loads prescribed Chapter 16 and wind loads prescribed in Section 1606.2 Simplified Provisions for Low Rise Buildings.

7. **DESIGN LOADS**

a. Uniformly Distributed Live Loads		(Section 1604.1)	
Floor Live Load	NA	psf	
b. Roof Live Loads		(Section 1604.6)	
5:12 pitch	16	psf	
c. Wind Loads		(Section 1606.2)	
1.) Enclosure Classification	Enclosed		
2.) Basic Wind Speed (3 second gust)	*130	mph	
3.) Wind Importance Factor, Iw	1.0		
4.) Exposure Category	B		
5.) Internal Pressure Coefficients:	+0.18, -0.18		

6.) Design Wind Pressures for Doors and Windows:

Opening Area (sf)	Inward Pressure (psf)	Outward Pressure (psf)
0-10	30.4	-40.7
11-20	29.0	-38.0
21-50	27.2	-34.3
51-100	25.9	-31.6

***STRUCTURE DESIGNED FOR 130 MPH AT CLIENT'S REQUEST. DESIGN WIND SPEED FOR THIS LOCATION IS 110 MPH.**

B. EARTHWORK

1. **General:**
   a. A geotechnical or soil investigation has not been performed for this site.
   b. Bearing soil is therefore presumed to be sandy soil with no organics, peat, clay, expansive clays, or boulders.
   c. It is assumed that seasonal high groundwater table is well below footing bearing elevation.
   d. It is assumed that allowable bearing pressure is 2,000 pounds per square foot.
   e. If contractor or building inspector encounters organics, clays, silts, boulders or high grounwater levels during foundation excavation, engineer of record and/or geotechnical engineer shall be contacted and/or employed to assess conditions first hand and give direction for additional corrective work or modifications to the design that may need to be performed.
2. **Site Preparation:**
   a. Strip all trees, grasses, topsoil and other organics from building footprint.
   b. Use root rake or similar equipment to remove roots from building footprint.
   c. Proofcompact existing grade with loaded dump truck or compactor to densify existing soils and identify soft or loose soils.
   d. If soft soils are encountered during proofcompaction, overcut unsuitable material and replace with well graded sand. (See 1e. above)
3. **Excavation:**
   a. Excavations are to be performed in accordance with current OSHA standards. Contractor is responsible for excavation safety.
   b. Compact all excavation bottoms to firm unyielding condition.
4. **Footing Bearing:**
   a. All foundations are to bear on undisturbed sandy soil soil or compacted fill as described herein.
   b. Bottom of footings are to extend at least 12 inches below grade.
5. **Ground/Surface Water Control:**
   a. Excavation and backfill operations are to be maintained in a dry condition.
   b. Slope or crown building subgrades to promote run-off and prevent ponding.
   c. Surface and infiltrating water are to be removed by grading and pumping from sumps if required.
6. **Backfill and Compaction:**
   a. Use only clean, well graded sand with no more than 10% passing #200 sieve for fill and backfill within building footprint.
   b. Mechanically compact all backfill within building footprint in maximum 12" loose lifts to firm unyielding consistency.
7. **Pest Control:**
   a. Treat all slab subgrades for termites in accordance with the Florida Building Code and local ordinances.
8. **Exterior Grading:**
   a. Exterior grade is to be kept at least 6 inches below wood siding and/or foam insulation.
   b. Slope exterior grade away from building to promote drainage.

STRUCTURAL SPECIFICATION (Continued)

C. CONCRETE

1. Concrete Materials:

a. General: Comply with the Florida Building Code, 2004 Chapter 19, and ACI 301-99 Specifications for Structural Concrete.

b. Concrete:
1.) Cement: ASTM C150, Type I Portland cement.
2.) Aggregate: ASTM C33. Maximum aggregate size = 1 inch.
3.) Compressive Strength: Footings and slabs - 2,500 psi minimum at 28 days.
4.) Maximum water/cement ratio: 0.50.
5.) Air entraining admixture: ASTM C 260. Concrete is to be air entrained for mild exposure, 3 - 6%.
6.) Water reducing admixtures: ASTM C 494, Type A. All concrete to contain a water reducing admixture.
7.) Slump: 4 inches +/- 1 inch.

c. Reinforcing Steel: ASTM A615, Grade 40.

d. Welded Wire Reinforcing (WWR): ASTM A185, 6x6-W1.4xW1.4 (6x6-10/10) sheets.

e. Fibrous Reinforcing: ASTM C 1116, Fibermesh "Stealth" or "Inforce e3" polypropylene fibers by SI Concrete Systems or equivalent. Add to concrete mix at a rate of 1.5 lb/cy of concrete.

2. Concrete Installation:

a. Slab-on-grade: Provide 4 inch thick slab-on-grade with 6 mil thick polyethylene vapor retarder, lap 6 inches.

b. Footings: Install footings with size and reinforcement shown on plans.

c. Reinforcing Steel:
1.) Standard Lap Splice: #3 bars = 15", #4 bars = 20", #5 bars = 25", #6 bars = 30"
2.) Standard Hooks: #3 bars = 6", #4 bars = 8", #5 bars = 10", #6 bars = 12"
3.) Corner Bars: Provide 90 degree bend with standard lap splice at all footing corners and intersections.
4.) Bar Cover: 3 inches clear between bottom of footing bars and soil. 1 1/2" clear for concrete beams.
5.) WWR Lap Length: Minimum 10"

d. Slab Reinforcement:
1.) For monolithic slabs: Use WWR only, lap edges minimum 10", support on chairs @ 3'-0" o.c. each way.
2.) For masonry stem walls: Use WWR or Fiber reinforcement at contractor's option. WWR need not be installed on chairs if used in conjunction with fiber reinforcement.

e. Protection: Cure all slabs for minimum 7 days using sprayed-on membrane curing compound or continuous water sprinkling.

f. Slab joints: As concrete slabs cure and dry out, they will shrink causing cracks to form in the surface of the slab. Slab reinforcement is placed in the slab to help limit the width of cracks that form. All slabs left exposed should be saw-cut in roughly 10'-0" squares.

D. MASONRY

1. Masonry Materials:

a. General: Comply with the Florida Building Code, 2004 Chapter 21 and ACI 530.1-02 Specifications for Masonry Structures.

b. Concrete Masonry Units: ASTM C90, Type 1, two core, normal weight units, 1,900 psi net area compressive strength.

c. Mortar: ASTM C270, Type M or S.

d. Grout: ASTM C476, fine or coarse grout, minimum 3,000 psi compressive strength at 28 days, 8-9 inch slump.

e. Joint Reinforcing: ASTM A951, truss type, hot-dip galvanized per ASTM A153, class B, 9 gauge wires.

f. Reinforcing Steel: ASTM A615, Grade 40.

2. Masonry Installation:

a. Joint Reinforcing: (Optional) Install joint reinforcing in all walls at 16 inches o.c. vertical for crack resistance.

b. Reinforcing:
1.) Provide clean-out at base of wall for all vertical bars for pours over 5 feet high.
2.) Provide vertical #5 bars @ 4'-0" o.c. and at all corners and ends of walls.
3.) Provide one vertical #5 bar in first cell at all window and door jambs.
4.) Provide (2) #5 vertical bars in all masonry columns.

c. Provide standard 90 degree hook into footing at bottom and into bond beam at top of wall for all vertical bars.

d. Provide one #5 bar continuous in bond beam at top of wall.

e. Lap bars in masonry construction 48 x bar diameter.

f. Provide 90 degree bend corner bars at all wall corners and intersections.

g. Provide precast/pre-reinforced U-shaped concrete lintels over all openings as described in the attached lintel schedule detail.

STRUCTURAL SPECIFICATION (Continued)

E. **WOOD FRAMING**

1. **Wood Materials:**
   a. General: Comply with the Florida Building Code, 2004 Chapter 23.
   b. Wall Framing:
      1.) Loadbearing Studs: 2x4's @ 16" o.c., Construction Grade Spruce-Pine-Fir (SPF).
      2.) Bottom Plate: 2x4, preservative treated wood.
      3.) Top Plate: Doubled 2x4.
      4.) Posts: No. 2 Southern Pine (SP), preservative treated, size as shown on plans.
      5.) Lumber Headers/Beams: No. 2 Southern Pine, size as shown on plan.
      6.) Wall Sheathing: 15/32" thick, Oriented Strand Board (OSB), Sheathing Grade, Exposure 1.
          or APA Rated CDX Plywood Sheathing, Exposure 1.
   c. Roof Framing:
      1.) Engineered Roof Trusses:
          a.) Wayland Structural Engineering is not responsible for design and detailing or installation of engineered wood roof trusses.
          b.) Truss engineering drawings to be signed and sealed by Professional Engineer registered in State of Florida.
          c.) Truss manufacturer to Engineer trusses to support dead, live and wind loads per Florida Building Code, 2004 or ASCE 7-02.
          d.) Engineer trusses to comply with ANSI/TPI 1 "National Design Standard for Metal Plate Connected Wood Truss Construction.
          e.) Comply with TPI HIB "Commentary and Recommendations for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses."
          f.) Comply with TPI DSB "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
          g.) Truss spacing = 2'-0" o.c. maximium.
      2.) Roof Sheathing: 15/32" thick, Oriented Strand Board (OSB), Sheathing Grade, Exposure 1.
          or APA Rated CDX Plywood Sheathing, Exposure 1.
      3.) Fascia Board: 2x6, No. 2, Spruce-Pine-Fir (SPF).
   d. Fasteners:
      1.) Framing Fasteners: Comply with Florida Building Code, 2004, Table 2304.9.1, "Fastening Schedule."
          a.) Fasteners permanently exposed to weather are to be hot-dip galvanized.
      2.) Anchor bolts: ASTM A307, 1/2" diameter x 8" J-bolts, 2"x2" washer.
      3.) Bolts: ASTM A307, hot-dip galvanized, see plan for size and quantity.
      4.) Wind Uplift Anchors: Use Simpson Strong-Tie or equivalent.
          a.) Contractor must verify that loads shown on truss engineering drawings do not exceed loads shown in anchor schedule prior to installation. If discrepancy is discovered, contact engineer for direction.

2. **Wood Installation:**
   a. Sheathing:
      1.) Fasten wall sheathing with 8d nails @ 6" o.c at panel edges, 12" o.c. along intermediate supports.
      2.) Fasten roof sheathing with 8d common nails @ 6" o.c at panel edges, 12" o.c. along intermediate supports.
      3.) Ensure that roof sheathing is edge nailed to 2x6 fascia. Ensure wall sheathing is edge nailed to top and bottom plates.
      4.) Lay roof and floor sheathing perpendicular to supporting members. Stagger end panel locations.
      5.) Use "H" panel clips between panel supports for roof sheathing.
      6.) Cover sheathing as soon as possible for protection against excessive moisture exposure.
   b. Anchors:
      1.) Install all uplift anchors as recommended by manufacturer.
      2.) Install anchor bolts @ 2'-0" o.c. at interior bearing walls, and 8" from corners and jamb studs.
   c. Fasteners: Fasten all wood construction using fasteners specified in FBC Table 2306.1 unless noted otherwise.
   d. Headers: See attached "Typical Header Schedule" for opening construction in wood stud bearing walls.

F. **WALL OPENINGS**

1. **Windows, Doors, Skylights:**
   a. Wayland Structural Engineering is not responsible for the design, construction, or attachment of windows, doors or skylights.
   b. The building envelope is designed assuming a fully enclosed condition, therefore windows, doors and skylights must be designed to support the same wind pressures that walls and roofs are designed for.
   b. Window, door and skylight manufacturer shall submit certification indicating that window or door units can adequately support design wind pressures for the specified wind zone as shown in section A.7.c.6. above.
   c. Window, door and skylight manufacturer is to provide fastening information for attachment to supporting construction.

WAYLAND STRUCTURAL ENGINEERING
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Date: 1/12/2006
By: GSW
Page: 4

Project Name: **BEACH RESIDENCE**
WSE Project Number: 05170
Project Location: Lake City, Florida
For:

A. UPLIFT CHECKS

1. BOND BEAM CHECK (upward bending)

Vertical bar spacing	s =	4.00 ft	
Gross uniform uplift load	ug =	-277 plf	(worst case from truss engineering)
Bond beam weight	wd =	42 plf	(one course high x 8 inches wide)
Calculated net uniform uplift load	un =	-235 plf	

		Calc'd	Supplied	
Maximum net shear (kips)	U =	**0.47**	**2.16**	OK
Maximum net moment (kip-in)	M =	**5.6**	**25.5**	OK

*** USE ONE COURSE HIGH x 8 INCH WIDE MASONRY BOND BEAM WITH (1) #5 CONTINUOUS TOP**

2. VERTICAL BAR CHECK (upward tension)

Allowable reinforcing tension Fs = 20,000 psi
Stress increase for wind Cw = 1.33

		* Calc'd Uplift (kips)	Vertical Reinforcing Quantity	Vertical Reinforcing Size (#)	**Supplied Uplift (kips)	
For typical common trusses,		0.940	1	5	8.161	OK
For girder trusses,	A13	1.068	1	5	8.161	OK
	A21	0.651	1	5	8.161	OK
	B5	0.701	1	5	8.161	OK
	C3	0.692	1	5	8.161	OK
	D1	1.786	1	5	8.161	OK
	E1	0.469	1	5	8.161	OK

* uplift values taken from truss engineering.
** includes stress increase for wind.

USE (1) #5 VERTICAL BAR @ 4'-0" O.C. MAX.

3A. WALL + FOOTING + SOIL WEIGHT CHECK (uplift at common trusses)

				Resisting Weight Supplied
Wall height	hw =	10.00 ft		
Wall thickness	tw =	8 in		
Wall unit weight	ww =	52 psf		
Bond beam height	hbb =	8 in	Bond beam	58
Bond beam unit weight	wbb =	130 psf	Wall	485
Footing thickness	tf =	10 in	Footing	208
Footing width	bf =	20 in	Soil (inside)	67
Footing depth below slab	df1 =	26 in	Soil (outside)	33
Footing depth below grade	df2 =	18 in	**Wr =**	**851 plf**
Soil unit weight	ws =	100 psf		

Safety Factor Against Uplift	SF =	1.00	
Gross uniform uplift load	ug =	277 plf	
Required Resisting Weight, Wr = SF*ug		**277 plf**	OK

USE MINIMUM 8" THICK MASONRY WALL WITH 10"X20" FOOTING WITH (3) #5 BARS CONTINUOUS.

3B. WALL + FOOTING + SOIL WEIGHT CHECK (uplift at girder truss bearing points and columns)

Girder Truss or Column	Downward Load (lb)	Uplift Load (lb)	Adjacent Uplift Load (plf)	*Required Uplift Load (lb)	**Resisting Weight (lb)	Rqd Footing ***Weight (lb)	Rqd Concrete Volume (cf)	Footing Thickness (in)	Min. Square Footing (ft)	
A13 LEFT	2,434	699	144	1,707	770	937	8	16	**2.4**	2'-6"x2'-6"x16"
A21 MID	4,234	1,204	335	3,549	770	2779	20	16	**3.9**	4'-0"x4'-0"x16"
D1 LEFT	6,229	1,769	100	2,469	6,812	-4343	-28	10	**0.0**	
D1 RIGHT	6,230	1,786	100	2,486	6,812	-4326	-27	10	**0.0**	

** Resisting weight equals weight of wall, footing, soil for 4 feet each side of load point.
*** Required footing weight equals weight required in addition to 10" x 20" footing.

B. LINTELS

1. TYPICAL LINTELS (with uniform load only)

	Unit Load (psf)	Trib. Width (ft)	Uniform Load (kips/ft)	Load Factor	Factored Uniform Load (kips/ft)	
Roof Dead Load	15	25.00	0.375	1.40	0.525	
Wall Dead Load	87	1.33	0.116	1.40	0.162	
Roof Live Load	16	25.00	0.400	1.70	0.680	
Roof Attic Load	10	25.00	0.250	1.70	0.425	
		w =	**1.141**	**wu =**	**1.792**	
*Uplift Load			0.277	1.60	0.443	(*from truss engineering)

Lintel Span	L =	**4.67**	**6.33**	**9.33**			ft
Unfactored Reaction	R =	2.66	3.61	5.32			kips
Unfactored Net Uplift Reaction	Unet =	0.48	0.66	0.97			kips
Factored Uplift Moment	Munet =	0.57	1.04	2.26			kip-ft
Factored Shear	Vu =	4.18	5.67	8.36			kips
Factored Design Shear	Vud =	**2.09**	**3.58**	**6.27**			kips
Factored Moment	Mu =	**4.89**	**8.98**	**19.50**			kip-ft
	Select Lintel	**TYPE A FILLED/ W 1 COURSE MASONRY**	**TYPE B FILLED/ W 1 COURSE MASONRY**	**TYPE B FILLED/ W 1 COURSE MASONRY**			

2. 18'-0" GARAGE DOOR LINTEL (with girder truss B5 bearing)

Lintel Span, L = **18.00** **ft**

	Unit Load (psf)	Trib. Width (ft)	Uniform Load (kips/ft)	Load Factor	Factored Uniform Load (kips/ft)
Uniform Load #1					
Roof Dead Load	15	13.33	0.200	1.40	0.280
Wall Dead Load	87	1.33	0.116	1.40	0.162
Roof Live Load	16	13.33	0.213	1.70	0.363
Roof Attic Load	10	13.33	0.133	1.70	0.227
		w1 =	**0.662**	**wu1 =**	**1.031**
Uplift Load			0.190	1.60	0.304
Uniform Load #2					
Roof Dead Load	15	5.50	0.083	1.40	0.116
Wall Dead Load	87	1.33	0.116	1.40	0.162
Roof Live Load	16	5.50	0.088	1.70	0.150
Roof Attic Load	10	5.50	0.055	1.70	0.094
		w2 =	**0.341**	**wu2 =**	**0.521**
Uplift Load			0.097	1.60	0.155

Point Load	Point Load (kips)	Load Factor	Factored Uniform Load (kips)	Distance From Left (ft)	Distance From Right (ft)
Dead Load	1.231	1.40	1.72		
Live Load	1.231	1.70	2.09		
P =	**2.462**	**Pu =**	**3.82**	4.33	13.67
Uplift Load	0.701	1.60	1.12	4.33	13.67

		Left End	Right End	
Unfactored Reaction	R =	6.16	3.83	kips
Unfactored Net Uplift Reaction	Unet =	1.13	0.47	kips
Factored Shear	Vu =	9.53	5.87	kips
Factored Design Shear	**Vud =**	**8.33**	**5.26**	**kips**

Factored Moment	(due to P)	Mu1 =	12.55	kip-ft @	4.33	ft
	(due to w1)	Mu2 =	7.48	kip-ft @	3.81	ft
	(due to w2)	Mu3 =	18.71	kip-ft @	9.52	ft
		Mu =	**28.27**	**kip-ft**		

USE TYPE E PRECAST WITH ONE COURSE MASONRY W/ #3 STIRRUPS @ 8" O.C.

3. 11'-4" BACK PORCH LINTEL (with no girder truss bearing)

	Unit Load (psf)	Trib. Width (ft)	Uniform Load (kips/ft)	Load Factor	Factored Uniform Load (kips/ft)	
Roof Dead Load	15	6.33	0.095	1.40	0.133	
Wall Dead Load	87	1.33	0.116	1.40	0.162	
Roof Live Load	16	6.33	0.101	1.70	0.172	
Roof Attic Load	10	6.33	0.063	1.70	0.108	
		w =	**0.375**	**wu =**	**0.575**	
*Uplift Load			0.102	1.60	0.163	(*from truss engineering)

Lintel Span	L =	**11.33**	ft
Unfactored Reaction	R =	2.13	kips
Unfactored Net Uplift Reaction	Unet =	0.18	kips
Factored Uplift Moment	Munet =	0.52	kip-ft
Factored Shear	Vu =	3.26	kips
Factored Design Shear	Vud =	**2.59**	kips
Factored Moment	Mu =	**9.22**	kip-ft

USE TYPE E FILLED W/ ONE COURSE MASONRY

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By:	GSW
Page:	7

Project Name:	**BEACH RESIDENCE**	For:	0
WSE Project Number:	05170		0
Project Location:	Lake City, Florida		0

C. LATERAL ANALYSIS

1. Building Data

Building Length	L =	70.67	ft
Building Width	B =	63.33	ft
Eave Height	he =	8.67	ft
Peak ht above eave	hp =	10.41	ft
Roof Slope		5	/12

2. Edge Zone

a = 0.10*B	6.33	ft
a = 0.40*h	3.47	ft
a =	3.47	ft
a = 0.04*B	2.53	ft
a = 3.00	3.00	ft
a =	**3.47**	**ft**

3. End Zone

z = 2*a = **6.94** **ft**

4. LONGITUDINAL DIRECTION

Exposure Category	B
Adjustment Coefficient	1.00

MWFRS Wind Pressures:

Wall Interior Zone	17.8	psf
Wall End Zone	26.8	psf
Roof Interior Zone	-8.2	psf
Roof End Zone	-13.9	psf

Wall Shear Force:

Interior	3.82	kips
End	1.61	kips
Total	5.43	kips

Roof Shear Force:

Interior	-2.70	kips
End	-0.28	kips
Total	-2.98	kips
Use	0.00	kips

Total Shear Force:

V = **5.43** **kips**

Roof Diaphragm Check:

Diaphragm shear	v =	38	plf
Allowable shear	v =	240	plf
	check	OK	

Shear Wall Check:

Shear wall length	d =	5.33	ft
Shear wall height	h =	8.67	ft
Shear wall effective thickness	be =	2.50	in
Masonry strength	f'm =	1500	psi
Actual Shear	V =	2.71	kips
Overturning moment	M =	23.53	kip-ft
Actual shear stress	**fv =**	**17.0**	**psi**
	check	OK	

Allowable shear stress

M/V*d	1.63	
M/V*d >= 1.0	YES	
Allowable shear stress		
Fv1 =	38.73	psi
Fv2 =	35.00	psi
Fv =	**35.00**	**psi**

5. TRANSVERSE DIRECTION

MWFRS Wind Pressures:

Wall Interior Zone	24.7	psf
Wall End Zone	37.1	psf
Roof Interior Zone	-5.4	psf
Roof End Zone	-9.8	psf

Wall Shear Force:

Interior	6.08	kips
End	2.23	kips
Total	8.31	kips

Roof Shear Force:

Interior	-2.04	kips
End	-0.20	kips
Total	-2.24	kips
Use	0.00	kips

Total Shear Force:

V = **8.31** **kips**

Roof Diaphragm Check:

Diaphragm shear	v =	66	plf
Allowable shear	v =	240	plf
	check	OK	

USE 15/32" OSB SHEATHING GRADE W/ 8d NAILS @ 6" O.C. EDGE, 12" O.C. FIELD

Shear Wall Check:

Shear wall length	d =	8.33	ft
Shear wall height	h =	8.67	ft
Shear wall effective thickness	be =	2.50	in
Masonry strength	f'm =	1500	psi
Actual Shear	V =	4.16	kips
Overturning moment	M =	36.04	kip-ft
Actual shear stress	**fv =**	**16.6**	**psi**
	check	OK	

Allowable shear stress

M/V*d	1.04	
M/V*d >= 1.0	YES	
Allowable shear stress		
Fv1 =	38.73	psi
Fv2 =	35.00	psi
Fv =	**35.00**	**psi**

USE 8" CMU W/ TYPE S MORTAR, FACE SHELL BEDDING, GROUT ONLY AT REINFORCED CELLS.

WAYLAND STRUCTURAL ENGINEERING			Date:	1/12/2006
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8200 SW 16th Place Gainesville, FL 32607	Ph/Fax 352-331-0727		Page:	8
Project Name: **BEACH RESIDENCE**			For:	
WSE Project Number: 05170				
Project Location: Lake City, Florida				

FRONT PORCH BEAM L = 12.67'

W = (480/2) = 240 plf

w = (246/2) = 123 plf

V = 240(12.67/2) = 1520 lb each end or P = 240(12.67+6)/2 = 2240 lb/post

M = 1/8(240) 12.67² x 12 = 57790 in.-lb.

U = 123(12.67/2) = 779 lb each end or U = 123(12.67+6)/2 = 1148 lb/post

A = 1520/(90 x 1.25) = 13.5 in²

S = 57790/(975 x 1.25) = 47.4 in³

∴ USE

(2) 2X12 BEAM (NO. 2 SP)
W/ (2) SIMPSON "LSTA21" TO EACH POST
W/ 4X4 P.T. POST (NO. 2 SP)
W/ SIMPSON "ABU44" + 5/8" x 10" BOLT TO FOUNDATION

APPROXIMATE PROJECT LOCATION

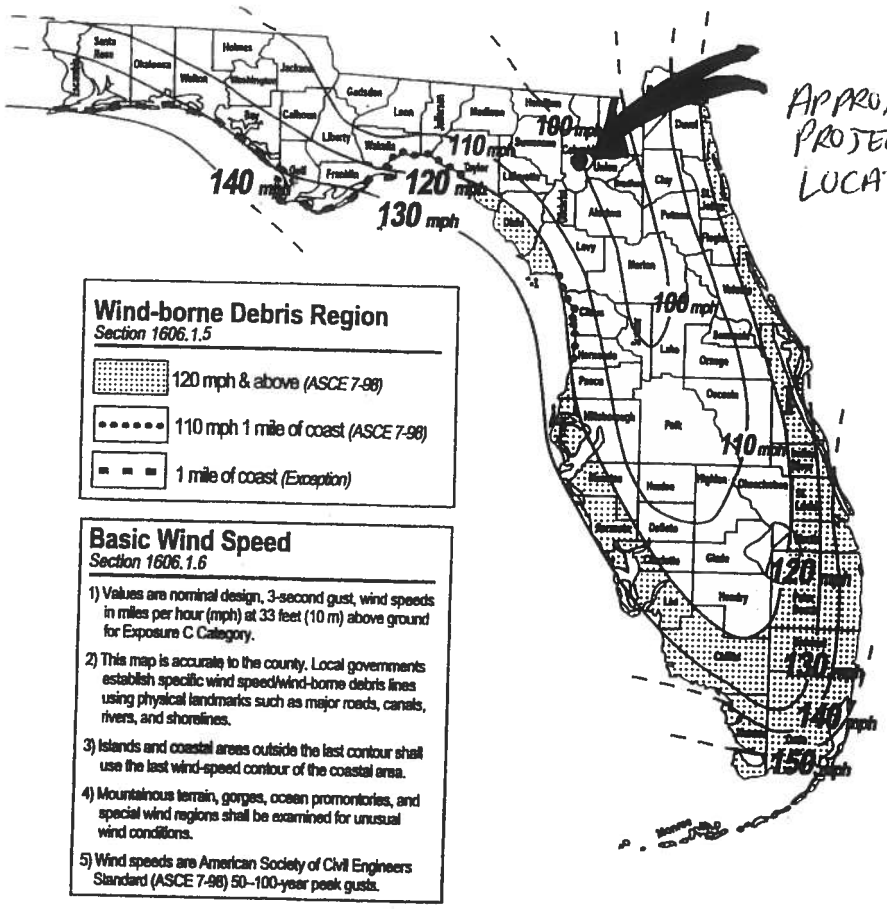

FIGURE 1606
STATE OF FLORIDA
WIND-BORNE DEBRIS REGION & BASIC WIND SPEED

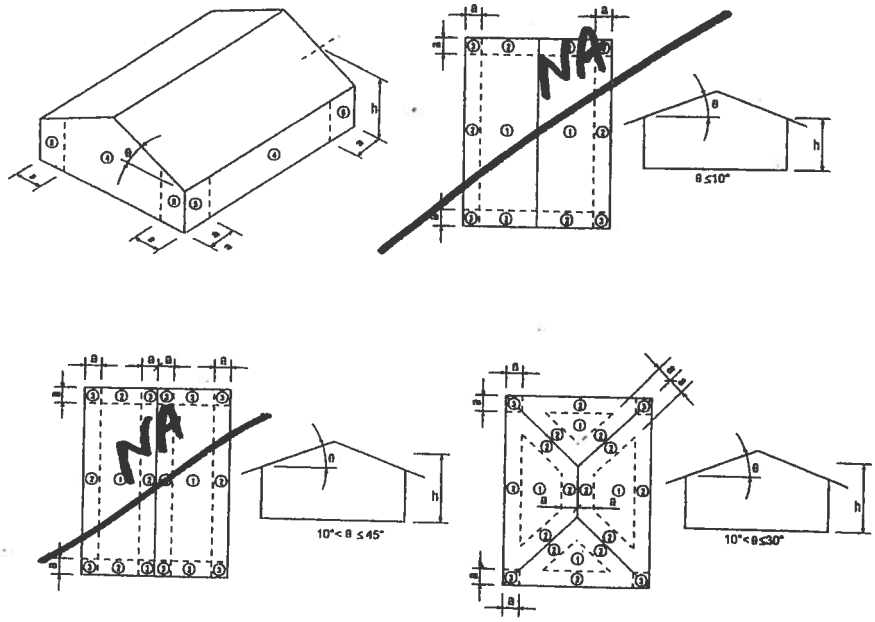

FIGURE 1606.2(c)
COMPONENT AND CLADDING LOADING DIAGRAMS

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Structural Engineering
8200 SW 16th Place
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TABLE 1606.2A
MAIN WIND FORCE RESISTING SYSTEM WIND LOADS FOR A BUILDING WITH A MEAN ROOF HEIGHT OF 30 FEET LOCATED IN Exposure B

			Horizontal loads[2]				Vertical Loads (psf)						Max. Horizontal Wall Loads[4] (psf)			
			End Zone		Interior Zone		End Zone		Interior Zone		Windward Overhang		Zone			
Wind Velocity (mph)	Load Direction	Roof angle (degrees)	Wall	Roof[3]	Wall	Roof[3]	Windward Roof	Leeward Roof	Windward Roof	Leeward Roof	End Zone	Interior Zone	1E	4E	1	4
90	Transverse	0 - 5	12.8	-6.7	8.5	-4.0	-15.4	-8.8	-10.7	-6.8	-21.6	-16.9	10.0	-7.5	7.2	-5.8
		20	17.8	-4.7	11.9	-2.6	-15.4	-10.7	-10.7	-8.1	-21.6	-16.9	12.0	-10.1	8.8	-7.5
		30 < angle ≤ 45	14.4	9.9	11.5	7.9	5.6	-8.8	4.8	-7.5	-5.1	-5.8	11.0	-8.1	9.1	-6.8
	Longitudinal	All angles	12.8	-6.7	8.5	-4.0	-15.4	-8.8	-10.7	-6.8	-21.6	-16.9	10.0	-7.5	7.2	-5.8
100	Transverse	0 - 5	15.9	-8.2	10.5	-4.9	-19.1	-10.8	-13.3	-8.4	-26.7	-20.9	12.0	-9.3	8.8	-7.2
		20	22.0	-5.8	14.6	-3.2	-19.1	-13.3	-13.3	-10.1	-26.7	-20.9	15.0	-12.5	10.8	-9.3
		30 < angle ≤ 45	17.8	12.2	14.2	9.8	6.9	-10.8	5.9	-9.3	-6.3	-7.2	13.0	-10.1	11.3	-8.4
	Longitudinal	All Angles	15.9	-8.2	10.5	-4.9	-19.1	-10.8	-13.3	-8.4	-26.7	-20.9	12.0	-9.3	8.8	-7.2
110	Transverse	0 - 5	19.2	-10.0	12.7	-5.9	-23.1	-13.1	-16.0	-10.1	-32.3	-25.3	15.0	-11.3	10.7	-8.7
		20	26.6	-7.0	17.7	-3.9	-23.1	-16.0	-16.0	-12.2	-32.3	-25.3	18.0	-15.1	13.1	-11.3
		30 < angle ≤ 45	21.6	14.8	17.2	11.8	8.3	-13.1	7.2	-11.3	-7.6	-8.7	16.0	-12.2	13.7	-10.1
	Longitudinal	All Angles	19.2	-10.0	12.7	-5.9	-23.1	-13.1	-16.0	-10.1	-32.3	-25.3	15.0	-11.3	10.7	-8.7
120	Transverse	0 - 5	22.8	-11.9	15.1	-7.0	-27.4	-15.6	-19.1	-12.1	-38.4	-30.1	17.0	-13.4	12.7	-10.3
		20	31.6	-8.3	21.1	-4.6	-27.4	-19.1	-19.1	-14.5	-38.4	-30.1	22.0	-18.0	15.6	-13.4
		30 < angle ≤ 45	25.7	17.6	20.4	14.0	9.9	-15.6	8.6	-13.4	-9.0	-10.3	19.0	-14.5	16.2	-12.1
	Longitudinal	All Angles	22.8	-11.9	15.1	-7.0	-27.4	-15.6	-19.1	-12.1	-38.4	-30.1	17.0	-13.4	12.7	-10.3
130	Transverse	0 - 5	26.8	-13.9	17.8	-8.2	-32.2	-18.3	-22.4	-14.2	-45.1	-35.3	20.0	-15.7	14.9	-12.1
		20	37.1	-9.8	24.7	-5.4	-32.2	-22.4	-22.4	-17.0	-45.1	-35.3	25.0	-21.1	18.3	-15.7
		30 < angle ≤ 45	30.1	20.6	24.0	16.5	11.6	-18.3	10.0	-15.7	-10.6	-12.1	22.0	-17.0	19.1	-14.2
	Longitudinal	All Angles	26.8	-13.9	17.8	-8.2	-32.2	-18.3	-22.4	-14.2	-45.1	-35.3	20.0	-15.7	14.9	-12.1
140	Transverse	0 - 5	31.1	-16.1	20.6	-9.6	-37.3	-21.2	-26.0	-16.4	-52.3	-40.9	24.0	-18.2	17.3	-14.0
		20	43.0	-11.4	28.7	-6.3	-37.3	-26.0	-26.0	-19.7	-52.3	-40.9	29.0	-24.5	21.2	-18.2
		30 < angle ≤ 45	35.0	23.9	27.8	19.1	13.4	-21.2	11.7	-18.2	-12.3	-14.0	26.0	-19.7	22.1	-16.4
	Longitudinal	All Angles	31.1	-16.1	20.6	-9.6	-37.3	-21.2	-26.0	-16.4	-52.3	-40.9	24.0	-18.2	17.3	-14.0
150	Transverse	0 - 5	35.7	-18.5	23.7	-11.0	-42.9	-24.4	-29.8	-18.9	-60.0	-47.0	27.0	-20.9	19.9	-16.1
		20	49.4	-13.0	32.9	-7.2	-42.9	-29.8	-29.8	-22.6	-60.0	-47.0	34.0	-28.1	24.4	-20.9
		30 < angle ≤ 45	40.1	27.4	31.9	22.0	15.4	-24.4	13.4	-20.9	-14.1	-16.1	30.0	-22.6	25.4	-18.9
	Longitudinal	All Angles	35.7	-18.5	23.7	-11.0	-42.9	-24.4	-29.8	-18.9	-60.0	-47.0	27.0	-20.9	19.9	-16.1

For SI: 1 ft² = 0.0929 m², 1 mph = 0.447 m/s, 1 degree of angle = 0.01745 rad, 1 psf = 47.88 N/m².

Notes:
1 Pressures for roof angles from 5 to 20 degrees shall be interpolated from the table.
2 Pressures are the sum of the windward and leeward pressures and shall be applied to the windward elevation of the building in accordance with Figure 1606.2(c).
3 If pressure is less than 0, use 0.
4 Pressures shall be applied in accordance with Figure 1606.2(b).

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TABLE 1606.2B
COMPONENT AND CLADDING WIND LOADS FOR A BUILDING WITH A MEAN ROOF HEIGHT OF 30 FEET LOCATED IN EXPOSURE B (psf)

Zone[3]	Effective wind area (ft^2)	Basic Wind Speed V (mph - 3 second gust)															
		85		90		100		110		120		130		140		150	
Roof Angle > 0-10 degrees																	
1	10.0	10.0	-13.0	10.0	-14.6	10.0	-18.0	10.0	-21.8	10.5	-25.9	12.4	-30.4	14.3	-35.3	16.5	-40.5
1	20.0	10.0	-12.7	10.0	-14.2	10.0	-17.5	10.0	-21.2	10.0	-25.2	11.6	-29.6	13.4	-34.4	15.4	-39.4
1	50.0	10.0	-12.2	10.0	-13.7	10.0	-16.9	10.0	-20.5	10.0	-24.4	10.6	-28.6	12.3	-33.2	14.1	-38.1
1	100.0	10.0	-11.9	10.0	-13.3	10.0	-16.5	10.0	-19.9	10.0	-23.7	10.0	-27.8	11.4	-32.3	13.0	-37.0
2	10.0	10.0	-21.8	10.0	-24.4	10.0	-30.2	10.0	-36.5	10.5	-43.5	12.4	-51.0	14.3	-59.2	16.5	-67.9
2	20.0	10.0	-19.5	10.0	-21.8	10.0	-27.0	10.0	-32.6	10.0	-38.8	11.6	-45.6	13.4	-52.9	15.4	-60.7
2	50.0	10.0	-16.4	10.0	-18.4	10.0	-22.7	10.0	-27.5	10.0	-32.7	10.6	-38.4	12.3	-44.5	14.1	-51.1
2	100.0	10.0	-14.1	10.0	-15.8	10.0	-19.5	10.0	-28.1	10.0	-33.0	11.4	-38.2	11.4	-38.2	13.0	-43.9
3	10.0	10.0	-32.8	10.0	-36.8	10.0	-45.4	10.0	-55.0	10.5	-65.4	12.4	-76.8	14.3	-89.0	16.5	-102.2
3	20.0	10.0	-27.2	10.0	-30.5	10.0	-37.6	10.0	-45.5	10.0	-54.2	11.6	-63.6	13.4	-73.8	15.4	-84.7
3	50.0	10.0	-19.7	10.0	-22.1	10.0	-27.3	10.0	-33.1	10.0	-39.3	10.6	-46.2	12.3	-53.5	14.1	-61.5
3	100.0	10.0	-14.1	10.0	-15.8	10.0	-19.5	10.0	-23.6	10.0	-28.1	10.0	-33.0	11.4	-38.2	13.0	-43.9
Roof Angle > 10-30 degrees																	
1	10.0	10.0	-11.9	10.0	-13.3	10.4	-16.5	12.5	-19.9	14.9	-23.7	17.5	-27.8	20.3	-32.3	23.3	-37.0
1	20.0	10.0	-11.6	10.0	-13.0	10.0	-16.0	11.4	-19.4	13.6	-23.0	16.0	-27.0	18.5	-31.4	21.3	-36.0
1	50.0	10.0	-11.1	10.0	-12.5	10.0	-15.4	10.0	-18.6	11.9	-22.2	13.9	-26.0	16.1	-30.2	18.5	-34.6
1	100.0	10.0	-10.8	10.0	-12.1	10.0	-14.9	10.0	-18.1	10.5	-21.5	12.4	-25.2	14.3	-29.3	16.5	-33.6
2	10.0	10.0	-25.1	10.0	-28.2	10.4	-34.8	12.5	-42.1	14.9	-50.1	17.5	-58.7	20.3	-68.1	23.3	-78.2
2	20.0	10.0	-22.8	10.0	-25.6	10.0	-31.5	11.4	-38.2	13.6	-45.4	16.0	-53.3	18.5	-61.8	21.3	-71.0
2	50.0	10.0	-19.7	10.0	-22.1	10.0	-27.3	10.0	-33.0	11.9	-39.3	13.9	-46.1	16.1	-53.5	18.5	-61.4
2	100.0	10.0	-17.4	10.0	-19.5	10.0	-21.1	10.0	-29.1	10.5	-34.7	12.4	-40.7	14.3	-47.2	16.5	-54.2
3	10.0	10.0	-25.1	10.0	-28.2	10.4	-34.8	12.5	-42.1	14.9	-50.1	17.5	-58.7	20.3	-68.1	23.3	-78.2
3	20.0	10.0	-22.8	10.0	-25.6	10.0	-31.5	11.4	-38.2	13.6	-45.4	16.0	-53.3	18.5	-61.8	21.3	-71.0
3	50.0	10.0	-19.7	10.0	-22.1	10.0	-27.3	10.0	-33.0	11.9	-39.3	13.9	-46.1	16.1	-53.5	18.5	-61.4
3	100.0	10.0	-17.4	10.0	-19.5	10.0	-24.1	10.0	29.1	10.5	-34.7	12.4	-40.7	14.3	-47.2	16.5	-54.2
Roof Angle > 30-45 degrees																	
1	10.0	11.9	-13.0	13.3	-14.6	16.5	-18.0	19.9	-21.8	23.7	-25.9	27.8	-30.4	32.3	-35.3	37.0	-40.5
1	20.0	11.6	-12.3	13.0	-13.8	16.0	-17.1	19.4	-20.7	23.0	-24.6	27.0	-28.9	31.4	-33.5	36.0	-38.4
1	50.0	11.1	-11.5	12.5	-12.8	15.4	-15.9	18.6	-19.2	22.2	-22.8	26.0	-26.8	30.2	31.1	34.6	-35.7
1	100.0	10.8	-10.8	12.1	-12.1	14.9	-14.9	18.1	-18.1	21.5	-21.5	25.2	-25.2	29.3	-29.3	33.6	-33.6
2	10.0	11.9	-15.2	13.3	-17.0	16.5	-21.0	19.9	-25.5	23.7	-30.3	27.8	-35.6	32.3	-41.2	37.0	-47.3
2	20.0	11.6	-14.5	13.0	-16.3	16.0	-20.1	19.4	-24.3	23.0	-29.0	27.0	-34.0	31.4	-39.4	36.0	-45.3
2	50.0	11.1	-13.7	12.5	-15.3	15.4	-18.9	18.6	-22.9	22.2	-27.2	26.0	-32.0	30.2	-37.1	34.6	-42.5
2	100.0	10.8	-13.0	12.1	-14.6	14.9	-18.0	18.1	-21.8	21.5	-25.9	25.2	-30.4	29.3	-35.3	33.6	-40.5
3	10.0	11.9	-15.2	13.3	-17.0	16.5	-21.0	19.9	-25.5	23.7	-30.3	27.8	-35.6	32.3	-41.2	37.0	-47.3
3	20.0	11.6	-14.5	13.0	-16.3	16.0	-20.1	19.4	-24.3	23.0	-29.0	27.0	-34.0	31.4	-39.4	36.0	-45.3
3	50.0	11.1	-13.7	12.5	-15.3	15.4	-18.9	18.6	-22.9	22.2	-27.2	26.0	-32.0	30.2	-37.1	34.6	-42.5
3	100.0	10.8	-13.0	12.1	-14.6	14.9	-18.0	18.1	-21.8	21.5	-25.9	25.2	-30.4	29.3	-35.3	33.6	-40.5
Wall																	
4	10.0	13.0	-14.1	14.6	-15.8	18.0	-19.5	21.8	-23.6	25.9	-28.1	30.4	-33.0	35.3	-38.2	40.5	-43.9
4	20.0	12.4	-13.5	13.9	-15.1	17.2	-18.7	20.8	-22.6	24.7	-26.9	29.0	-31.6	33.7	-36.7	38.7	-42.1
4	50.0	11.6	-12.7	13.0	-14.3	16.1	-17.6	19.5	-21.3	23.2	-25.4	27.2	-29.8	31.6	-34.6	36.2	-39.7
4	100.0	11.1	-12.2	12.4	-13.6	15.3	-16.8	18.5	-20.4	22.0	-24.2	25.9	-28.4	30.0	-33.0	34.4	-37.8
5	10.0	13.0	-17.4	14.6	-19.5	18.0	-24.1	21.8	-29.1	25.9	-34.7	30.4	-40.7	35.3	-47.2	40.5	-54.2
5	20.0	12.4	-16.2	13.9	-18.2	17.2	-22.5	20.8	-27.2	24.7	-32.4	29.0	-38.0	33.7	-44.0	38.7	-50.5
5	50.0	11.6	-14.7	13.0	-16.5	16.1	-20.3	19.5	-24.6	23.2	-29.3	27.2	-34.3	31.6	-39.8	36.2	-45.7
5	100.0	11.1	-13.5	12.4	-15.1	15.3	-18.7	18.5	-22.6	22.0	-26.9	25.9	-31.6	30.0	-36.7	34.4	-42.1

For SI: 1 ft^2 = 0.0929 m^2, 1 mph = 0.447 m/s, 1 psf = 47.88 N/m^2.

1 For effective areas or wind speeds between those given above the load may be interpolated, otherwise use the load associated with the lower effective area.

2 Table values shall be adjusted for height and exposure by multiplying by adjustment coefficients in Table 1606.2D.

3 See Figure 1606.2(c) for location of zones.

4 Plus and minus signs signify pressures acting toward and away from the building surfaces.

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TABLE 1606.2C
ROOF OVERHANG COMPONENT AND CLADDING DESIGN WIND PRESSURES FOR A BUILDING WITH MEAN ROOF HEIGHT OF 30 FEET LOCATED IN EXPOSURE B (psf)

Zone	Effective Wind Area (ft^2)	Basic Wind Speed v (mph - 3 second gust) 90	100	110	120	130	140	150
Roof Angle > 0-10 degrees								
2	10	-21.0	-25.9	-31.4	-37.3	-43.8	-50.8	-58.3
2	20	-20.6	-25.5	-30.8	-36.7	-43.0	-49.9	-57.3
2	100	-19.8	-24.4	-29.5	-35.1	-41.2	-47.8	-54.9
3	10	-34.6	-42.7	-51.6	-61.5	-72.1	-83.7	-96.0
3	20	-27.1	-33.5	-40.5	-48.3	-56.6	-65.7	-75.4
3	100	-10.0	-12.2	-14.8	-17.6	-20.6	-23.9	-27.4
Roof Angle > 10 - 30 degrees								
2	10	-27.2	-33.5	-40.6	-48.3	-56.7	-65.7	-75.5
2	20	-27.2	-33.5	-40.6	-48.3	-56.7	-65.7	-75.5
2	100	-27.2	-33.5	-40.6	-48.3	-56.7	-65.7	-75.5
3	10	-45.7	-56.4	-68.3	-81.2	-95.3	-110.6	-126.9
3	20	-40.5	-50.0	-60.5	-72.0	-84.5	-98.0	-112.5
3	100	-28.4	-35.1	-42.4	-50.5	-59.3	-68.7	-78.9
Roof Angle > 30 - 45 degrees								
2	10	-24.7	-30.5	-36.9	-43.9	-51.5	-59.8	-68.6
2	20	-24.0	-29.6	-35.8	-42.6	-50.0	-58.0	-66.5
2	100	-22.2	-27.4	-33.2	-39.5	-46.4	-53.8	-61.7
3	10	-24.7	-30.5	-36.9	-43.9	-51.5	-59.8	-68.6
3	20	-24.0	-29.6	-35.8	-42.6	-50.0	-58.0	-66.5
3	100	-22.2	-27.4	-33.2	-39.5	-46.4	-53.8	-61.7

For SI: 1 psf = 47.88 N/m^2, 1 ft^2 = 0.0929 m^2, 1 mph = 0.447 m/s.
Note: For effective areas between those given above the load may be interpolated, otherwise use the load may be interpolated, otherwise use the load associated with the lower effective area.

TABLE 1606.2D
HEIGHT AND EXPOSURE ADJUSTMENT COEFFICIENTS

Mean Roof Height	Exposure B	C	D
15	1.00	1.21	1.47
20	1.00	1.29	1.55
25	1.00	1.35	1.61
30	1.00	1.40	1.66
35	1.05	1.45	1.70
40	1.09	1.49	1.74
45	1.12	1.53	1.78
50	1.16	1.56	1.81
55	1.19	1.59	1.84
60	1.22	1.62	1.87

Note: All table values shall be adjusted for other exposures and heights by multiplying by the above coefficients.

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Gregory S. Wayland, PE FL PE #54396 FL COA #8236
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Date: 1/12/2006
By: GSW
Page: 13

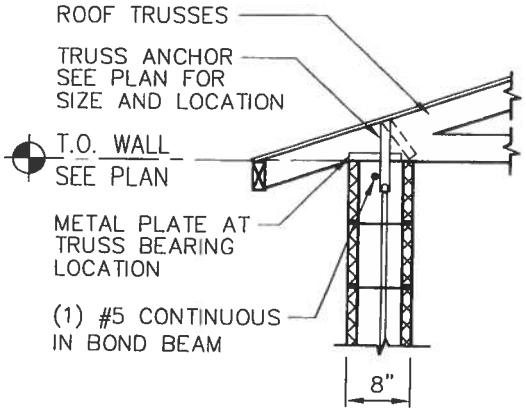
Project Name: **BEACH RESIDENCE**
WSE Project Number: **05170**
Project Location: Lake City, Florida
For:

ROOF TRUSS ANCHOR SCHEDULE

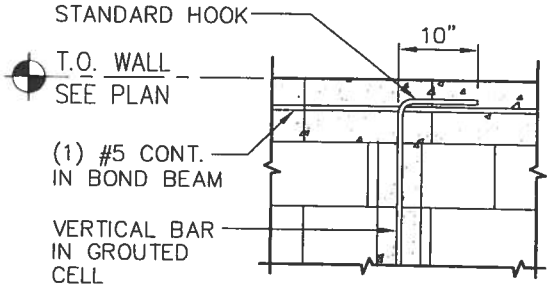
Truss Engineering: MAYO TRUSS CO., INC.
Anchors: SIMPSON STRONG-TIE CO., INC.
Date: 12/23/2005

1. TRUSS TO TRUSS CONNECTIONS ARE TO BE SPECIFIED AND SUPPLIED BY TRUSS MANUFACTURER.
2. USE "META16" FOR ALL TRUSSES BEARING ON MASONRY UNLESS OTHERWISE NOTED BELOW (U = 1450 lb).
3. USE "H2.5A" FOR ALL TRUSSES BEARING ON WOOD UNLESS OTHERWISE NOTED BELOW (U = 535 lb).

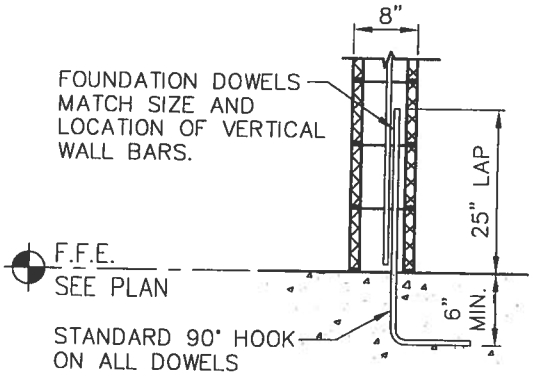
TRUSS DESIGNATION	Bearing Point #1		Bearing Point #2		Bearing Point #3		Bearing Point #4	
	Uplift (lb)	Anchor	Uplift (lb)	Anchor	Uplift (lb)	Anchor	Uplift (lb)	Anchor
A20	200	META16	670	H10	269	META16		
A21	128	META16	1204	LGT2	651	META16		
D1	1769	(2)META16	1786	(2)META16				



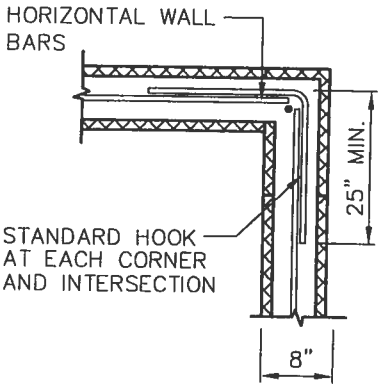
1 EXTERIOR TRUSS BEARING
1/2" = 1'-0"



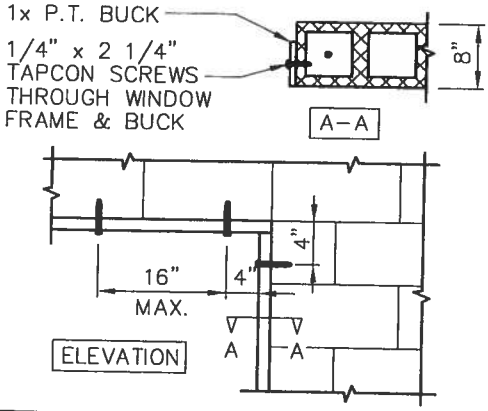
2 HOOK TO BOND BEAM
1/2" = 1'-0"



3 WALL BASE
1/2" = 1'-0"



4 WALL CORNER REINFORCING
1/2" = 1'-0"



5 DOOR/WINDOW BUCK
1/2" = 1'-0"

WSE
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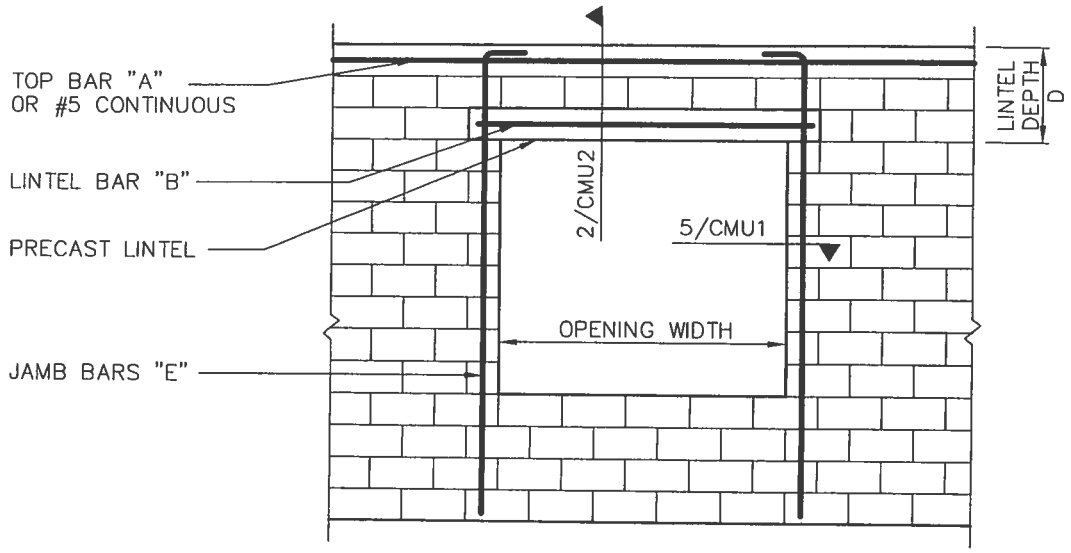
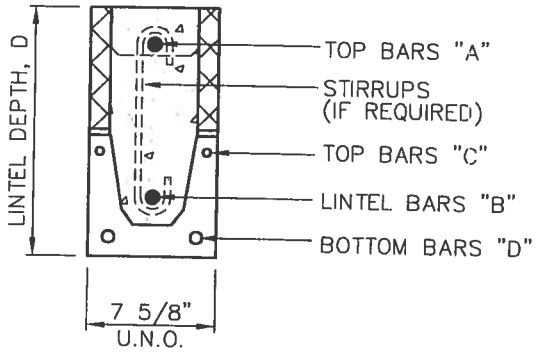
DWG. NAME: TYPICAL CMU WALL DETAILS
SCALE: VARIES
PROJECT NAME:
BEACH RESIDENCE
LAKE CITY, FLORIDA
PROJECT NO: 05170
DRAWN BY: GSW
DATE: 1/12/2006
DWG NO. CMU1



1 OPENING ELEVATION
1/4" = 1'-0"

MASONRY OPENING	LINTEL MARK	LINTEL DEPTH D (IN)	MASONRY REINFORCING			PRECAST LINTEL REINFORCING		JAMB BARS "E"
			TOP BARS "A"	LINTEL BARS "B"	STIRRUPS	TOP BARS "C"	BOTTOM BARS "D"	
4'-8"	A	16	(1) #5	(1) #5	NONE	NONE	(2) #3	(1) #5
6'-4"	B	16	(1) #5	(1) #5	NONE	(2) #2	(2) #4	(1) #5
9'-4"	B	16	(1) #5	(1) #5	NONE	(2) #2	(2) #4	(1) #5
11'-4" BACK PORCH LINTEL	E	16	(1) #5	(1) #5	NONE	(2) #4	(2) #6	(2) #5
18'-0" GARAGE DOOR LINTEL	E	16	(1) #5	(1) #5	#3@8	(2) #4	(2) #6	(2) #5

1. PRECAST U-SHAPED LINTELS BY CEMENT PRECAST OR EQUAL.
2. PRECAST CONCRETE: 4,000 PSI COMPRESSIVE STRENGTH.
3. PRECAST REINFORCING: ASTM A615, GRADE 60.
4. PROVIDE MINIMUM 8" BEARING BOTH ENDS.
5. POUR PRECAST LINTEL AND MASONRY ABOVE MONOLITHICALLY.
6. LINTEL WIDTH IS 7 5/8" UNLESS OTHERWISE NOTED.
7. E+CIP = TYPE E PRECAST LINTEL WITH CAST-IN-PLACE CONCRETE ABOVE INSTEAD OF FILLED MASONRY. CONCRETE TO BE 3,000 PSI.
8. SHORE LINTELS OVER 12 FEET LONG FOR 14 DAYS.



2 TYPICAL MASONRY LINTELS
1" = 1'-0"

WSE
WAYLAND
STRUCTURAL ENGINEERING
Gregory S. Wayland, PE
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8200 SW 16th Place
Gainesville, FL 32607
Phone (352) 331-0727
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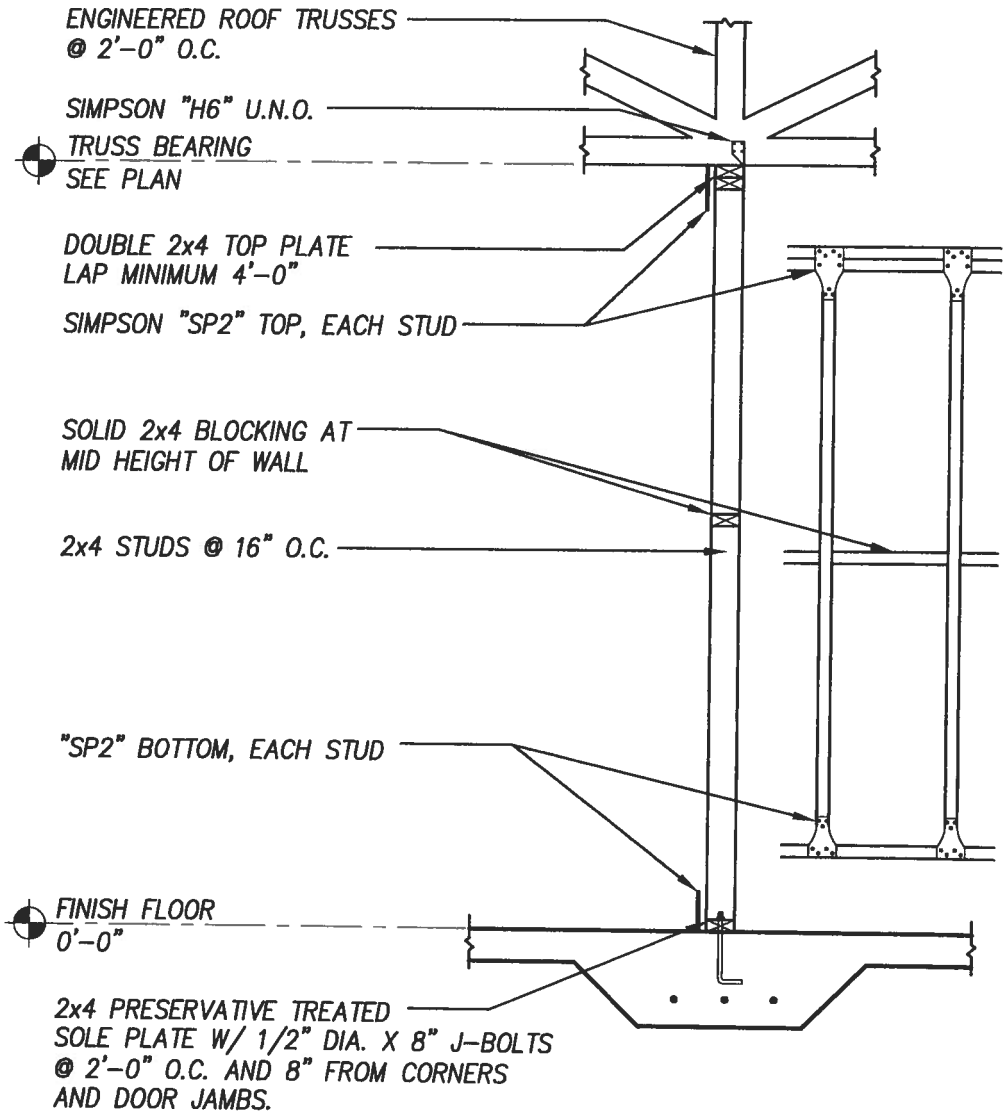
DWG. NAME: TYPICAL CMU WALL DETAILS
SCALE: VARIES
PROJECT NAME:
BEACH RESIDENCE
LAKE CITY, FLORIDA
PROJECT NO: 05170
DRAWN BY: GSW
DATE: 1/12/2006
DWG NO. CMU2



A

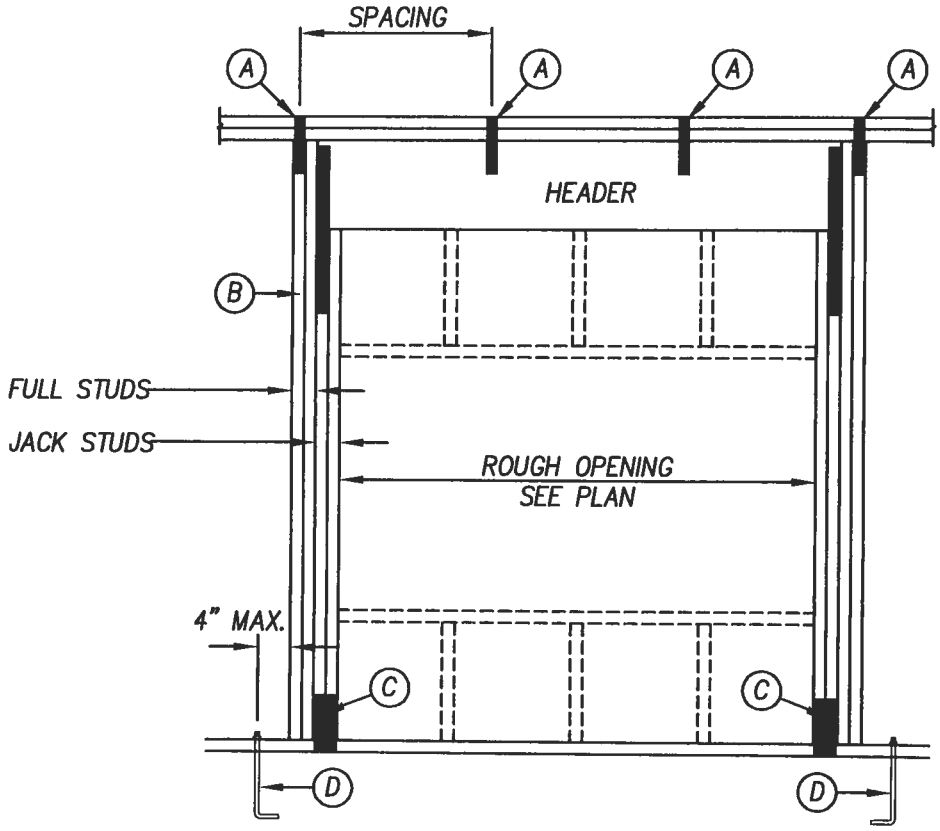
Typical Interior Bearing Wall

1/2" = 1'-0"

WOOD-W11

HEADER SCHEDULE							
HEADER SPAN (FT)	HEADER	QTY JACK STUDS	QTY FULL STUDS	UPLIFT ANCHORS			
				(A)	(B)	(C)	(D)
4'-0"	(2) 2x6	1	2	SPH4 @ 24"	(1) LSTA18	(1) SPH4	1/2" x 8" J-BOLT
6'-0"	(2) 2x8	2	2	↓	(2) LSTA18	(2) SPH4	1/2" x 8" J-BOLT
8'-0"	(2) 2x10	2	3	↓	(2) LSTA18	(2) SPH4	1/2" x 8" J-BOLT

1. USE NO. 2 SOUTHERN PINE FOR ALL DIMENSIONAL LUMBER HEADERS.
2. USE 1 3/4" THICK "GP-LAM" LAMINATED VENEER LUMBER (Fb = 2950 PSI) FOR LVL HEADERS. BY GEORGIA PACIFIC OR EQUIVALENT.
3. ALL CONNECTORS ARE BY SIMPSON STRONG-TIE OR EQUIVALENT.
4. PROVIDE 1/2" OSB OR PLYWOOD SPACER BETWEEN HEADER PLYS FOR DIMENSIONAL LUMBER.
5. FASTEN HEADER PLYS TOGETHER WITH 16d NAILS @ 12" O.C. STAGGERED TOP AND BOTTOM.
6. FASTEN JAMB STUDS TOGETHER WITH 10d NAILS @ 12" O.C.
7. TOP PLATE ANCHORS (A) ARE REQUIRED ONLY ON ALL UNSHEATHED BEARING WALLS.



B **Typical Header Schedule**

1/2" = 1'-0"

WOOD-W08A