V# 13545

Columbia County New Building Permit Application

For Office Use Only Application # 44481 Date Received 2/7 By MG Permit # 39317 / 39318

Zoning Official LW / LH Date 2-10-20 Flood Zone X Land Use RLD Zoning RSF-1

FEMA Map # _____ Elevation _____ MFE _____ River _____ Plans Examiner T.C. Date 2-7-20

Comments _____

☑ NOC ☑ EH ☑ Deed or PA ☑ Site Plan ☐ State Road Info ☑ Well letter ☑ 911 Sheet ☐ Parent Parcel # _____

☐ Dev Permit # _____ ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter

☐ Owner Builder Disclosure Statement ☐ Land Owner Affidavit ☐ Ellisville Water ☑ App Fee Paid ☑ Sub VF Form

Septic Permit No. 20-0069 OR City Water Fax (386) 719-9899

Applicant (Who will sign/pickup the permit) Matthew A. Erkinger Phone (386) 754-5555

Address 248 SE Nassau St. Lake City, FL 32025

Owners Name Tony & Nichol Robertson Phone (386) 867-5605

911 Address 614 SE Press Ruth Drive

Contractors Name Matthew A. Erkinger ST Phone (386) 754-5555

Address 248 SE Nassau St., Lake City, FL 32025

Contractor Email info@erkingerhomes.com ***Include to get updates on this job.

Fee Simple Owner Name & Address _____

Bonding Co. Name & Address _____

Architect/Engineer Name & Address DISOSWAY DESIGN GROUP - 163 SW MIDTOWN PLACE Suite 103

Mortgage Lenders Name & Address CAMPUS USA 1900 SW 34th ST GAINESVILLE FL.

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

Property ID Number 15-4S-17-08356-004 Estimated Construction Cost 206,000.00

Subdivision Name _____ Lot ____ Block ____ Unit ____ Phase ____

Driving Directions from a Major Road SE BAYA EAST TO SE COUNTRY CLUB ROAD, TURN LEFT. 3.5 MILE TO LIGHT-CR252, TURN LEFT. .8 MILE TO PRESS RUTH DRIVE, TURN LEFT. .5 MILE TO ERKINGER SIGN ON LEFT

Construction of SINGLE FAMILY RESIDENCE _____ Commercial OR X Residential

Proposed Use/Occupancy RESIDENTIAL Number of Existing Dwellings on Property 0

Is the Building Fire Sprinkled? NO If Yes, blueprints included _____ Or Explain _____

Circle Proposed - (Culvert Permit for 2nd Prop) or Culvert Waiver or D.O.T. Permit or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 100'+- Side 80'+- Side 110'+- Rear 1,300'+-

Number of Stories 1 Heated Floor Area 1804 ☑ Total Floor Area 2300 ☑ Acreage 16.32

Zoning Applications applied for (Site & Development Plan, Special Exception, etc.) _____

2/19 - email sent

Columbia County Building Permit Application

CODE: Florida Building Code 2014 and the 2011 National Electrical Code.

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.

TIME LIMITATIONS OF APPLICATION : An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless pursued in good faith or a permit has been issued.

TIME LIMITATIONS OF PERMITS: Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment: According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO CONTRACTOR AND AGENT: ***YOU ARE HEREBY NOTIFIED*** as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: I CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.

NOTICE TO OWNER: There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. You must verify if your property is encumbered by any restrictions or face possible litigation and or fines.

Tony E. ROBERTSON — **Print Owners Name**

T E Robertson SR. — **Owners Signature**

****Property owners must sign here before any permit will be issued.**

****If this is an Owner Builder Permit Application then, ONLY the owner can sign the building permit when it is issued.**

CONTRACTORS AFFIDAVIT: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit including all application and permit time limitations.

Contractor's Signature

Contractor's License Number CRC1330825
Columbia County
Competency Card Number 154

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 10 **day of** Jan **20**20.

Personally known ____ **or Produced Identification** FL D/L

State of Florida Notary Signature (For the Contractor)

SEAL:

Notary Public State of Florida
Robert S Stewart
My Commission GG 128943
Expires 09/26/2021

(17)

App# 44481

CAROL CHADWICK, P.E.
Civil Engineer
1208 S.W. Fairfax Glen
Lake City, FL 32025
307.680.1772
ccpewyo@gmail.com
www.carolchadwickpe.com

November 4, 2019

Matthew Erkinger
Erkinger Construction Group
matthew1@erkingerhomes.com

re: ELEVATION LETTER – 614 SE PRESS RUTH DRIVE, LAKE CITY, FL

As requested, I inspected the building site for the proposed construction at the above referenced site. The foundation location was staked at the time of the inspection. The photo was taken from Press Ruth Drive looking west at the building site. The natural topography of the property naturally slopes to the west away from Press Ruth Drive. Per the SRWMD Flood Report, the proposed building site is located above and outside the FEMA flood zones on the property.

CC Job #FL19147

The elevation of the road adjacent to the site is 134.00 +/-. The highest existing ground elevation at the foundation is 4.5' below the existing road or 129.50+/-. The minimum finished floor of the home will be 1.5' above the highest existing ground elevation or 131.00. The finished floor of the home will be below the nearest adjacent street.

A swale will be graded between the street and the home to prevent direct precipitation runoff from impacting the home.

I certify that the minimum finished floor elevation listed above will protect the structure against water damage from a base flood event, as defined in Article 8 of the Land Development Regulations.

Should you have any questions, please don't hesitate to contact me.

Respectfully,

Digitally signed by Carol Chadwick
DN: c=US, o=Unaffiliated, ou=A01410C0000016CDF503D0F00000CBA, cn=Carol Chadwick
Date: 2019.11.04 17:05:42 -05'00'

Carol Chadwick, P.E.

attachments: SRWMD Flood Report
aerial with contours

(2)

SUBCONTRACTOR VERIFICATION

APPLICATION/PERMIT # _____ JOB NAME _____

THIS FORM MUST BE SUBMITTED BEFORE A PERMIT WILL BE ISSUED

Columbia County issues combination permits. One permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the general contractors permit.

NOTE: *It shall be the responsibility of the general contractor to make sure that all of the subcontractors are licensed with the Columbia County Building Department.*
Use website to confirm licenses: http://www.columbiacountyfla.com/PermitSearch/ContractorSearch.aspx

NOTE: If this should change prior to completion of the project, it is your responsibility to have a corrected form submitted to our office, before that work has begun.

Violations will result in stop work orders and/or fines.

			Need
ELECTRICAL ☑	Print Name Mark Matthews	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC# 26	Company Name: Matthews Electric		
	License #: EC 13005959	Phone #: 386-344-2029	
MECHANICAL/ A/C ☑	Print Name Richard C Register	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC# 1052	Company Name: Registers Heating & Air		
	License #: CAC041267	Phone #: (904) 384-2862	
PLUMBING/ GAS ☑	Print Name Cody Bowers	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC# 715	Company Name: Bowers Plumbing		
	License #: CFC 1427145	Phone #: 386-623-0509	
ROOFING ☑	Print Name MARLACE POWELL	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC# 1034	Company Name: POWELL & SONS ROOFING INC		
	License #: CCC057307	Phone #: 386-209-5198	
SHEET METAL ☐	Print Name	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC#	Company Name:		
	License #:	Phone #:	
FIRE SYSTEM/ SPRINKLER ☐	Print Name	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC#	Company Name:		
	License#:	Phone #:	
SOLAR ☐	Print Name	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC#	Company Name:		
	License #:	Phone #:	
STATE SPECIALTY ☐	Print Name	Signature	☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
CC#	Company Name:		
	License #:	Phone #:	

Ref: F.S. 440.103; ORD. 2016-30

Columbia County Property Appraiser

Jeff Hampton

2020 Working Values
updated: 11/27/2019

Parcel: << **15-4S-17-08356-004** >>

Aerial Viewer Pictometery Google Maps

Owner & Property Info

Result: 29 of 29

Owner	ROBERTSON TONY E 614 SE PRESS RUTH DR LAKE CITY, FL 32025		
Site	614 PRESS RUTH DR, LAKE CITY		
Description*	BEG SE COR OF SW1/4 OF SE1/4, W 188.81 FT, N 625.03 FT, E 1510.54 FT TO W MAINT R/W OF SE PRESS RUTH DR, S ALONG R/W 240.79 FT, W 633.80 FT, S 384.31 FT , W 686.15 FT TO POB WD 1338-2151, QC 1396-2710,		
Area	16.32 AC	S/T/R	15-4S-17E
Use Code**	MISC RES (000700)	Tax District	2

*The Description above is not to be used as the Legal Description for this parcel in any legal transaction.
**The Use Code is a FL Dept. of Revenue (DOR) code and is not maintained by the Property Appraiser's office. Please contact your city or county Planning & Zoning office for specific zoning information.

Property & Assessment Values

2019 Certified Values		2020 Working Values	
Mkt Land (1)	$28,723	Mkt Land (1)	$28,723
Ag Land (0)	$0	Ag Land (0)	$0
Building (0)	$0	Building (0)	$0
XFOB (1)	$22,500	XFOB (1)	$22,500
Just	$51,223	Just	$51,223
Class	$0	Class	$0
Appraised	$51,223	Appraised	$51,223
SOH Cap [?]	$0	SOH Cap [?]	$0
Assessed	$51,223	Assessed	$51,223
Exempt	$0	Exempt	$0
Total Taxable	county:$51,223 city:$51,223 other:$51,223 school:$51,223	Total Taxable	county:$51,223 city:$51,223 other:$51,223 school:$51,223

Sales History

Sale Date	Sale Price	Book/Page	Deed	V/I	Quality (Codes)	RCode
10/22/2019	$100	1396/2710	QC	V	U	11
6/6/2017	$35,800	1338/2151	WD	V	Q	01

Building Characteristics

Bldg Sketch	Bldg Item	Bldg Desc*	Year Blt	Base SF	Actual SF	Bldg Value
NONE						

Extra Features & Out Buildings (Codes)

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0030	BARN,MT	2018	$22,500.00	1500.000	30 x 50 x 0	(000.00)

Land Breakdown

Land Code	Desc	Units	Adjustments	Eff Rate	Land Value
000700	MISC RES (MKT)	16.320 AC	1.00/1.00 1.00/0.50	$1,760	$28,723

Search Result: 29 of 29

Legend

Parcels

SectionTownshipAndRange

LidarElevations

2018 Flood Zones

0.2 PCT ANNUAL CHANCE

A

AE

AH

SRWMD Wetlands

2018Aerials

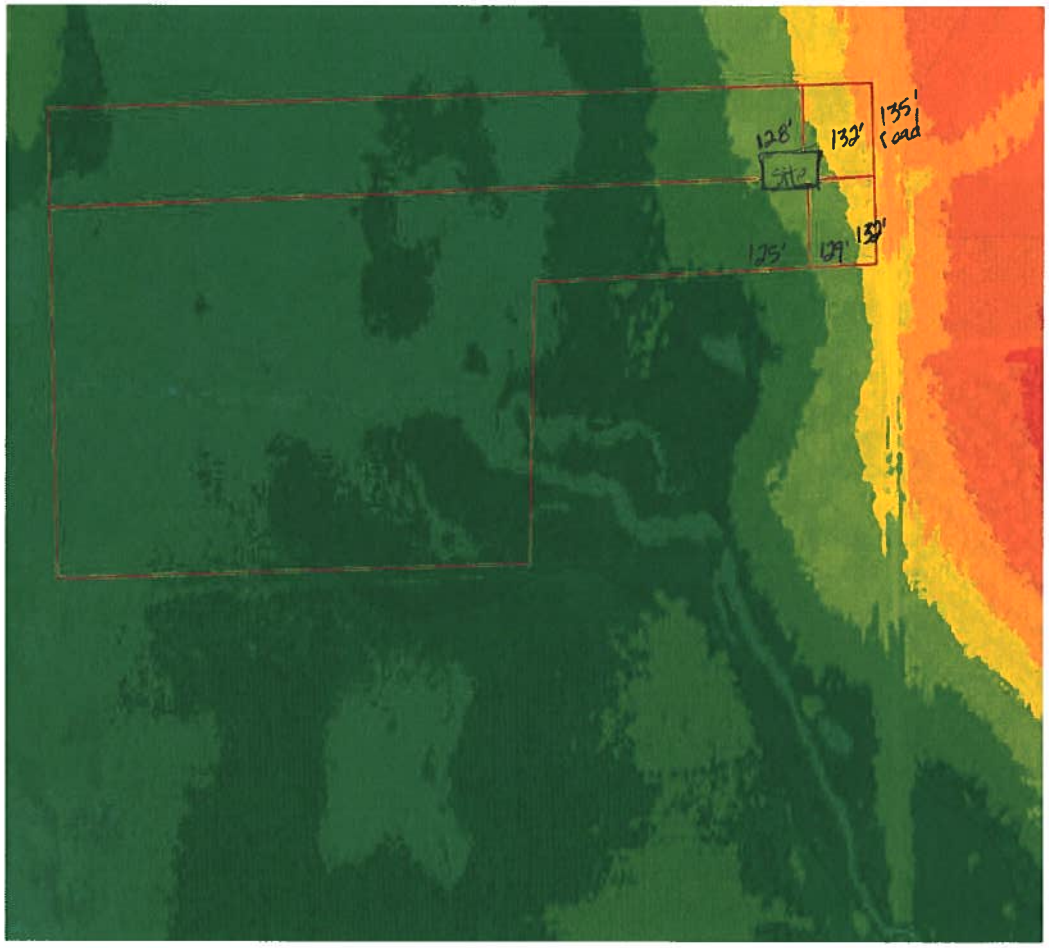
Roads

Roads

others

Columbia County, FLA - Building & Zoning Property Map

Printed: Mon Feb 10 2020 12:06:10 GMT-0500 (Eastern Standard Time)



Parcel Information

Parcel No: 15-4S-17-08356-004

Owner: ROBERTSON TONY E

Subdivision:

Lot:

Acres: 16.3216553

Deed Acres: 16.32 Ac

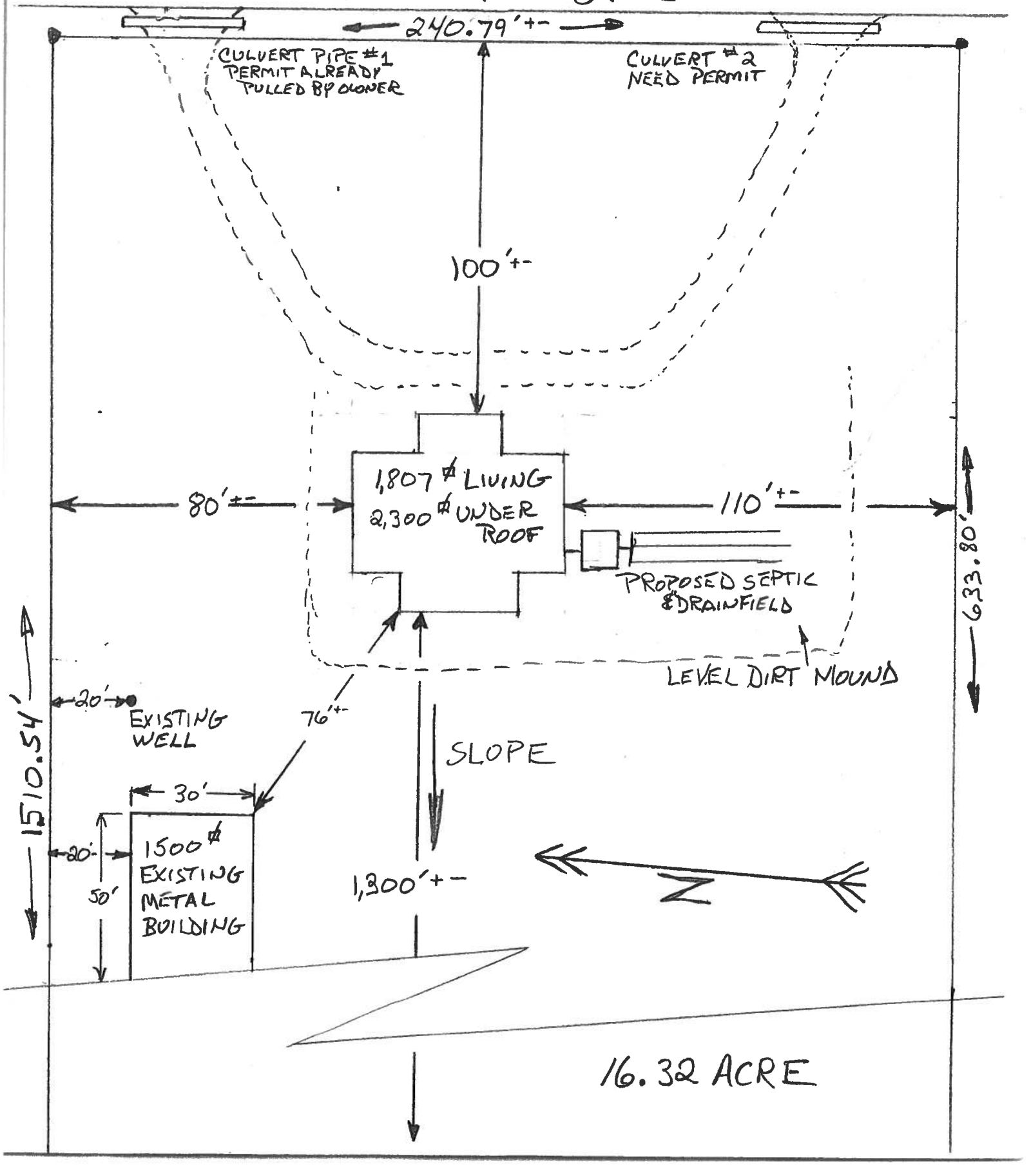
District: District 4 Toby Witt

Future Land Uses: Agriculture - 3, Residential - Very Low

Flood Zones: A,

Official Zoning Atlas: A-3, RSF-1

PLOT PLAN FOR: TONY & NICHOLE ROBERTSON
PARCEL ID# 15-45-17-08356-004
614 SE PRESS RUTH DRIVE



(9)

District No. 1 - Ronald Williams
District No. 2 - Rusty DePratter
District No. 3 - Bucky Nash
District No. 4 - Everett Phillips
District No. 5 - Tim Murphy

BOARD OF COUNTY COMMISSIONERS • COLUMBIA COUNTY

Address Assignment and Maintenance Document

To maintain the county wide 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 addressing 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 Services 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/Time Issued:	**5/24/2018 4:33:52 PM**
Address:	**614 SE PRESS RUTH Dr**
City:	**LAKE CITY**
State:	**FL**
Zip Code	**32025**
Parcel ID	**08356-004**

REMARKS: Address for proposed structure on parcel.

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

Address Issued By: **Signed:/ Matt Crews**

Columbia County GIS/911 Addressing Coordinator

COLUMBIA COUNTY
911 ADDRESSING / GIS DEPARTMENT

263 NW Lake City Ave., Lake City, FL 32055 Telephone: (386) 758-1125
Email: gis@columbiacountyfla.com

This Instrument Prepared By:
Campus USA Credit Union
14007 NW 1st Road
Jonesville, Florida 32669
(352)335-9090

After Recording Return To:
CAMPUS USA CREDIT UNION
14007 NW 1ST ROAD
JONESVILLE, FLORIDA 32669

[Space Above This Line For Recording Data]

Permit No.: _____ Tax Folio No.: R08356-004

NOTICE OF COMMENCEMENT

STATE OF FLORIDA

COUNTY OF Columbia

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.

1. Description of Property: 614 SE PRESS RUTH DRIVE, LAKE CITY, FLORIDA 32025
SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF SEE EXHIBIT "A"
ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.
SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF
A.P.N.: R08356-004

2. General description of improvement: Single Family Residence

3. Owner information or Lessee information if the Lessee contracted for the improvement:

   a. Name and address: Tony E Robertson SR, Carol Nicole Robertson
   614 SE PRESS RUTH DRIVE
   LAKE CITY, FLORIDA 32024

b. Interest in property: _____

c. Name and address of fee simple title holder (if other than Owner): _____

4. a. Contractor (name and address): ERKINGER CONSTRUCTION GROUP
248 SE NASSAU ST
LAKE CITY, FLORIDA 32054

b. Contractor's phone number: _____

5. Surety (if applicable, a copy of the payment bond is attached):

a. Name and address: _____

b. Phone Number: _____

c. Amount of bond: _____

6. a. Lender: CAMPUS USA CREDIT UNION
14007 NW 1ST ROAD
JONESVILLE, FLORIDA 32669

b. Lenders phone number: (352)335-9090

7. Persons within the State of Florida designated by Owner upon whom notices or other document may be served as provided by Section 713.13 (1) (a) 7, Florida Statutes:

a. Name and address: _____

b. Phone numbers of designated persons: _____

8. a. In addition to himself, Owner designates _____
of _____
to receive a copy of the Lienor's Notice as provided in Section 713.13 (1) (b), Florida Statues.

b. Phone number of person or entity designated by owner: _____

9. Expiration date of notice of commencement (the expiration date is 1 year from the date of recording unless a different date is specified): _____

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

T E R SR. 1/10/2020
Signature of Owner/Lessee Tony E Robertson SR Date

Carol Nicole R 1/10/2020
Signature of Owner/Lessee Carol Nicole Robertson Date

[Space Below This Line For Acknowledgment]

The foregoing instrument was acknowledged before me this 10th day of JANUARY, 2020

by Tony E Robertson SR AND Carol Nicole Robertson

who is personally known to me or who has produced Driver's License

(Type of Identification)

as identification.

Notary Public State of Florida
Robert S Stewart
My Commission GG 128943
Expires 09/28/2021

(Seal)

Signature

Robert Stewart
Name of Notary

Closer
Title

Serial Number, if any

Verification Pursuant to Section 892.525, Florida Statutes

UNDER PENALTIES OF PERJURY, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

T E R SR 1/10/2020
Borrower Tony E Robertson SR Date

Carol Nicole R 1/10/2020
Borrower Carol Nicole Robertson Date

EXHIBIT "A"
Property Description

Closing Date: **January 10, 2020**

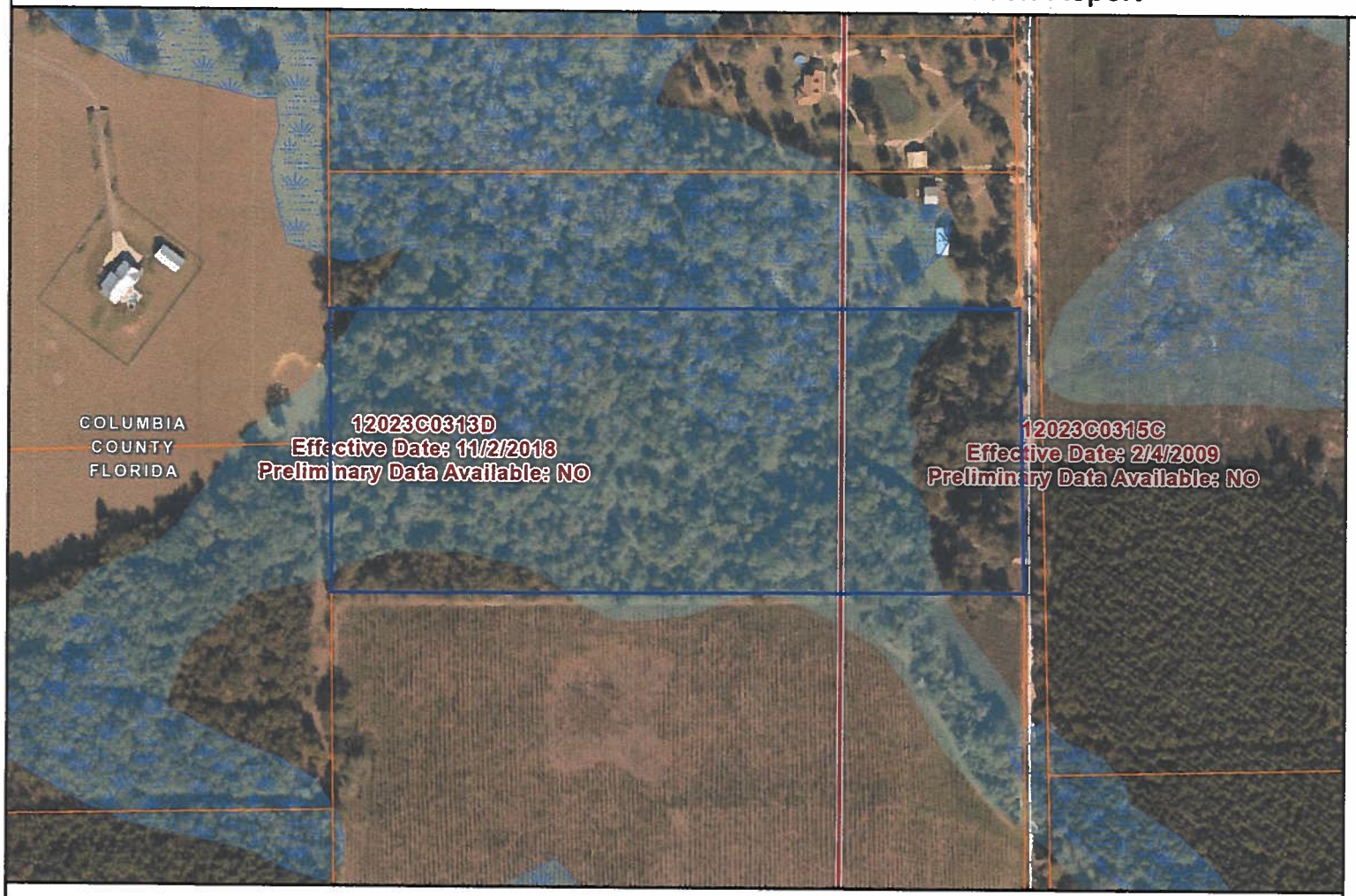
Borrower(s): **Tony E. Robertson, Sr. and Carol Nicole Robertson**

Property Address: **614 SE Press Ruth Road, Lake City, FL 32025**

PROPERTY DESCRIPTION:

A part of the NW (1/4) of the SE (1/4) and a part of the NE (1/4) of the SE (1/4) of Section 15, Township 4 South, Range 17 East, Columbia County, Florida, being more particularly described as follows:Begin at the Southeast corner of said NW (1/4) of the SE (1/4) and run thence S 87 degrees 43'37" W, along the South line of said NW (1/4) of the SE (1/4), 188.81 feet; thence N 02 degrees 36'41" W, 625.03 feet to the North line of the South 625 feet of said NW (1/4) of the SE (1/4); thence N 87 degrees 43'28" E, along said North line and the North line of the South 625 feet of the NE (1/4) of the SE (1/4), 1510.54 feet to the West maintained right of way of SE Press Ruth Drive; thence S 02 degrees 11'16" W, along said West maintained right of way, 240.79 feet; thence South 87 degrees 43'37" W, 633.80 feet; thence S 02 degrees 36'41" E, 384.31 feet to the South line of aforesaid NE (1/4) of the SE (1/4); thence S 87 degrees 43'37" W, along said South line, 686.15 feet to the Point of Beginning.

Suwannee River Water Management District
Effective Flood Information Report



Effective Flood Zones described on Page 2

- SFHA - Zones AE, AH, AO
- SFHA - AE w/Floodway
- SFHA - Zone VE
- SFHA - Zone A
- 0.2 % (shaded X)
- Wetlands
- FIRM Panel
- State Lands
- Counties
- SRWMD
- Parcels
- Depressions
- BFE
- Cross Sections

LOCATION

Date: 11-4-2019

Parcel: 15-4S-17-08356-001

County: COLUMBIA

STR: S015 T04 R17

Columbia Flood Hazard Areas Status 11/2/2018

FLOOD INFORMATION

Special Flood Hazard Area? (SFHA): Yes

Flood Zone(s): A

Floodway: No

1% Annual Chance Flood Elev (BFE): Not Applicable

10% Annual Chance Flood Elev: Not Applicable

50% Annual Chance Flood Elev: Not Applicable

Note: Elevations are based on NAVD88

FIRM Panel(s): 12023C0313D, 12023C0315C

The Federal Emergency Management Agency (FEMA) maintains information about map features, such as street locations and names, in or near designated flood hazard areas. The information herein represents the best available data as of the effective date shown. The applicable Flood Insurance Study and a Digital Flood Insurance Rate Map is available online (http://www.srwmdfloodreport.com). To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to also consult the FEMA Map Service Center at 1-800-358-9616 (http://www.msc.fema.gov) for information on available products associated with this FIRM panel. Available products from the Map Service Center may include previously issued Letters of Map Change.

Requests to revise flood information in or near designated flood hazard areas may be provided to FEMA during the community review period on preliminary maps, or through the Letter of Map Change process for effective maps.

Base Flood Elevation (BFE)

The elevation shown on the Flood Insurance Rate Map for Zones AE, AH, A1-A30, AR, AO, V1-V30, and VE that indicates the water surface elevation resulting from a flood that has a one percent chance of equaling or exceeding that level in any given year.

A

Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

AE, A1-A30

Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. In most instances, base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

AH

Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Usually areas of ponding with flood depths of 1 to 3 feet. Base Flood Elevations are determined.

AO

Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Usually areas of sheet flow on sloping terrain with flood depths of 1 to 3 feet. Base Flood Elevations are determined.

Supplemental Information:

10%-chance flood elevations (10-year flood-risk elevations) and 50%-chance flood elevations (2-year flood-risk elevations), are calculated during detailed flooding studies but are not shown on FEMA Digital Flood Insurance Rate Maps (FIRMs). They have been provided as supplemental information in the Flood Information section of this report.

AE FW (FLOODWAYS)

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood (1% annual chance flood event). The floodway must be kept open so that flood water can proceed downstream and not be obstructed or diverted onto other properties.

Please note, if you develop within the regulatory floodway, you will need to contact your Local Government and the Suwannee River Water Management District prior to commencing with the activity. Please contact the District at 800.226.1066.

VE

Areas with a 1% annual chance of flooding over the life of a 30-year mortgage with additional hazards due to storm-induced velocity wave action. Base Flood Elevations (BFEs) derived from detailed analyses.

X 0.2 PCT (X Shaded, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD)

Same as Zone X; however, detailed studies have been performed, and the area has been determined to be within the 0.2 percent annual chance floodplain (also known as the 500-year flood zone). Insurance purchase is not required in this zone but is available at a reduced rate and is recommended.

X

All areas outside the 1-percent annual chance floodplain are Zone X. This includes areas of 1% annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones.

LINKS

FEMA:

http://www.fema.gov

SRWMD:

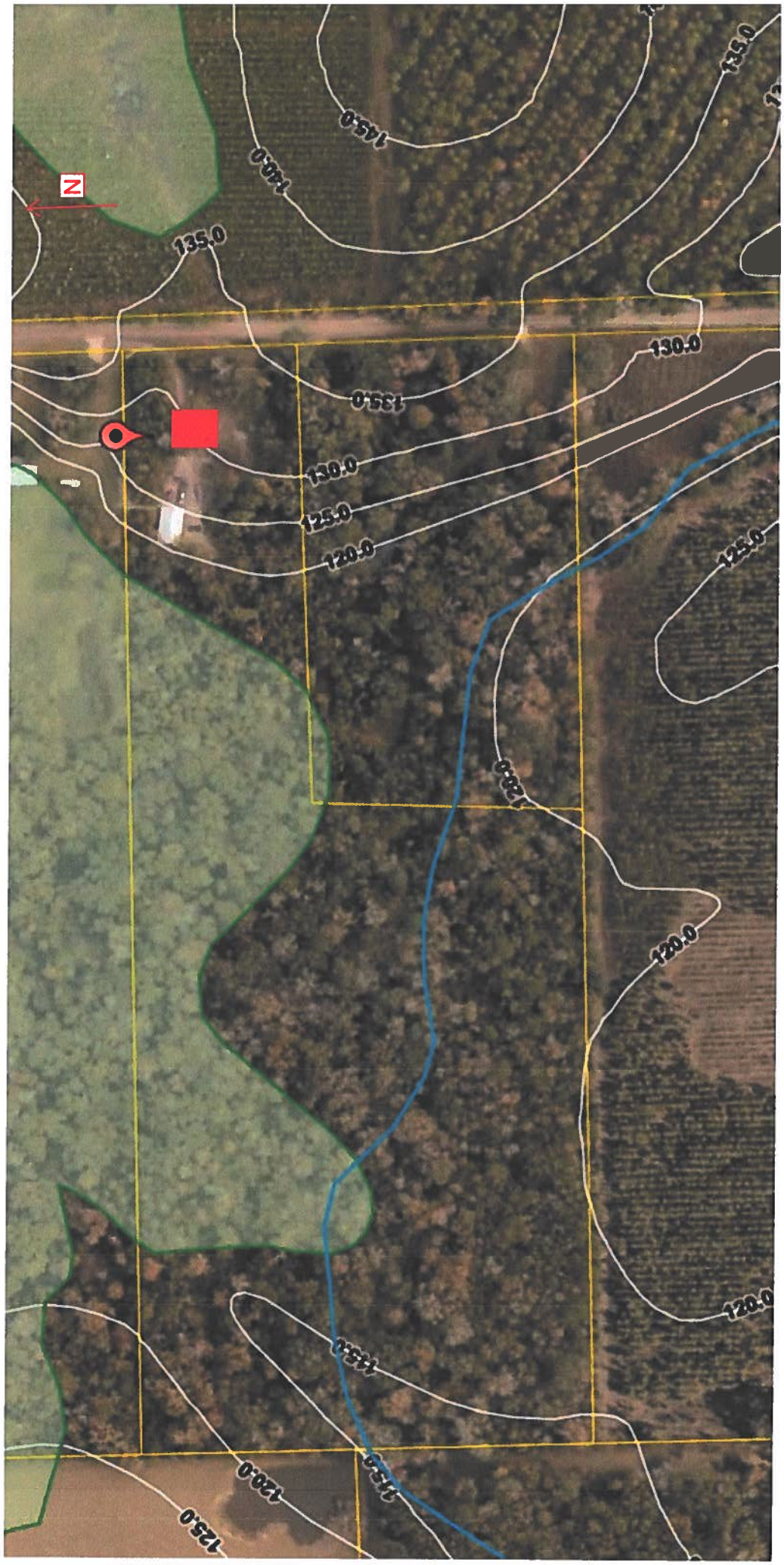
http://www.srwmd.state.fl.us

CONTACT

SRWMD
9225 County Road 49
Live Oak, FL 32060

(386) 362-1001

Toll Free:
(800) 226-1066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App# 44481

CR# 10-7460

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM
APPLICATION FOR CONSTRUCTION PERMIT

PERMIT NO. 20-0269
DATE PAID: 1/29/20
FEE PAID: 310.00
RECEIPT #: 1464554

APPLICATION FOR:
[X] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ]

APPLICANT: TONY & NICHLOE ROBERTSON

AGENT: ERKINGER CONSTRUCTION GROUP TELEPHONE: (386) 754-5555

MAILING ADDRESS: 248 SE NASSAU ST. LAKE CITY FL 32025

TO BE COMPLETED BY APPLICANT OR APPLICANT'S AUTHORIZED AGENT. SYSTEMS MUST BE CONSTRUCTED BY A PERSON LICENSED PURSUANT TO 489.105(3)(m) OR 489.552, FLORIDA STATUTES. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE DOCUMENTATION OF THE DATE THE LOT WAS CREATED OR PLATTED (MM/DD/YY) IF REQUESTING CONSIDERATION OF STATUTORY GRANDFATHER PROVISIONS.

PROPERTY INFORMATION

LOT: N/A BLOCK: N/A SUBDIVISION: METES AND BOUNDS PLATTED:

PROPERTY ID #: 15-4S-17-08356-004 ZONING: AG I/M OR EQUIVALENT: [NO]

PROPERTY SIZE: 16.320 ACRES WATER SUPPLY: [X] PRIVATE PUBLIC [ ]<=2000GPD [ ]>2000GPD

IS SEWER AVAILABLE AS PER 381.0065, FS? [NO] DISTANCE TO SEWER: N/A FT

PROPERTY ADDRESS: 614 SE PRESS RUTH DR. LAKE CITY

DIRECTIONS TO PROPERTY: 441 SOUTH TURN LEFT ON CR 252. TURN LEFT ON PRESS RUTH DR. SITE ON LEFT AFTER PAVEMENT ENDS.

BUILDING INFORMATION [X] RESIDENTIAL [ ] COMMERCIAL

Unit No.	Type of Establishment	No. of Bedrooms	Building Area Sqft	Commercial/Institutional System Design Table 1, Chapter 64E-6, FAC
1	HOUSE	3	1,807	
2				
3				
4				

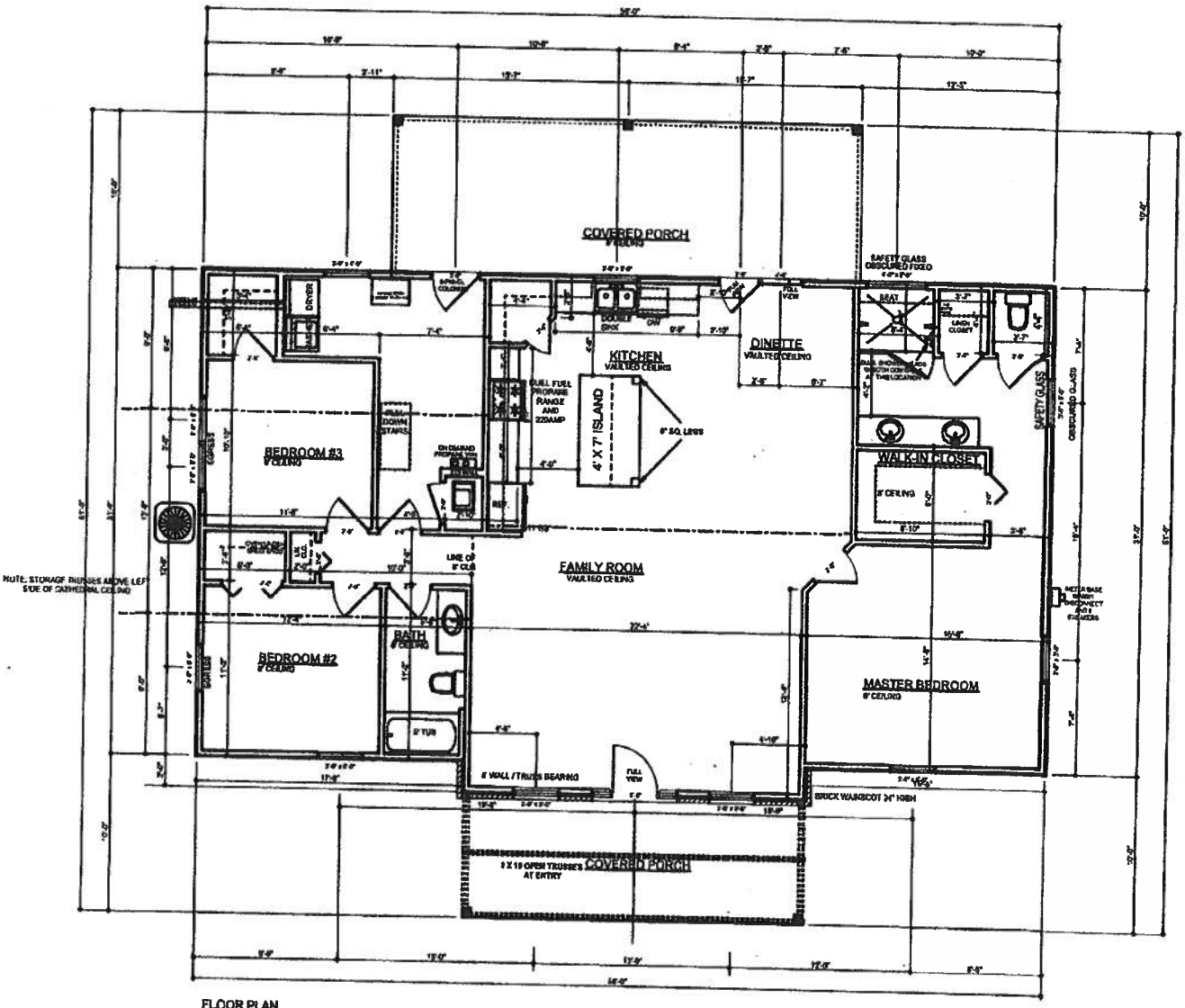
[ ] Floor/Equipment Drains [ ] Other (Specify)

SIGNATURE: [signature] DATE: 1-27-2020

DH 4015, 08/09 (Obsoletes previous editions which may not be used)
Incorporated 64E-6.001, FAC

20-0069

EXHIBIT "A5"



FLOOR PLAN

SCALE: 1/4" = 1'-0"

AREA SUMMARY

LIVING AREA	1,807 S.F.
PORCH AREA	493 S.F.
TOTAL AREA	2,300 S.F.

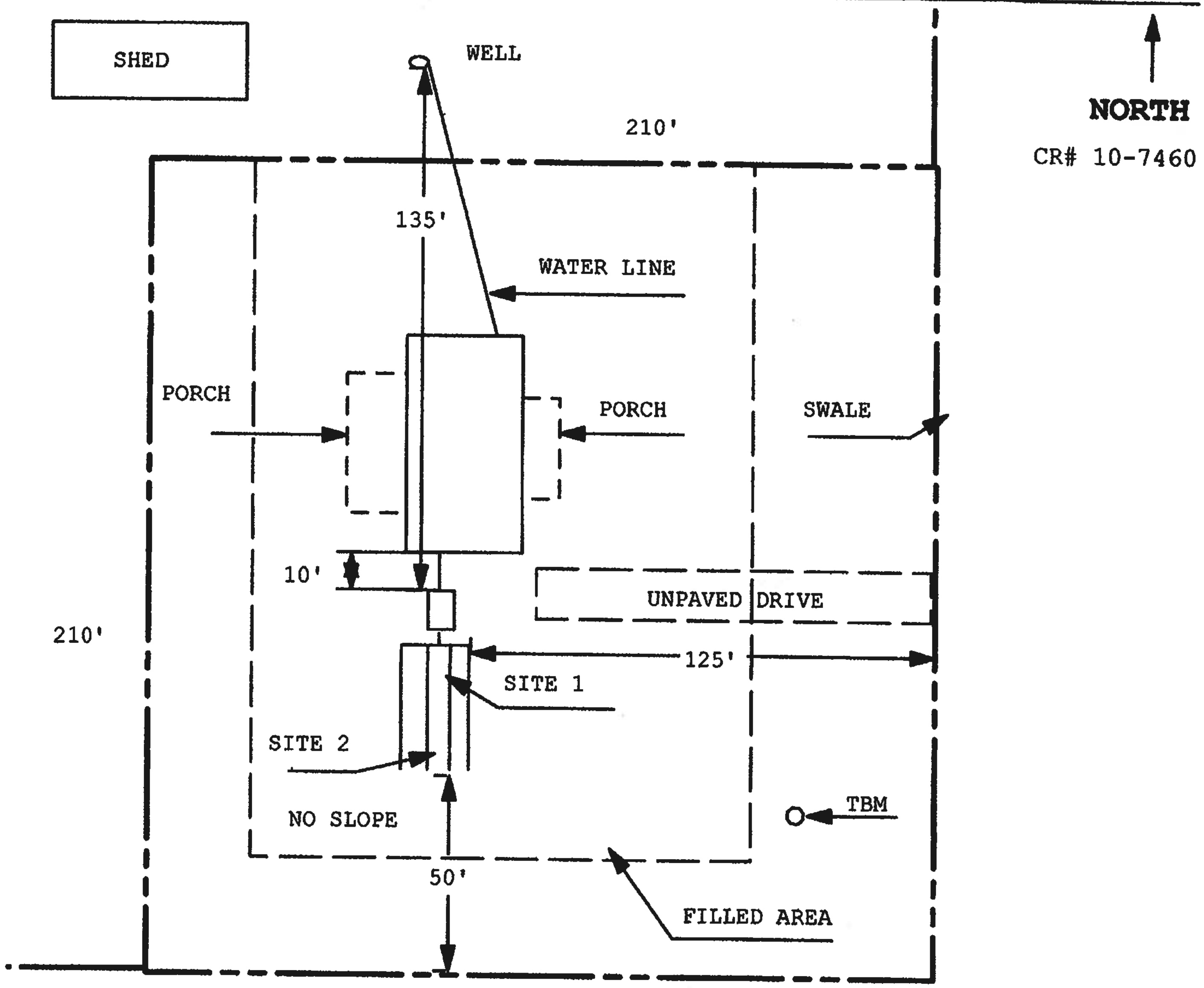
OWNER _____ DATE _____ OWNER _____ DATE _____

OWNER _____ DATE _____

Application for Onsite Sewage Disposal System Construction Permit. Part II Site Plan

Permit Application Number: 20-0069

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT



NO WELLS WITHIN 100' 1 INCH = 40 FEET

Site Plan Submitted By Paul Lloyd **Date** 1/24/20

Plan Approved ✓ **Not Approved** ____ **Date** ____

By ____ ____ **CPHU**

Notes: ____

(12)

CLYATT WELL DRILLING, INC.

(Established in 1971)
Post Office Box 180
Worthington Springs, Florida 32697
Phone (386)496-2488 *** FAX (386)496-4640

WELL DESCRIPTION

DESCRIPTION DATE
6/14/2017

CUSTOMER NAME AND ADDRESS	DESCRIPTION OF WORK
Erkinger Construction Group 248 SE Nassau Street Lake City, Fl 32025	

DESCRIPTION
Feet 4" Well 1 HP Submersible Pump Feet 1-1/4" Drop Pipe Feet 14/3 Submersible Pump Wire 81 Gallon Pressure Tank 4 X 1-1/4 Well Seal Pressure Relief Valve Controls and Fittings Sales Tax @ 7%

The above description is provided to give a brief description of the water well to be constructed by Clyatt Well Drilling, Inc.

(10)

COLUMBIA COUNTY BUILDING DEPARTMENT
RESIDENTIAL CHECK LIST

MINIMUM PLAN REQUIREMENTS: FLORIDA BUILDING CODE RESIDENTIAL 2014 EFFECTIVE 1 JULY 2015
AND THE NATIONAL ELECTRICAL 2011 EFFECTIVE 1 JULY 2015

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

ALL BUILDING PLANS MUST INDICATE COMPLIANCE WITH THE CURRENT 2014 FLORIDA BUILDING CODES RESIDENTIAL, EFFECTIVE 1 JULY 2015. NATIONAL ELECTRICAL CODE 2011 EFFECTIVE 1 JULY 2015. ALL PLANS OR DRAWINGS SHALL PROVIDE 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 SPEEDS ARE PER FLORIDA BUILDING CODE FIGURE 1609-A THROUGH 1609-C ULTIMATE DESIGN WIND SPEEDS FOR RISK CATEGORY AND BUILDINGS AND OTHER STRUCTURES
Revised 7/1/15

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL				Items to Include- Each Box shall be Circled as Applicable		
				Yes	No	N/A
1	Two (2) complete sets of plans containing the following:			X		
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void			X		
3	**Condition space (Sq. Ft.)**	1804	**Total (Sq. Ft.) under roof** 2300	IIIIIIII	IIIIIIII	IIIII

Designers name and signature shall be on all documents and a licensed architect or engineer, signature and official embossed seal shall be affixed to the plans and documents as per the FLORIDA BUILDING CODES RESIDENTIAL R101.2.1

Site Plan information including:

4	Dimensions of lot or parcel of land	X		
5	Dimensions of all building set backs	X		
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	X		
7	Provide a full legal description of property.	X		

Wind-load Engineering Summary, calculations and any details are required.

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL		Items to Include- Each Box shall be Circled as Applicable		
8	**Plans or specifications must show compliance with FBCR Chapter 3**	IIIIII	IIIII	IIIIII
		YES	NO	N/A
9	Basic wind speed (3-second gust), miles per hour	X		
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	X		
11	Wind importance factor and nature of occupancy	X		
12	The applicable internal pressure coefficient, Components and Cladding	X		
13	The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component, cladding materials not specifally designed by the registered design professional.	X		

Elevations Drawing including:

14	All side views of the structure	X		
15	Roof pitch	X		
16	Overhang dimensions and detail with attic ventilation	X		
17	Location, size and height above roof of chimneys	X		
18	Location and size of skylights with Florida Product Approval			N/A
18	Number of stories	X		
20A	Building height from the established grade to the roofs highest peak	X		

Floor Plan including:

20	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	X		
21	Raised floor surfaces located more than 30 inches above the floor or grade			N/A
22	All exterior and interior shear walls indicated	X		
23	Shear wall opening shown (Windows, Doors and Garage doors)	X		
24	Show compliance with Section FBCR 310 Emergency escape and rescue opening shown in each bedroom (net clear opening shown) and Show compliance with Section FBC 1405.13.2 where the opening of an operable window is located more than 72 inches above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Glazing between the floor and 24 inches shall be fixed or have openings through which a 4-inch-diameter sphere cannot pass.	X		
25	Safety glazing of glass where needed	X		
26	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)			N/A
27	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails			N/A
28	Identify accessibility of bathroom (see FBCR SECTION 320)	X		

All materials placed within opening or onto/into exterior walls, soffits or roofs shall have Florida product approval number and mfg. installation information submitted with the plans
(see Florida product approval form)

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

FBCR 403: Foundation Plans

		YES	NO	N/A
29	Location of all load-bearing walls footings indicated as standard, monolithic, dimensions, size and type of reinforcing.	X		
30	All posts and/or column footing including size and reinforcing	X		
31	Any special support required by soil analysis such as piling.			N/A
32	Assumed load-bearing valve of soil_____ Pound Per Square Foot			N/A
33	Location of horizontal and vertical steel, for foundation or walls (include # size and type) **For** structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system. Per the National Electrical Code article 250.52.3	X		

FBCR 506: CONCRETE SLAB ON GRADE

34	Show Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)	X		
35	Show control joints, synthetic fiber reinforcement or welded fire fabric reinforcement and Supports	X		

FBCR 318: PROTECTION AGAINST TERMITES

36	Indicate on the foundation plan if soil treatment is used for subterranean termite prevention or Submit other approved termite protection methods. **Protection shall be provided by registered termiticides**	X		

FBCR 606: Masonry Walls and Stem walls (load bearing & shear Walls)

37	Show all materials making up walls, wall height, and Block size, mortar type	X		
38	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	X		

Metal frame shear wall and roof systems shall be designed, signed and sealed by Florida Prof. Engineer or Architect

Floor Framing System: First and/or second story

39	Floor truss package shall including layout and details, signed and sealed by Florida Registered Professional Engineer			N/A
40	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or priers			N/A
41	Girder type, size and spacing to load bearing walls, stem wall and/or priers			N/A
42	Attachment of joist to girder			N/A
43	Wind load requirements where applicable	X		
44	Show required under-floor crawl space			N/A
45	Show required amount of ventilation opening for under-floor spaces			N/A
46	Show required covering of ventilation opening			N/A
47	Show the required access opening to access to under-floor spaces			N/A
48	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing			↓
49	Show Draftstopping, Fire caulking and Fire blocking			
50	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6			
51	Provide live and dead load rating of floor framing systems (psf).			

FBCR CHAPTER 6 WOOD WALL FRAMING CONSTRUCTION

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		YES	NO	N/A
52	Stud type, grade, size, wall height and oc spacing for all load bearing or shear walls	X		
53	Fastener schedule for structural members per table IRC 602.3 are to be shown	X		
54	Show Wood structural panel's sheathing attachment to studs, joist, trusses, rafters and structural members, showing fastener schedule attachment on the edges & intermediate of the areas structural panel sheathing	X		
55	Show all required connectors with a max uplift rating and required number of connectors and oc spacing for continuous connection of structural walls to foundation and roof trusses or rafter systems	X		
56	Show sizes, type, span lengths and required number of support jack studs, king studs for shear wall opening and girder or header per FBCB 2308.9.5	X		
57	Indicate where pressure treated wood will be placed	X		
58	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	X		
59	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	X		

FBCR :ROOF SYSTEMS:

60	Truss design drawing shall meet section FBCR 802.1.7.1 Wood trusses	X		
61	Include a layout and truss details, signed and sealed by Florida Professional Engineer	X		
62	Show types of connector's assemblies' and resistance uplift rating for all trusses and rafters	X		
63	Show gable ends with rake beams showing reinforcement or gable truss and wall bracing details	X		
64	Provide dead load rating of trusses	X		

FBCR 802:Conventional Roof Framing Layout

65	Rafter and ridge beams sizes, span, species and spacing	X		
66	Connectors to wall assemblies' include assemblies' resistance to uplift rating	X		
67	Valley framing and support details	X		
68	Provide dead load rating of rafter system	X		

FBCR 803 ROOF SHEATHING

69	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	X		
70	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	X		

ROOF ASSEMBLIES FRC Chapter 9

71	Include all materials which will make up the roof assembles covering	X		
72	Submit Florida Product Approval numbers for each component of the roof assembles covering	X		

FBCR Energy Conservation R.401

Residential construction shall comply with this code by using the following compliance methods in the Residential buildings compliance methods. **Two of the required forms are to be submitted**, *R 402-2014 As an alternative to the computerized Compliance Method A, the Alternate Residential Point System Method hand calculation, Alternate Form R 402-2014, may be used. All requirements specific to this calculation are located in Sub appendix C to Appendix G. Buildings complying by this alternative shall meet all mandatory requirements of this chapter. Computerized versions of the Alternate Residential Point System Method shall not be acceptable for code compliance.*

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		YES	NO	N/A
73	Show the insulation R value for the following areas of the structure	X		
74	Attic space	X		
75	Exterior wall cavity	X		
76	Crawl space	X		

HVAC information

77	Submit two copies of a Manual J sizing equipment or equivalent computation study	X		
78	Exhaust fans shown in bathrooms **Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous required**			N/A
79	Show clothes dryer route and total run of exhaust duct	X		

Plumbing Fixture layout shown

80	All fixtures waste water lines shall be shown on the foundation plan	X		
81	Show the location of water heater	X		

Private Potable Water

82	Pump motor horse power	X		
83	Reservoir pressure tank gallon capacity	X		
84	Rating of cycle stop valve if used	X		

Electrical layout shown including

85	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	X		
86	Show all 120-volt, single phase, 15- and 20-ampere branch circuits outlets required to be protected by **Ground-Fault Circuit Interrupter (GFCI) Article 210.8 A**	X		
87	Show the location of smoke detectors & Carbon monoxide detectors	X		
88	Show service panel, sub-panel, location(s) and total ampere ratings	X		
89	On the electrical plans identify the electrical service overcurrent protection device for the main electrical service. This device shall be installed on the exterior of structures to serve as a disconnecting means for the utility company electrical service. 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. Indicate if the utility company service entrance cable will be of the overhead or underground type. **For structures** with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an Grounding electrode system. Per the National Electrical Code article 250.52.3	X		
90	Appliances and HVAC equipment and disconnects	X		
91	Show all 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed **Combination arc-fault circuit interrupter,** Protection device. NEC 210.12A	X		

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

		YES	NO	N/A
92	**Building Permit Application** A current Building Permit Application is to be completed, by following the Checklist all supporting documents must be submitted. There is a **$15.00** application fee. The completed application with attached documents and application fee can be mailed.	X		
93	**Parcel Number** The parcel number (Tax ID number) from the Property Appraisers Office (386) 758-1083 is required. A copy of property deed is also required. www.columbiacountyfla.com	X		
94	**Environmental Health Permit or Sewer Tap Approval** A copy of a approved Columbia County Environmental Health (386) 758-1058			
95	**City of Lake City** A City Water and/or Sewer letter. Call 386-752-2031			N/A
96	**Toilet facilities shall be provided for all construction sites**	X		
97	**Town of Fort White** (386) 497-2321 If the parcel in the application for building permit is within the Corporate city limits of Fort White, an approval land use development letter issued by the Town of Fort is required to be submitted with the application for a building permit.			N/A
98	**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 a 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 8.5.2 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 8.5.3 of the Columbia County Land Development Regulations			N/A
99	**CERTIFIED FINISHED FLOOR ELEVATIONS** will be required on any project where the approved FIRM Flood Maps show the property is in a AE, Floodway, and AH flood zones. Additionally One Foot Rise letters are required for AE and AH zones. In the Floodway Flood zones a Zero Rise letter is required.	X		
100	A Flood development permit is also required for AE, Floodway & AH. Development permit cost is **$50.00**			N/A
101	**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. County Public Works Dept. determines the size and length of every culvert before instillation and completes a final inspection before permanent power is granted. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (**$50.00**) Separate Check when issued. If the project is to be located on an F.D.O.T. maintained road, then an F.D.O.T. access permit is required.	X		
102	**911 Address:** An application for a 911address must be applied for and **received** through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125.	X		

Disclosure Statement for Owner Builders *If you as the applicant will be acting as an owner/builder under section 489.103(7) of the Florida Statutes, submit the required owner builder disclosure statement form.*

Notice Of Commencement

A notice of commencement form **recorded** in the Columbia County Clerk Office is required to be filed with the building department Before Any Inspections can be preformed.

Section R101.2.1 of the Florida Building Code Residential:

The provisions of Chapter 1, Florida Building Code shall govern the administration and enforcement of the Florida Building Code, Residential.

Section 105 of the Florida Building Code defines the:

Time limitation of application.
An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Single-family residential dwelling.
Section 105.3.4 A building permit for a single-family residential dwelling must be issued within 30 working days of application therefor unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances.

Permit intent.
Section 105.4.1: A permit issued shall be constructed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code. Every permit issued shall become invalid unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

If work has commenced.
Section 105.4.1.1: If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

New Permit.
Section 105.4.1.2: If a new permit is not obtained within 180 days from the date the initial permit became null and void, the building official is authorized to require that any work which has been commenced or completed be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date if issuance of the new permit.

Work Shall Be:
Section 105.4.1.3: Work shall be considered to be in active progress when the permit has received an approved inspection within 180 days. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process.

The Fee:
Section 105.4.1.4: The fee for renewal reissuance and extension of a permit shall be set forth by the administrative authority.

Notification:
When the application is approved for permitting the applicant will be notified by phone as to the status by the Columbia County Building & Zoning Department.

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	Masonite	Fiberglass Ext. Door w/Composite Jm	FL4334-R9
B. SLIDING			
C. SECTIONAL/ROLL UP			
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	Magnolia	Vinyle Single Hung w/Low é Glass	FL16475-R2
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING			
B. SOFFITS	Kaycan	Alum. Soffets	FL16503-R1
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	Certainteed	30 YR Architectural	FL5444-R8
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	Alpine	Truss Plates	FL1999-3
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR			
ENVELOPE PRODUCTS			

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.

Contractor OR Agent Signature _____ Date _____

NOTES: _____

(16)

FORM R405-2017

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

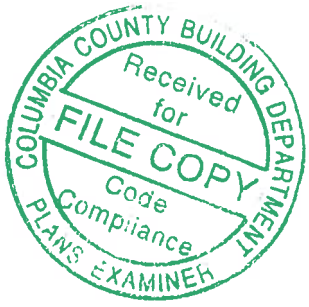
Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2017 Florida Building Code, Energy Conservation via the residential Simulated Performance Method shall include:

- ☐ *This checklist*
- ☐ *A Form R405 report that documents that the Proposed Design complies with Section R405.3 of the Florida Energy Code. This form shall include a summary page indicating home address, e-ratio and the pass or fail status along with summary areas and types of components, whether the home was simulated as a worst-case orientation, name and version of the compliance software tool, name of individual completing the compliance report (one page) and an input summary checklist that can be used for field verification (usually four pages/may be greater).*
- ☐ *Energy Performance Level (EPL) Display Card (one page)*
- ☐ *HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7*
- ☐ *Mandatory Requirements (five pages)*

Required prior to CO for the Performance Method:

- ☐ *Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- ☐ *A completed Envelope Leakage Test Report (usually one page)*
- ☐ *If Form R405 duct leakage type indicates anything other than "default leakage", then a completed Form R405 Duct Leakage Test Report (usually one page)*



FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	200164 Robertson	Builder Name:	Erkinger Construction Group
Street:	614 Press Ruth Way	Permit Office:	
City, State, Zip:	Lake City , FL ,	Permit Number:	
Owner:	Tony & C. Nicole Robertson	Jurisdiction:	
Design Location:	FL, Gainesville	County:	columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1807
Conditioned floor area below grade (ft²)	0

7. Windows(224.3 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.30	224.33 ft²
SHGC:	SHGC=0.20	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		4.662 ft.
Area Weighted Average SHGC:		0.200

8. Floor Types (1807.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1807.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1424.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1424.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1899.0 sqft.)	Insulation	Area
a. Roof Deck (Unvented)	R=22.0	1899.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Main, Ret: Main, AH: Main	6	361.4

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	24.0	SEER:16.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	24.0	HSPF:8.80

14. Hot water systems		
a. Propane	Tankless	Cap: 1 gallons EF: 0.620
b. Conservation features		
None		

15. Credits — Pstat

Glass/Floor Area: 0.124

Total Proposed Modified Loads: 50.05

Total Baseline Loads: 49.93

PASS

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

PREPARED BY: Evan Beamsley

DATE: 2020-02-06

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

OWNER/AGENT:

DATE: 2-6-20

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:

- **Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.**
- **Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).**

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	200164 Robertson	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1807	Lot #	
Owner Name:	Tony & C. Nicole Robertson	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Erkinger Construction Group	Rotate Angle:	270	Street:	614 Press Ruth Way
Permit Office:		Cross Ventilation:		County:	columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1807	15359.5

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1807	15359.5	Yes	6	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	178 ft	0	1807 ft²	----	0.3	0.3	0.4

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	2093 ft²	528 ft²	Dark	N	0.92	No	0.9	No	22	30.3

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Unvented	0	1807 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Unvented)	Main	0	Blown	1899 ft²	0.11	Wood

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	N=>W	Exterior	Frame - Wood	Main	13	12	5	8		99.3 ft²		0.23	0.75	0
____	2	N=>W	Exterior	Frame - Wood	Main	13	31	2	8		249.3 ft²		0.23	0.75	0
____	3	N=>W	Exterior	Frame - Wood	Main	13	12	5	8		99.3 ft²		0.23	0.75	0
____	4	E=>N	Exterior	Frame - Wood	Main	13	31		8		248.0 ft²		0.23	0.75	0
____	5	S=>E	Exterior	Frame - Wood	Main	13	15	8	8		125.3 ft²		0.23	0.75	0
____	6	E=>N	Exterior	Frame - Wood	Main	13	2	0	8		16.0 ft²		0.23	0.75	0
____	7	S=>E	Exterior	Frame - Wood	Main	13	22	8	8		181.3 ft²		0.23	0.75	0
____	8	W=>S	Exterior	Frame - Wood	Main	13	2		8		16.0 ft²		0.23	0.75	0
____	9	S=>E	Exterior	Frame - Wood	Main	13	17	8	8		141.3 ft²		0.23	0.75	0
____	10	W=>S	Exterior	Frame - Wood	Main	13	31		8		248.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	N=>W	Insulated	Main	None	.4	3		6	8	20 ft²
_____	2	N=>W	Insulated	Main	None	.4	2		6	8	13.3 ft²
_____	3	S=>E	Insulated	Main	None	.4	1		6	8	6.7 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to As Built (rotated 270 degrees).

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	N=>W	1	Metal	Low-E Double	Yes	0.3	0.2	N	12.0 ft²	1 ft 6 in	0 ft 6 in	None	None
_____	2	N=>W	2	Metal	Low-E Double	Yes	0.3	0.2	N	9.0 ft²	11 ft 6 in	0 ft 0 in	None	None
_____	3	N=>W	2	Metal	Low-E Double	Yes	0.3	0.2	N	22.2 ft²	11 ft 6 in	0 ft 0 in	None	None
_____	4	N=>W	3	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
_____	5	E=>N	4	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	1 ft 6 in	5 ft 6 in	None	None
_____	6	S=>E	5	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
_____	7	S=>E	7	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	8 ft 0 in	3 ft 0 in	None	None
_____	8	S=>E	7	Metal	Low-E Double	Yes	0.3	0.2	N	17.8 ft²	8 ft 0 in	3 ft 0 in	None	None
_____	9	S=>E	7	Metal	Low-E Double	Yes	0.3	0.2	N	13.3 ft²	8 ft 0 in	3 ft 0 in	None	None
_____	10	S=>E	9	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
_____	11	W=>S	10	Metal	Low-E Double	Yes	0.3	0.2	N	45.0 ft²	1 ft 6 in	8 ft 0 in	None	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000378	1791.9	98.38	185.01	.1457	7

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.8	24 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 16	24 kBtu/hr	720 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Propane	Tankless	Main	0.62	1 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	--- Supply --- Location	R-Value	Area	--- Return --- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Main	6	361.4 ft	Main	1 ft²	Default Leakage	Main	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Main

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 100

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. New (From Plans)
2. Single-family or multiple-family	2. Single-family
3. No. of units (if multiple-family)	3. 1
4. Number of bedrooms	4. 3
5. Is this a worst case? (yes/no)	5. No
6. Conditioned floor area (sq. ft.)	6. 1807
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.300
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.200
c) Area	7c. 224.3
8. Skylights	
a) U-factor:(weighted average)	8a. NA
b) Solar Heat Gain Coefficient (SHGC)	8b. NA
9. Floor type, insulation level:	
a) Slab-on-grade (R-value)	9a. 0.0
b) Wood, raised (R-value)	9b.
c) Concrete, raised (R-value)	9c.
10. Wall type and insulation:	
A. Exterior:	
1. Wood frame (Insulation R-value)	10A1. 13.0
2. Masonry (Insulation R-value)	10A2.
B. Adjacent:	
1. Wood frame (Insulation R-value)	10B1.
2. Masonry (Insulation R-value)	10B2.
11. Ceiling type and insulation level	
a) Under attic	11a. 0.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. No

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Main
13. Cooling system:	Capacity 24.0
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	16.0
14. Heating system:	Capacity 24.0
a) Split system heat pump	HSPF
b) Single package heat pump	HSPF
c) Electric resistance	COP
d) Gas furnace, natural gas	AFUE
e) Gas furnace, LPG	AFUE
f) Other	8.80
15. Water heating system	
a) Electric resistance	EF
b) Gas fired, natural gas	EF
c) Gas fired, LPG	EF 0.62
d) Solar system with tank	EF
e) Dedicated heat pump with tank	EF
f) Heat recovery unit	HeatRec%
g) Other	
16. HVAC credits claimed (Performance Method)	
a) Ceiling fans	
b) Cross ventilation	No
c) Whole house fan	No
d) Multizone cooling credit	
e) Multizone heating credit	
f) Programmable thermostat	Yes

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, 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: Matthew A. Eby, Pres Date: 2-6-20

Address of New Home: 614 Press Ruth Way City/FL Zip: Lake City, FL

Florida Building Code, Energy Conservation, 6th Edition (2017)
Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS:	614 Press Ruth Way Lake City , FL ,	Permit Number:

MANDATORY REQUIREMENTS See individual code sections for full details.

✓

SECTION R401 GENERAL

☐ **R401.3 Energy Performance Level (EPL) display card (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

☐ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

Exception: Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.

☐ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

Exception: Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

☐ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m2), when tested according to NFRC 400 or AAMA/ WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

MANDATORY REQUIREMENTS - (Continued)

☐ **R402.4.4 Rooms containing fuel-burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

R403.1 Controls.

☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system.

☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

☐ **R403.3.2 Sealing (Mandatory)** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

☐ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums.

☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory)**Heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.

R403.5.6 Water heater efficiencies (Mandatory).

☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).

☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.

☐ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.

☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:

1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
2. Be installed at an orientation within 45 degrees of true south.

☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.

Exception: Where whole-house mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.

☐ **R403.6.2 Ventilation air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:

1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.

R403.7 Heating and cooling equipment (Mandatory).

☐ **R403.7.1 Equipment sizing.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY [a] (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min. a. When tested in accordance with HVI Standard 916

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section 403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.

The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

☐ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.

☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.

☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC—Commercial Provisions in lieu of Section R403.

☐ **R403.9 Snow melt and ice system controls (Mandatory)** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

☐ **R403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.
3. Where pumps are powered exclusively from on-site renewable generation.

☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.

☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

☐ **R404.1 Lighting equipment (Mandatory).** Not less than 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Exception: Low-voltage lighting.

R404.1.1 Lighting equipment (Mandatory). Fuel gas lighting systems shall not have continuously burning pilot lights.

2017 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

				CHECK
Project Name:	200164 Robertson	Builder Name:	Erkinger Construction Group	
Street:	614 Press Ruth Way	Permit Office:		
City, State, Zip:	Lake City , FL ,	Permit Number:		
Owner:	Tony & C. Nicole Robertson	Jurisdiction:		
Design Location:	FL, Gainesville			

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance

2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:	Permit #:

Job Information

Builder: Erkinger Construction Group Community: Lot: NA

Address: 614 Press Ruth Way

City: Lake City State: FL Zip:

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

○ **PRESCRIPTIVE METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

○ **PERFORMANCE or ERI METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 7.000

_____ x 60 ÷ 15360 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

○ Retrieved from architectural plans

● Code software calculated

○ Field measured and calculated

R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues.*or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the*code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope.*

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____

Residential System Sizing Calculation

Summary

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title:
200164 Robertson

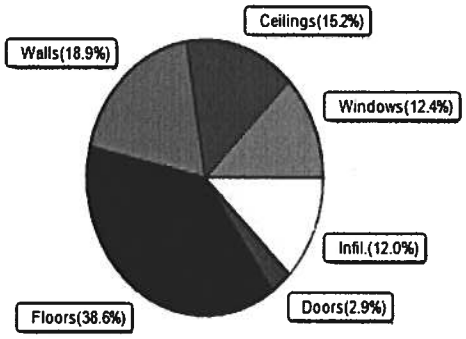
2020-02-06

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (78F) Humidity difference(47gr.)					
Winter design temperature(MJ8 99%)	32	F	Summer design temperature(MJ8 99%)	99	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	38	F	Summer temperature difference	24	F
Total heating load calculation	**20693**	**Btuh**	**Total cooling load calculation**	**18024**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	116.0	24000	Sensible (SHR = 0.75)	116.9	18000
Heat Pump + Auxiliary(0.0kW)	116.0	24000	Latent	228.7	6000
			Total (Electric Heat Pump)	133.2	24000

WINTER CALCULATIONS

Winter Heating Load (for 1807 sqft)

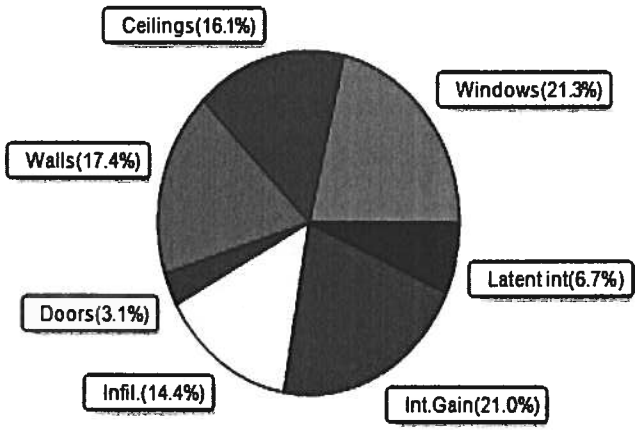
Load component			Load	
Window total	224	sqft	2557	Btuh
Wall total	1160	sqft	3911	Btuh
Door total	40	sqft	608	Btuh
Ceiling total	1899	sqft	3151	Btuh
Floor total	1807	sqft	7982	Btuh
Infiltration	60	cfm	2483	Btuh
Duct loss			0	Btuh
Subtotal			**20693**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**20693**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1807 sqft)

Load component			Load	
Window total	224	sqft	3842	Btuh
Wall total	1160	sqft	3139	Btuh
Door total	40	sqft	560	Btuh
Ceiling total	1899	sqft	2902	Btuh
Floor total			0	Btuh
Infiltration	45	cfm	1176	Btuh
Internal gain			3780	Btuh
Duct gain			0	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**15400**	**Btuh**
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			1424	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**2624**	**Btuh**
TOTAL HEAT GAIN			**18024**	**Btuh**



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EnergyGauge® System Sizing
PREPARED BY: Evan Beamsley
DATE: 2020-02-06

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title:
200164 Robertson
Building Type: User

2020-02-06

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 38.0 F (MJ8 99%)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	2, NFRC 0.20	Metal	0.30	W	12.0	11.4	137 Btuh
2	2, NFRC 0.20	Metal	0.30	W	9.0	11.4	103 Btuh
3	2, NFRC 0.20	Metal	0.30	W	22.2	11.4	253 Btuh
4	2, NFRC 0.20	Metal	0.30	W	15.0	11.4	171 Btuh
5	2, NFRC 0.20	Metal	0.30	N	30.0	11.4	342 Btuh
6	2, NFRC 0.20	Metal	0.30	E	15.0	11.4	171 Btuh
7	2, NFRC 0.20	Metal	0.30	E	30.0	11.4	342 Btuh
8	2, NFRC 0.20	Metal	0.30	E	17.8	11.4	203 Btuh
9	2, NFRC 0.20	Metal	0.30	E	13.3	11.4	152 Btuh
10	2, NFRC 0.20	Metal	0.30	E	15.0	11.4	171 Btuh
11	2, NFRC 0.20	Metal	0.30	S	45.0	11.4	513 Btuh
	Window Total				224.3(sqft)		2557 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	87	3.37	295 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	185	3.37	623 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	84	3.37	284 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	218	3.37	735 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	110	3.37	372 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	16	3.37	54 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	114	3.37	383 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	16	3.37	54 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	126	3.37	426 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	203	3.37	685 Btuh
	Wall Total				1160(sqft)		3911 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)	20	15.2	304 Btuh
2	Insulated - Exterior,	n	(0.400)	13	15.2	203 Btuh
3	Insulated - Exterior,	n	(0.400)	7	15.2	101 Btuh
	Door Total			40(sqft)		608Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Unvent Attic/D/Shing	(0.044)	0.0/22.0	1899	1.7	3151 Btuh
	Ceiling Total			1899(sqft)		3151Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	178.0 ft(perim.)	44.8	7982 Btuh
	Floor Total			1807 sqft		7982 Btuh

				Envelope Subtotal:		18209 Btuh

Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural		0.23	15360	1.00	59.7	2483 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title:
200164 Robertson
Building Type: User

2020-02-06

Duct load	Average sealed, R6.0, Supply(Con), Return(Con) (DLM of 0.000)	0 Btuh
All Zones	**Sensible Subtotal All Zones**	**20693 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	20693 Btuh 0 Btuh 20693 Btuh

EQUIPMENT

1. Electric Heat Pump	#	24000 Btuh

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)

Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title:
200164 Robertson

2020-02-06

Reference City: Gainesville, FL Temperature Difference: 24.0F(MJ8 99%) Humidity difference: 47gr.

Component Loads for Whole House

Window	Type* Panes	SHGC	U	InSh	IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2 NFRC	0.20, 0.30		No	No	W	1.5ft	0.5ft	12.0	2.2	9.8	11	26	284 Btuh
2	2 NFRC	0.20, 0.30		No	No	W	11.5f	0.0ft	9.0	9.0	0.0	11	26	103 Btuh
3	2 NFRC	0.20, 0.30		No	No	W	11.5f	0.0ft	22.2	22.2	0.0	11	26	253 Btuh
4	2 NFRC	0.20, 0.30		No	No	W	1.5ft	0.5ft	15.0	2.2	12.8	11	26	364 Btuh
5	2 NFRC	0.20, 0.30		No	No	N	1.5ft	5.5ft	30.0	0.0	30.0	11	11	342 Btuh
6	2 NFRC	0.20, 0.30		No	No	E	1.5ft	0.5ft	15.0	2.2	12.8	11	26	364 Btuh
7	2 NFRC	0.20, 0.30		No	No	E	8.0ft	3.0ft	30.0	21.8	8.2	11	26	465 Btuh
8	2 NFRC	0.20, 0.30		No	No	E	8.0ft	3.0ft	17.8	9.7	8.1	11	26	324 Btuh
9	2 NFRC	0.20, 0.30		No	No	E	8.0ft	3.0ft	13.3	7.3	6.1	11	26	243 Btuh
10	2 NFRC	0.20, 0.30		No	No	E	1.5ft	0.5ft	15.0	2.2	12.8	11	26	364 Btuh
11	2 NFRC	0.20, 0.30		No	No	S	1.5ft	8.0ft	45.0	4.7	40.3	11	13	576 Btuh
	Excursion													160 Btuh
	Window Total								224 (sqft)					3842 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	87.3	2.7	236 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	184.8	2.7	500 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	84.3	2.7	228 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.0	218.0	2.7	590 Btuh
5	Frame - Wood - Ext	0.09	13.0/0.0	110.3	2.7	299 Btuh
6	Frame - Wood - Ext	0.09	13.0/0.0	16.0	2.7	43 Btuh
7	Frame - Wood - Ext	0.09	13.0/0.0	113.6	2.7	307 Btuh
8	Frame - Wood - Ext	0.09	13.0/0.0	16.0	2.7	43 Btuh
9	Frame - Wood - Ext	0.09	13.0/0.0	126.3	2.7	342 Btuh
10	Frame - Wood - Ext	0.09	13.0/0.0	203.0	2.7	550 Btuh
	Wall Total			1160 (sqft)		3139 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	14.0	280 Btuh
2	Insulated - Exterior	13.3	14.0	187 Btuh
3	Insulated - Exterior	6.7	14.0	93 Btuh
	Door Total	40 (sqft)		560 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Unvented Attic/DarkShingle	0.044	0.0/22.0	1899.0	1.53	2902 Btuh
	Ceiling Total			1899 (sqft)		2902 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	1807 (ft-perimeter)	0.0	0 Btuh
	Floor Total		1807.0 (sqft)		0 Btuh

	Envelope Subtotal:	10444 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title: 200164 Robertson

Climate:FL_GAINESVILLE_REGIONAL_A

2020-02-06

Infiltration	Type	Average ACH	Volume(cuft)		Wall Ratio		CFM=	Load	
	Natural	0.17	15360		1		44.8	1176	Btuh
Internal gain		Occupants	Btuh/occupant				Appliance	Load	
		6	X	230	+		2400	3780	Btuh
						Sensible Envelope Load:		15400	Btuh
Duct load	Average sealed, Supply(R6.0-Condi), Return(R6.0-Condi)					(DGM of 0.000)		0	Btuh
						Sensible Load All Zones		**15400**	**Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Tony & C. Nicole Robertson
614 Press Ruth Way
Lake City, FL

Project Title: 200164 Robertson

Climate:FL_GAINESVILLE_REGIONAL_A

2020-02-06

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**15400 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**15400 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**15400 Btuh**
	Latent infiltration gain (for 47 gr. humidity difference)	1424 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**2624 Btuh**
	TOTAL GAIN	**18024 Btuh**

EQUIPMENT

1. Central Unit	#	24000 Btuh

*Key: Window types (Panes - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)

Version 8

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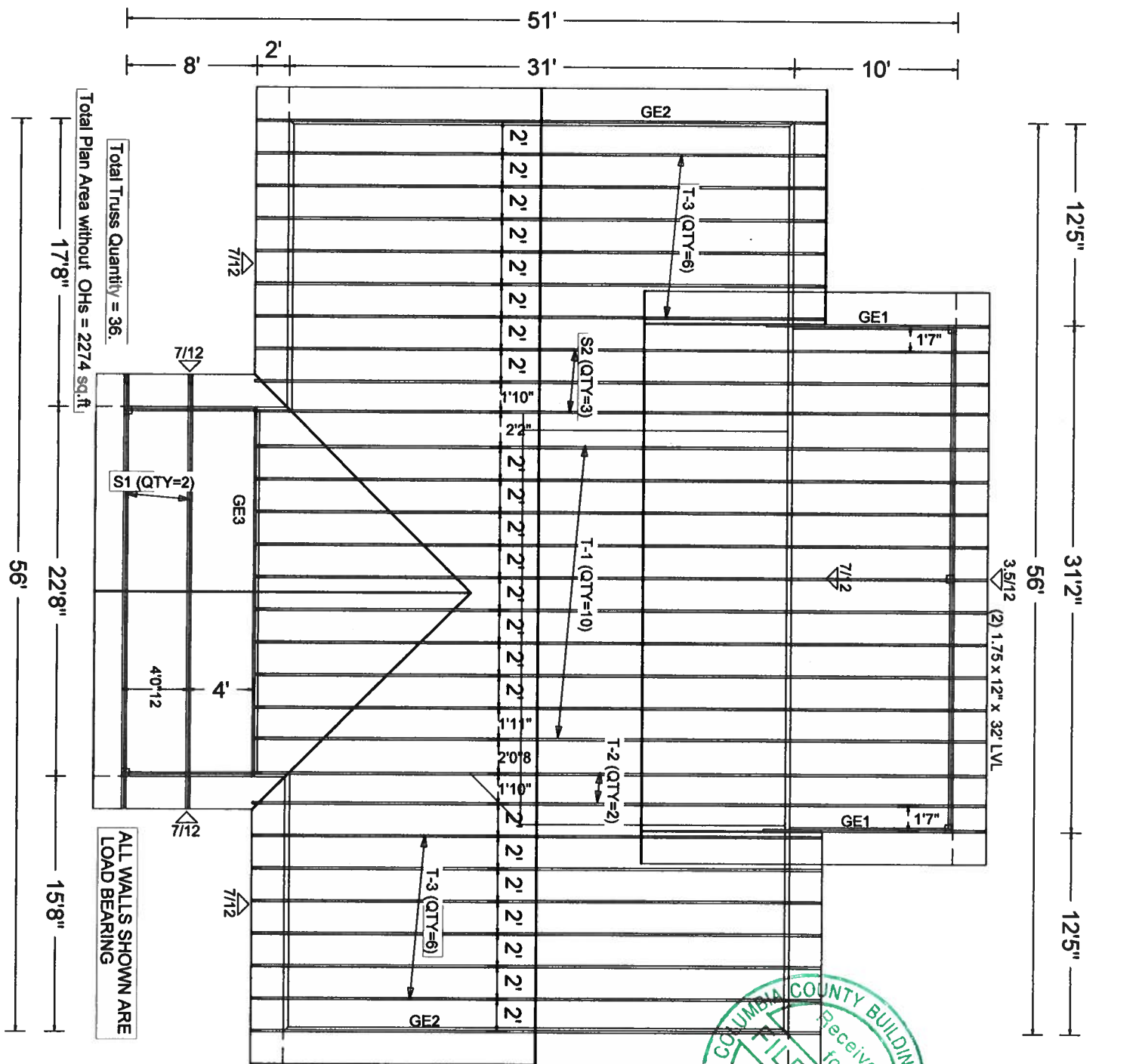
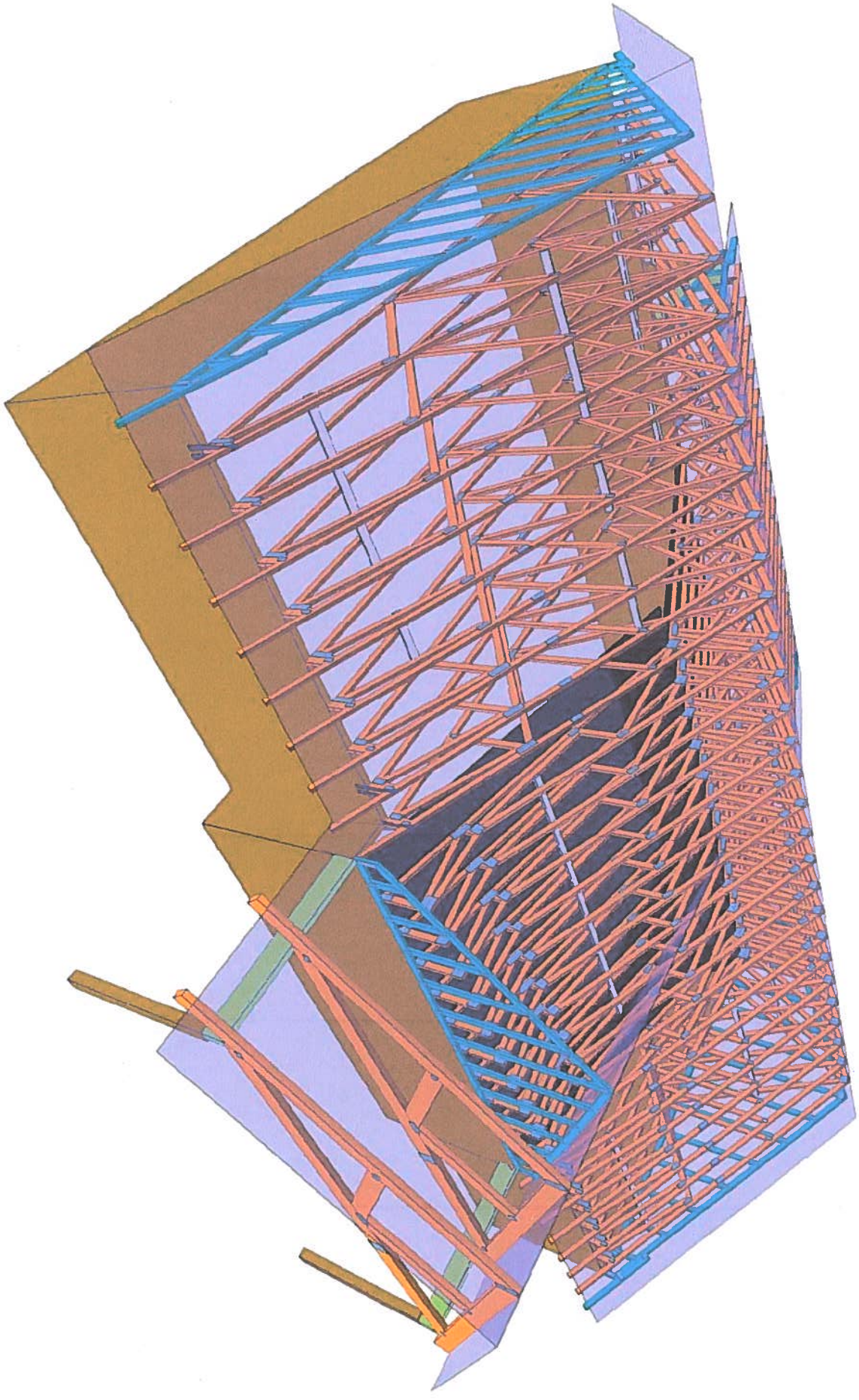


PAGE NO: 1 OF 1	JOB NO: B50700a	Job Name: Robertson Res Customer: Erkinger Home Builders Designer: Rodney Barone PlanName: Tony & Nicole Robertson Created : 01-29-2020 SemRef# : B50700a		SEMINOLE TRUSSES INC.



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COA #0 278
01/30/2020

Alpine, an ITW Company
6750 Forum Drive, Suite 305
Orlando, FL 32821
Phone: (800)755-6001
www.alpineitw.com

WILLIAM H. KRICK LICENSE No. 70861 STATE OF FLORIDA PROFESSIONAL ENGINEER

COLUMBIA COUNTY BUILDING DEPARTMENT Received for FILE COPY Code Compliance PLANS EXAMINER

Site Information:	Page 1:
Customer: Seminole Trusses, Inc.	*Job Number:* B50700a
Job Description: -Robertson Res Erkinger Home Builders	
Address: 614 Press Ruth Way, LAKE CITY, FL	

Job Engineering Criteria:	
Design Code: FBC 2017 RES	*IntelliVIEW Version:* 18.02.01A *JRef #:* 1WSc8570002
Wind Standard: ASCE 7-16 *Wind Speed (mph):* 140 *Building Type:* Closed	*Roof Load (psf):* 20.00- 7.00- 0.00-10.00 *Floor Load (psf):* None

This package contains general notes pages, 8 truss drawing(s) and 7 detail(s).

Item	Drawing Number	Truss
1	030.20.0929.01740	GE1
3	030.20.0929.05517	GE3
5	030.20.0929.18470	S2
7	030.20.0929.25303	T-2
9	A14015ENC160118	
11	PB160160118	
13	REPCHRD1014	
15	BRCLBSUB0119	

Item	Drawing Number	Truss
2	030.20.0929.04250	GE2
4	030.20.0929.14047	S1
6	030.20.0929.22677	T-1
8	030.20.0935.59560	T-3
10	GBLLETIN0118	
12	PB180160118	
14	DEFLCAMB1014	

General Notes

Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:
The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AF&PA. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

Temporary Lateral Restraint and Bracing:
Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

Permanent Lateral Restraint and Bracing:
The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed and detailed by the Building Designer.

Connector Plate Information:
Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at www.icc-es.org.

General Notes (continued)

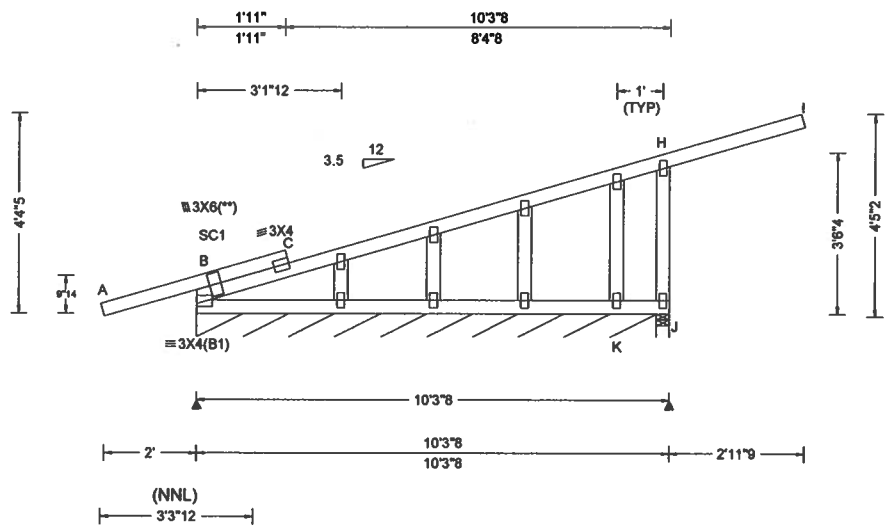
Key to Terms:
Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.
BCLL = Bottom Chord standard design Live Load in pounds per square foot.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.
HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.
HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.
L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.
L/defl = ratio of Length between bearings, in inches, divided by the immediate vertical Deflection, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.
Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.
Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for of all load cases.
Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for of all load cases.
Max Web CSI= Maximum bending and axial Combined Stress Index for Webs for of all load cases.
NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.
PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.
PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds
PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.
PP = Panel Point.
R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).
Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).
TCDL = Top Chord standard design Dead Load in pounds per square foot.
TCLL = Top Chord standard design Live Load in pounds per square foot.
U = maximum Upward design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.
VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.
VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.
W = Width of non-hanger bearing, in inches.

Refer to ASCE-7 for Wind and Seismic abbreviations.
Uppercase Acronyms not explained above are as defined in TPI 1.

References:
1. AF&PA: American Forest & Paper Association, 1111 19th Street, NW, Suite 800, Washington, DC 20036; www.afandpa.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 13723 Riverport Drive, Suite 200, Maryland Heights, MO 63043; www.alpineitw.com.
4. TPI: Truss Plate Institute, 218 North Lee Street, Suite 312, Alexandria, VA 22314; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcindustry.co

SEQN: 4655 GABL FROM: RNB Page 1 of 2	Ply: 1 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: GE1		Cust: R 857 JRef: 1WSc8570002 T9 DrwNo: 030.20.0929.01740 SSB / WHK 01/30/2020	



Loading Criteria (psf)		Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria
TCLL:	20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#
TCDL:	7.00	Speed: 140 mph	Pf: NA Ce: NA	VERT(LL): 0.006 C 999 360
BCLL:	0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.006 C 999 240
BCDL:	10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.002 C - -
Des Ld:	37.00	EXP: C Kzt: NA		HORZ(TL): 0.002 C - -
NCBCLL:	10.00	Mean Height: 15.00 ft	**Code / Misc Criteria**	Creep Factor: 2.0
Soffit:	2.00	TCDL: 0.0 psf	Bldg Code: FBC 2017 RES	Max TC CSI: 0.674
Load Duration:	1.25	BCDL: 0.0 psf	TPI Std: 2014	Max BC CSI: 0.048
Spacing:	24.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: Varies by Ld Case	Max Web CSI: 0.062
		C&C Dist a: 3.00 ft	FT/RT:20(0)/0(0)	
		Loc. from endwall: Any	Plate Type(s):	VIEW Ver: 18.02.01A.0205.23
		GCpi: 0.18	WAVE	
		Wind Duration: 1.60		

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
B*	80	/-	/-	/44	/16	/5
J	617	/-	/-	/161	/0	/-
K		/-157				

Wind reactions based on MWFRS
B Brg Width = 120 Min Req = -
J Brg Width = 3.5 Min Req = 1.5
Bearings B & J Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Gable Forces Per Ply (lbs)

Gables	Tens.	Comp.
H - J	0	-615

Lumber

Top chord: 2x4 SP SS Dense;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #1;

Plating Notes

All plates are 2X4 except as noted.

(**) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	49	-2.04	1.98
TC	75	0.00	13.21
BC	120	0.13	10.29

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading

Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 6.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical exposed to wind pressure. Deflection meets L/180.

Wind loading based on both gable and hip roof types.

COA #0278

01/30/2020

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

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Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing,any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trussesA **seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.**

For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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SEQN: 4655 GABL FROM: RNB Page 2 of 2	Ply: 1 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: GE1	Cust: R 857 JRef: 1WSc8570002 T9 DrwNo: 030.20.0929.01740 SSB / WHK 01/30/2020

Additional Notes

Refer to General Notes for additional information

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

COA #0278

01/30/2020

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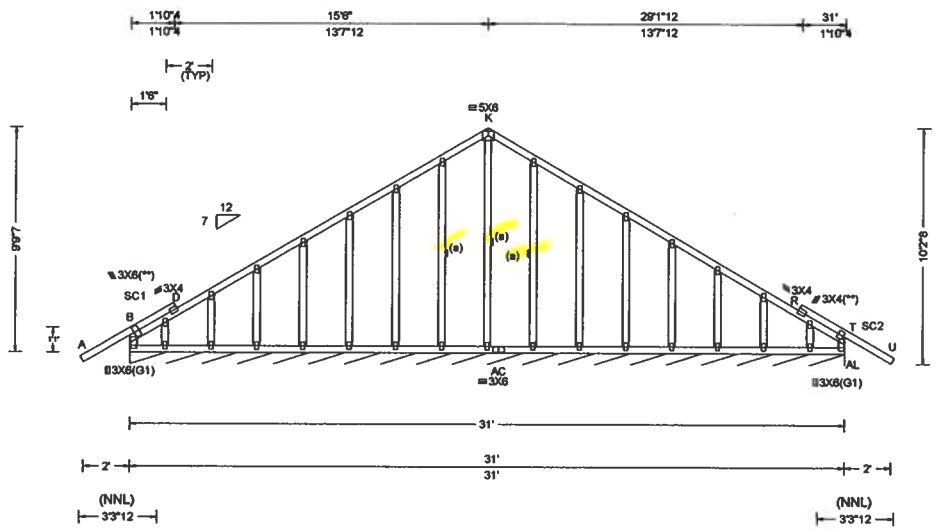
SEQN: 4758 GABL FROM: RNB Page 1 of 2	Ply: 1 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: GE2		Cust: R 857 JRef: 1WSc8570002 T1 DrwNo: 030.20.0929.04250 SSB / WHK 01/30/2020	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 140 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 0.0 psf
BCDL: 0.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.10 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Varies by Ld Case
FT/RT:20(0)/0(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL):	0.002 L	999	360
VERT(CL):	0.004 L	999	240
HORZ(LL):	0.003 B	-	-
HORZ(TL):	0.003 B	-	-

Creep Factor: 2.0
Max TC CSI: 0.444
Max BC CSI: 0.124
Max Web CSI: 0.110

VIEW Ver: 18.02.01A.0205.23

▲Maximum Reactions (lbs), or *=PLF

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
AL	* 133	/-	/-	/47	/6	/3

Wind reactions based on MWFRS
AL Brg Width = 372 Min Req = -
Bearing B Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.
R - T	93	-550

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.
AC - T	493	-62

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #1;
Stack Chord: SC2 2x4 SP #1;
Lt Stub Wedge: 2x4 SP #3;Rt Stub Wedge: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

Plating Notes

All plates are 2X4 except as noted.

(**) 2 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	54	-2.07	1.98
TC	75	0.00	15.50
TC	75	15.50	31.00
TC	54	29.02	33.07
BC	120	0.00	31.00

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading

Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 6.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

COA #0278

01/30/2020

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SEQN: 4758 GABL FROM: RNB Page 2 of 2	Ply: 1 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: GE2	Cust: R 857 JRef: 1WSc8570002 T1 DrwNo: 030.20.0929.04250 SSB / WHK 01/30/2020

Additional Notes

Refer to General Notes for additional information

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

COA #0278

01/30/2020

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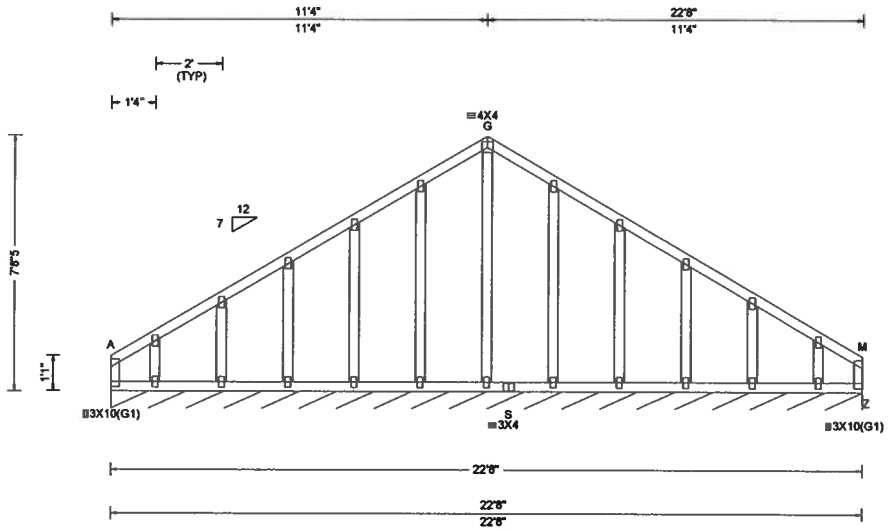
SEQN: 4650 GABL FROM: RNB	Ply: 1 Qty: 1	**Job Number:** B50700a -Robertson Res Erkinger Home Builders **Truss Label:** GE3		Cust: R 857 JRef: 1WSc8570002 T4 DrwNo: 030.20.0929.05517 SSB / WHK 01/30/2020	



Loading Criteria (psf)	**Wind Criteria**	**Snow Criteria** (Pg,Pf in PSF)	**Defl/CSI Criteria**	**▲Maximum Reactions (lbs), or *=PLF**
TCLL: 20.00 TCDL: 7.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 37.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-16 Speed: 140 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 0.0 psf BCDL: 0.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 6.06 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA **Code / Misc Criteria** Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/0(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.003 G 999 360 VERT(CL): 0.003 F 999 240 HORZ(LL): -0.014 F - - HORZ(TL): 0.014 F - - Creep Factor: 2.0 Max TC CSI: 0.106 Max BC CSI: 0.086 Max Web CSI: 0.178 VIEW Ver: 18.02.01A.0205.23	Gravity / Non-Gravity Loc R+ / R- / Rh / Rw / U / RL Z* 114 /- /- /44 /57 /12 Wind reactions based on MWFRS Z Brg Width = 272 Min Req = - Bearing A Fcperp = 425psi. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3;
Lt Stub Wedge: 2x8 SP SS Dense;
Rt Stub Wedge: 2x8 SP SS Dense;

Plating Notes

All plates are 2X4 except as noted.

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	75	0.00	11.33
TC	75	11.33	22.67
BC	120	0.00	22.67

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading

Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 6.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

Refer to General Notes for additional information

See DWGS A14015ENC160118 & GBLLETIN0118 for gable wind bracing and other requirements.

COA #0278

01/30/2020

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AN ITW COMPANY
6750 Forum Drive
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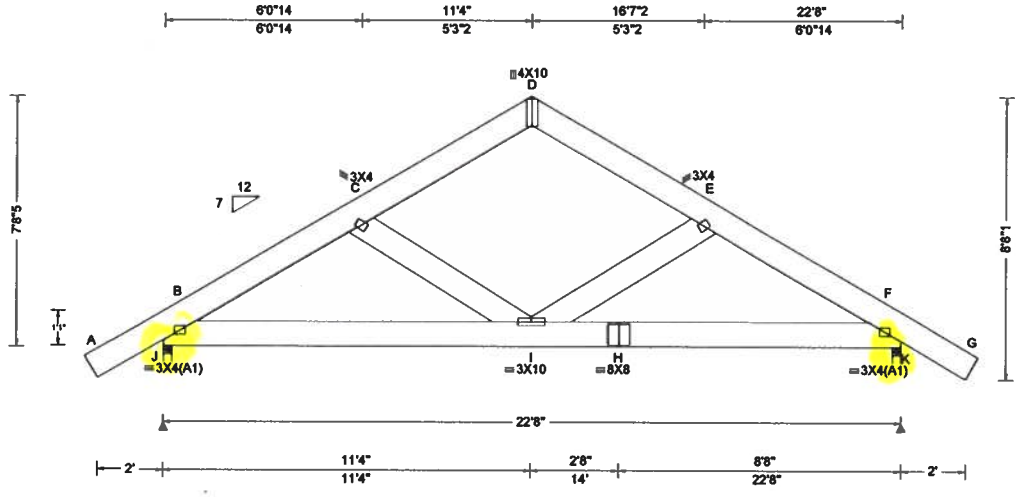
Orlando FL, 32821

SEQN: 4625 SPEC FROM: RNB	Ply: 2 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: S1	Cust: R 857 JRef: 1WSc8570002 T3 DrwNo: 030.20.0929.14047 SSB / WHK 01/30/2020	

2 Complete Trusses Required



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria
TCLL: 20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#
TCDL: 7.00	Speed: 140 mph	Pf: NA Ce: NA	VERT(LL): -0.116 I 999 360
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.225 I 999 240
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.037 E - -
Des Ld: 37.00	EXP: C Kzt: NA		HORZ(TL): 0.076 E - -
NCBCLL: 10.00	Mean Height: 15.00 ft	**Code / Misc Criteria**	Creep Factor: 2.0
Soffit: 2.00	TCDL: 0.0 psf	Bldg Code: FBC 2017 RES	Max TC CSI: 0.562
Load Duration: 1.25	BCDL: 0.0 psf	TPI Std: 2014	Max BC CSI: 0.311
Spacing: 48.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.047
	C&C Dist a: 3.00 ft	FT/RT:20(0)/0(0)	
	Loc. from endwall: Any	Plate Type(s):	VIEW Ver: 18.02.01A.0205.23
	GCpi: 0.18	WAVE	
	Wind Duration: 1.60		

▲ Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
J	1994	/-	/-	/1203	/1073	/555
K	1994	/-	/-	/1203	/1073	/-

Wind reactions based on MWFRS
J Brg Width = 3.0 Min Req = 1.5
K Brg Width = 3.0 Min Req = 1.5
Bearings J & K Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	661	-921	D - E	644	-846
C - D	643	-846	E - F	660	-922

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - I	670	-362	H - F	670	-353
I - H	670	-353			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - I	384	-108	I - E	384	-104

Lumber

Top chord: 2x10 SP #2;
Bot chord: 2x10 SP #2;
Webs: 2x10 SP #2;

Nailnote

Nail Schedule:0.128"x3", min. nails
Top Chord: 1 Row @12.00" o.c.
Bot Chord: 1 Row @12.00" o.c.
Webs : 1 Row @ 4" o.c.
Use equal spacing between rows and stagger nails in each row to avoid splitting.
(1) 1/2" bolts may be used for
(2) 0.128"x3", min. nails on
Either The Top or Bottom Chords.

Plating Notes

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	120	-2.19	11.33
TC	120	11.33	24.86
BC	120	0.13	22.54

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

Refer to General Notes for additional information

COA #0278

01/30/2020

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6750 Forum Drive
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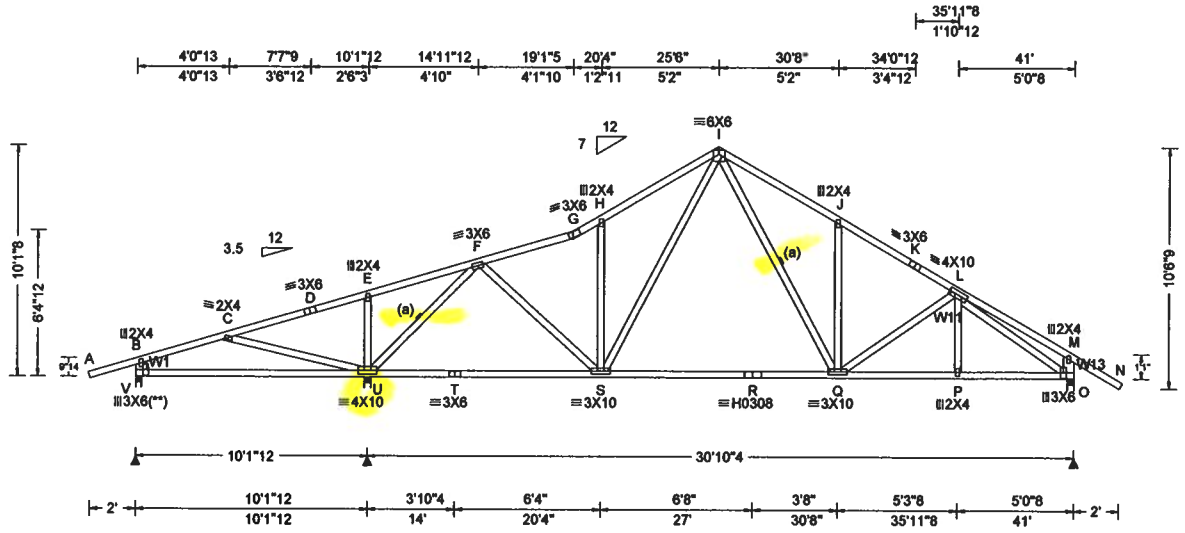
SEQN: 4752 SPEC FROM: RNB	Ply: 1 Qty: 3	**Job Number:** B50700a -Robertson Res Erkinger Home Builders **Truss Label:** S2	Cust: R 857 JRef: 1WSc8570002 T8 DrwNo: 030.20.0929.18470 SSB / WHK 01/30/2020	



Loading Criteria (psf)		Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria				▲Maximum Reactions (lbs)					
TCLL:	20.00	Wind Std: ASCE 7-16	Pg: NA Ct: NA CAT: NA	PP Deflection in	loc	L/defl	L/#		Gravity			Non-Gravity	
TCDL:	7.00	Speed: 140 mph	Pf: NA Ce: NA	VERT(LL): 0.110	G	999	360	Loc	R+ / R-	/ Rh	/ Rw	/ U	/ RL
BCLL:	0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.215	G	999	240	V	339 /-	/-	/236	/151	/338
BCDL:	10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.041	G	-	-	U	1816 /-	/-	/1008	/667	/-
Des Ld:	37.00	EXP: C Kzt: NA		HORZ(TL): 0.083	G	-	-	O	1267 /-	/-	/775	/420	/-
NCBCLL:	10.00	Mean Height: 15.00 ft	**Code / Misc Criteria**	Creep Factor: 2.0				Wind reactions based on MWFRS					
Soffit:	2.00	TCDL: 0.0 psf	Bldg Code: FBC 2017 RES	Max TC CSI: 0.993				V Brg Width = 3.0			Min Req = 1.5		
Load Duration:	1.25	BCDL: 0.0 psf	TPI Std: 2014	Max BC CSI: 0.811				U Brg Width = 3.5			Min Req = 2.3		
Spacing:	24.0 "	MWFRS Parallel Dist: h to 2h	Rep Fac: Yes	Max Web CSI: 0.941				O Brg Width = 3.5			Min Req = 1.6		
		C&C Dist a: 4.10 ft	FT/RT:20(0)/0(0)					Bearings V, U, & O Fcperp = 425psi.					
		Loc. from endwall: not in 13.00 ft	Plate Type(s):					Members not listed have forces less than 375#					
		GCpi: 0.18	WAVE, HS	VIEW Ver: 18.02.01A.0205.23									
		Wind Duration: 1.60											

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
C - D	574	-495	H - I	886	-1406
D - E	611	-495	I - J	942	-1424
E - F	596	-412	J - K	787	-1375
F - G	680	-1252	K - L	787	-1421
G - H	647	-1164			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
U - T	790	-294	R - Q	858	-272
T - S	790	-294	Q - P	1283	-569
S - R	858	-272	P - O	1281	-569

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
C - U	534	-568	S - I	623	-361
U - F	1059	-1617	I - Q	682	-470
F - S	645	-273	L - O	697	-1466
H - S	499	-593			

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3; W1,W13 2x6 SP #1;
W11 2x4 SP #1;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

Plating Notes

(**) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	59	-2.04	19.11
TC	58	19.11	25.50
TC	61	25.50	43.07
BC	75	0.00	41.00

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading

Truss passed check for 20 psf additional bottom chord live load in areas with 42"-high x 24"-wide clearance.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Additional Notes

Refer to General Notes for additional information

COA #0278

01/30/2020

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ALPINE
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6750 Forum Drive
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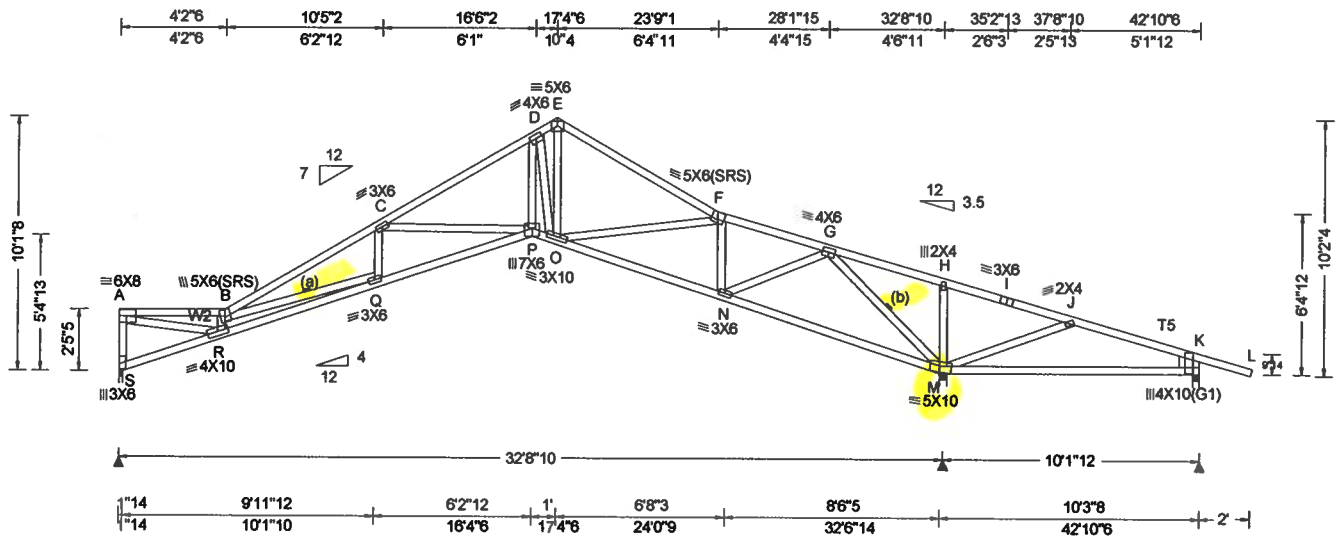
SEQN: 4661 COMN FROM: RNB Page 1 of 2	Ply: 1 Qty: 10	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: T-1	Cust: R 857 JRef: 1WSc8570002 T18 DrwNo: 030.20.0929.22677 SSB / WHK 01/30/2020	



Loading Criteria (psf)
TCLL: 20.00
TCDL: 7.00
BCLL: 0.00
BCDL: 10.00
Des Ld: 37.00
NCBCLL: 10.00
Soffit: 2.00
Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 140 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 0.0 psf
BCDL: 0.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 4.29 ft
Loc. from endwall: not in 13.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Yes
FT/RT:20(0)/0(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.391	Q	999	360
VERT(CL): 0.755	Q	517	240
HORZ(LL): 0.277	M	-	-
HORZ(TL): 0.542	M	-	-

Creep Factor: 2.0
Max TC CSI: 0.993
Max BC CSI: 0.986
Max Web CSI: 0.898

VIEW Ver: 18.02.01A.0205.23

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
S	1070	/-	/-	/555	/364	/334
M	2447	/-	/-	/1216	/846	/-
K	190	/-352	/-	/230	/217	/-

Wind reactions based on MWFRS
S Brg Width = 1.9 Min Req = 1.5
M Brg Width = 3.5 Min Req = 3.1
K Brg Width = 3.0 Min Req = 1.5
Bearings S, M, & K Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
A - B	2525	-3960	F - G	622	-1256
B - C	2130	-3745	G - H	1857	-1254
C - D	1243	-2311	H - I	1836	-1226
D - E	1043	-1756	I - J	1799	-1207
E - F	991	-1872	J - K	1312	-855

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
S - R	638	-348	O - N	1336	-552
R - Q	4918	-3345	N - M	402	-305
Q - P	3337	-2059	M - K	864	-1212
P - O	1948	-1045			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
A - S	681	-995	D - O	960	-1553
A - R	4040	-2512	O - E	1470	-803
R - B	1631	-2480	O - F	415	-299
B - Q	1221	-1484	F - N	631	-920
Q - C	461	-194	N - G	1425	-826
C - P	929	-1243	G - M	1354	-2221
P - D	1677	-966	M - J	597	-711

Lumber

Top chord: 2x4 SP #1; T5 2x4 SP M-30;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3; W2 2x4 SP #1;
Rt Stub Wedge: 2x6 SP #1;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 1x4 #3SRB SPF-S or better "T" reinforcement. 80% length of web member. Attached with 8d Box or Gun (0.113"x2.5",min.)nails @ 6" oc.

(b) Continuous lateral restraint equally spaced on member. Or 2x6 #3 or better "T" reinforcement. 80% length of web member. Attached with 10d Box or Gun (0.128"x3",min.)nails @ 6" oc.

Plating Notes

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	24	0.00	4.20
TC	29	4.20	17.36
TC	53	17.36	23.75
TC	66	23.75	44.91
BC	56	0.00	16.36
BC	75	16.36	32.57
BC	51	32.57	42.86

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Wind

Wind loads based on MWFRS with additional C&C member design.

Left end vertical exposed to wind pressure. Deflection meets L/180.

Wind loading based on both gable and hip roof types.

Deflection

Max JT VERT DEFL: LL: 0.39" DL: 0.41". See detail DEFLCAMB1014 for camber recommendations. Provide for adequate drainage of roof.

COA #0278

01/30/2020

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SEQN: 4661 COMN FROM: RNB Page 2 of 2	Ply: 1 Qty: 10	**Job Number:** B50700a -Robertson Res Erkinger Home Builders **Truss Label:** T-1	Cust: R 857 JRef: 1WSc8570002 T18 DrwNo: 030.20.0929.22677 SSB / WHK 01/30/2020

Additional Notes

Refer to General Notes for additional information

Negative reaction(s) of -352# MAX. from a non-wind load case requires uplift connection. See Maximum Reactions.

Shim all supports to solid bearing.

COA #0278

01/30/2020

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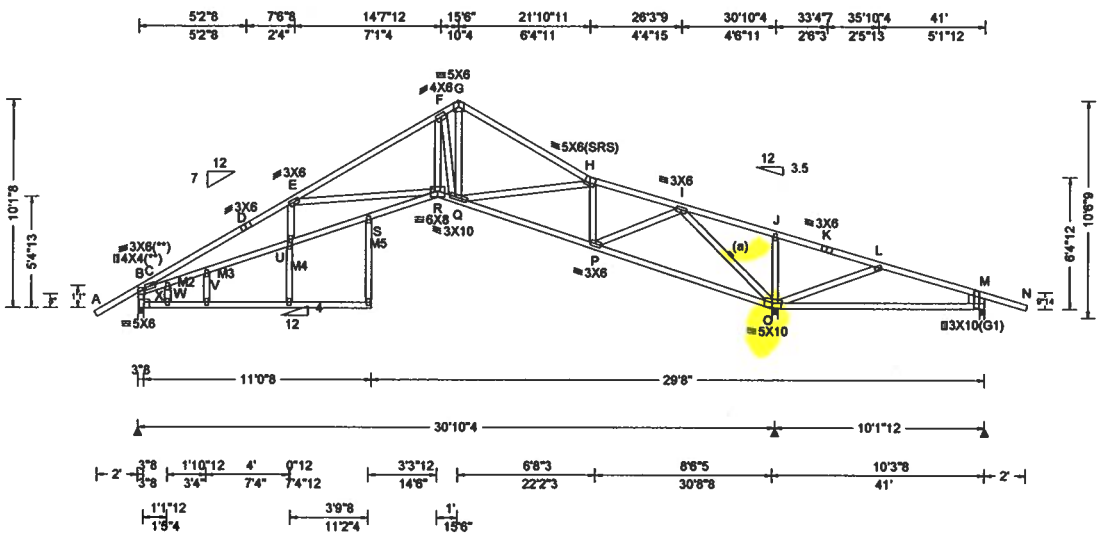
SEQN: 4756 COMN FROM: RNB Page 1 of 2	Ply: 1 Qty: 2	**Job Number:** B50700a -Robertson Res Erkinger Home Builders **Truss Label:** T-2	Cust: R 857 JRef: 1WSc8570002 T2 DrwNo: 030.20.0929.25303 SSB / WHK 01/30/2020	



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 140 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 0.0 psf
BCDL: 0.0 psf
MWFRS Parallel Dist: h to 2h
C&C Dist a: 4.10 ft
Loc. from endwall: not in 13.00 ft
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Yes
FT/RT:20(0)/0(0)
Plate Type(s):
WAVE

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): 0.299	S	999	360
VERT(CL): 0.576	S	636	240
HORZ(LL): -0.355	O	-	-
HORZ(TL): 0.377	O	-	-

Creep Factor: 2.0
Max TC CSI: 0.999
Max BC CSI: 0.983
Max Web CSI: 0.991

VIEW Ver: 18.02.01A.0205.23

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
X	1183	/-	/-	/710	/394	/338
O	2165	/-	/-	/1095	/755	/-
M	265	/-190	/-	/200	/130	/-

Wind reactions based on MWFRS
X Brg Width = 3.5 Min Req = 3.5
O Brg Width = 3.5 Min Req = 2.7
M Brg Width = 3.0 Min Req = 1.5
Bearings X, O, & M Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	582	-328	H - I	694	-1456
C - D	1862	-3317	I - J	1377	-913
D - E	1859	-3175	J - K	1360	-892
E - F	1200	-2251	K - L	1322	-874
F - G	1056	-1744	L - M	893	-564
G - H	969	-1814			

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
C - W	2886	-1814	S - R	2932	-1860
W - V	2883	-1834	R - Q	1906	-1030
V - U	2910	-1842	Q - P	1528	-699
U - S	2881	-1835	O - M	592	-820

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
B - X	713	-1179	Q - H	474	-241
E - R	758	-911	H - P	552	-802
R - F	1513	-854	P - I	1272	-726
F - Q	953	-1529	I - O	1260	-2020
Q - G	1503	-849	O - L	556	-627

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP #1;
Webs: 2x4 SP #3; M2,M3,M4,M5 2x4 SP #1;
Filler 2x4 SP #1;
Rt Stub Wedge: 2x6 SP #1;

Bracing

(a) Continuous lateral restraint equally spaced on member. Or 2x4 #3 or better "T" reinforcement. 80% length of web member. Attached with 10d Box or Gun (0.128"x3",min.)nails @ 6" oc.

Plating Notes

All plates are 2X4 except as noted.

Plates extending outside the truss perimeter shall be positioned within the tolerance specified on the plate placement polygon only, without use of TPI 1-2007 section 3.7.2.2 alternate positioning. Steel extending above the top chord or below the bottom chord may be trimmed or folded along the outer edge of that chord. Steel extending elsewhere beyond outermost truss members may be folded.

(**) 2 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Plates sized for a minimum of 3.50 sq.in./piece.

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	35	-2.07	15.50
TC	54	15.50	21.89
TC	62	21.89	43.04
BC	69	0.29	14.50
BC	75	14.50	30.71
BC	71	30.71	41.00
BC	120	0.29	11.14

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

COA #0278

01/30/2020

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Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing,any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses**A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.**

For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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Suite 305
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SEQN: 4756 COMN FROM: RNB Page 2 of 2	Ply: 1 Qty: 2	Job Number: B50700a -Robertson Res Erkinger Home Builders Truss Label: T-2	Cust: R 857 JRef: 1WSc8570002 T2 DrwNo: 030.20.0929.25303 SSB / WHK 01/30/2020

Additional Notes

Refer to General Notes for additional information

Negative reaction(s) of -190# MAX. from a non-wind load case requires uplift connection. See Maximum Reactions.

Shim all supports to solid bearing.

COA #0278

01/30/2020

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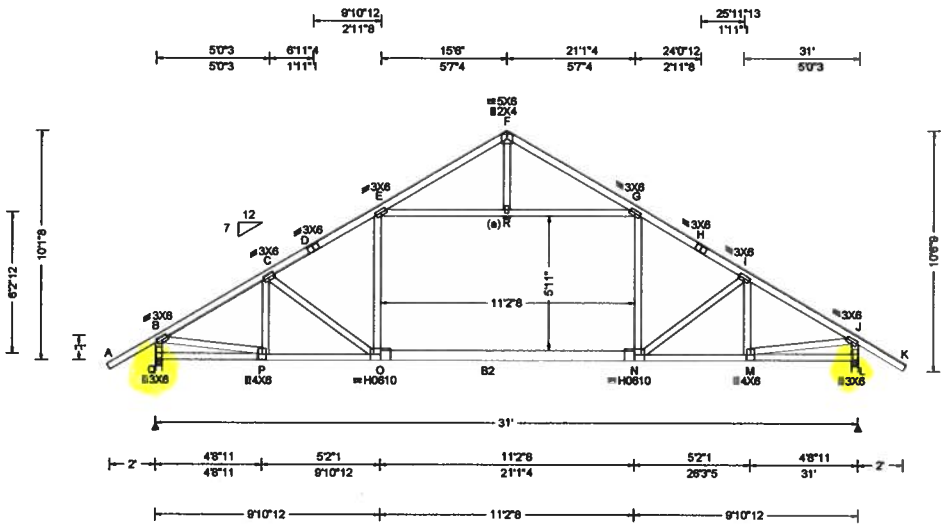
SEQN: 56994 COMN	Ply: 1	Job Number: B50700a	Cust: R 857 JRef: 1WSc8570002 T5
FROM: CVB	Qty: 12	-Robertson Res Erkinger Home Builders	DrwNo: 030.20.0935.59560
		Truss Label: T-3	SSB / WHK 01/30/2020



Loading Criteria (psf)

TCLL:	20.00
TCDL:	7.00
BCLL:	0.00
BCDL:	10.00
Des Ld:	37.00
NCBCLL:	10.00
Soffit:	2.00

Load Duration: 1.25
Spacing: 24.0 "

Wind Criteria
Wind Std: ASCE 7-16
Speed: 140 mph
Enclosure: Closed
Risk Category: II
EXP: C Kzt: NA
Mean Height: 15.00 ft
TCDL: 0.0 psf
BCDL: 0.0 psf
MWFRS Parallel Dist: 0 to h/2
C&C Dist a: 3.10 ft
Loc. from endwall: Any
GCpi: 0.18
Wind Duration: 1.60

Snow Criteria (Pg,Pf in PSF)
Pg: NA Ct: NA CAT: NA
Pf: NA Ce: NA
Lu: NA Cs: NA
Snow Duration: NA

Code / Misc Criteria
Bldg Code: FBC 2017 RES
TPI Std: 2014
Rep Fac: Yes
FT/RT:20(0)/0(0)
Plate Type(s):
WAVE, HS

Defl/CSI Criteria

PP Deflection in	loc	L/defl	L/#
VERT(LL): -0.672	O	553	360
VERT(CL): 0.717	N	518	180
HORZ(LL): -0.435	E	-	-
HORZ(TL): 0.435	E	-	-

Creep Factor: 2.0
Max TC CSI: 0.950
Max BC CSI: 0.989
Max Web CSI: 0.888

VIEW Ver: 18.02.01A.0205.20

▲Maximum Reactions (lbs)

	Gravity			Non-Gravity		
Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
Q	1489	/-	/-	/758	/705	/344
L	1489	/-	/-	/758	/705	/-

Wind reactions based on MWFRS
Q Brg Width = 3.5 Min Req = 1.9
L Brg Width = 3.5 Min Req = 1.9
Bearings Q & L Fcperp = 425psi.
Members not listed have forces less than 375#

Maximum Top Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
B - C	1060	-1921	F - G	291	-501
C - D	1061	-1956	G - H	1062	-1910
D - E	1061	-1910	H - I	1062	-1956
E - F	291	-487	I - J	1060	-1921

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.	Comp.	Chords	Tens.	Comp.
P - O	1621	-770	N - M	1621	-785
O - N	1652	-639			

Maximum Web Forces Per Ply (lbs)

Webs	Tens.	Comp.	Webs	Tens.	Comp.
B - Q	957	-1438	R - G	829	-1360
B - P	1598	-777	N - G	528	-113
E - O	528	-113	M - J	1598	-777
E - R	829	-1360	J - L	957	-1438

Lumber

Top chord: 2x4 SP #1;
Bot chord: 2x4 SP SS Dense; B2 2x6 SP #1;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

Plates sized for a minimum of 3.50 sq.in./piece.

Purlins

In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	52	-2.07	15.50
TC	52	15.50	33.07
BC	90	0.00	31.00

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Collar-tie braced with continuous lateral bracing at 24" oc. or rigid ceiling.

Loading

Live loads applied in combination per ASCE 7 sec. 2.4.1 use 0.75 factor for multiple live loads.

BC attic loading: LL = 20.00 psf; DL = 5.00 psf; from 9-10-12 to 21-1-4.

Additional Notes

Refer to General Notes for additional information

Wind

Wind loads based on MWFRS with additional C&C member design.

Wind loading based on both gable and hip roof types.

COA #0278

01/30/2020

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Gable Stud Reinforcement Detail

ASCE 7-16: 140 mph Wind Speed, 15' Mean Height, Enclosed, Exposure C, Kzt = 1.00

Or: 120 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure C, Kzt = 1.00
Or: 120 mph Wind Speed, 15' Mean Height, Enclosed, Exposure D, Kzt = 1.00
Or: 100 mph Wind Speed, 15' Mean Height, Partially Enclosed, Exposure D, Kzt = 1.00

Max Gable Vertical Length

2x4 Gable Vertical Spacing	Species	Brace Grade	No Braces	(1) 1x4 "L" Brace * Group A	(1) 1x4 "L" Brace * Group B	(1) 2x4 "L" Brace * Group A	(1) 2x4 "L" Brace * Group B	(2) 2x4 "L" Brace ** Group A	(2) 2x4 "L" Brace ** Group B	(1) 2x6 "L" Brace * Group A	(1) 2x6 "L" Brace * Group B	(2) 2x6 "L" Brace ** Group A	(2) 2x6 "L" Brace ** Group B
24" o.c.	SPF HF	#1 / #2	4' 3"	7' 3"	7' 7"	8' 7"	8' 11"	10' 3"	10' 8"	13' 6"	14' 0"	14' 0"	14' 0"
		#3	4' 1"	6' 7"	7' 1"	8' 6"	8' 10"	10' 1"	10' 6"	13' 4"	13' 10"	14' 0"	14' 0"
		Stud	4' 1"	6' 7"	7' 0"	8' 6"	8' 10"	10' 1"	10' 6"	13' 4"	13' 10"	14' 0"	14' 0"
		Standard	4' 1"	5' 8"	6' 0"	7' 7"	8' 1"	10' 1"	10' 6"	11' 10"	12' 8"	14' 0"	14' 0"
	SP DFL	#1	4' 6"	7' 4"	7' 8"	8' 8"	9' 0"	10' 4"	10' 9"	13' 8"	14' 0"	14' 0"	14' 0"
		#2	4' 3"	7' 3"	7' 7"	8' 7"	8' 11"	10' 3"	10' 8"	13' 6"	14' 0"	14' 0"	14' 0"
		#3	4' 2"	6' 0"	6' 4"	7' 11"	8' 6"	10' 2"	10' 7"	12' 5"	13' 4"	14' 0"	14' 0"
		Stud	4' 2"	6' 0"	6' 4"	7' 11"	8' 6"	10' 2"	10' 7"	12' 5"	13' 4"	14' 0"	14' 0"
		Standard	4' 0"	5' 3"	5' 7"	7' 0"	7' 6"	9' 6"	10' 2"	11' 0"	11' 10"	14' 0"	14' 0"
16" o.c.	SPF HF	#1 / #2	4' 11"	8' 4"	8' 8"	9' 10"	10' 3"	11' 8"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 8"	8' 1"	8' 8"	9' 8"	10' 1"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 8"	8' 1"	8' 6"	9' 8"	10' 1"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 8"	6' 11"	7' 5"	9' 3"	9' 11"	11' 7"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 1"	8' 5"	8' 9"	9' 11"	10' 4"	11' 10"	12' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	4' 11"	8' 4"	8' 8"	9' 10"	10' 3"	11' 8"	12' 2"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 9"	7' 4"	7' 9"	9' 9"	10' 2"	11' 8"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	4' 9"	7' 4"	7' 9"	9' 9"	10' 2"	11' 8"	12' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	4' 8"	6' 5"	6' 10"	8' 7"	9' 2"	11' 7"	12' 1"	13' 6"	14' 0"	14' 0"	14' 0"
12" o.c.	SPF HF	#1 / #2	5' 5"	9' 2"	9' 6"	10' 10"	11' 3"	11' 8"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 1"	9' 0"	9' 4"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	5' 1"	9' 0"	9' 4"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	5' 1"	8' 0"	8' 6"	10' 8"	11' 1"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 8"	9' 3"	9' 8"	10' 11"	11' 4"	13' 0"	13' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 5"	9' 2"	9' 6"	10' 10"	11' 3"	12' 11"	13' 5"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 3"	8' 5"	9' 0"	10' 9"	11' 2"	12' 10"	13' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		Stud	5' 3"	8' 5"	9' 0"	10' 9"	11' 2"	12' 10"	13' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		Standard	5' 1"	7' 5"	7' 11"	9' 11"	10' 7"	12' 9"	13' 3"	14' 0"	14' 0"	14' 0"	14' 0"

Bracing Group Species and Grades:

Group A:

Spruce-Pine-Fir	
#1 / #2	Standard
#3	Stud

Hem-Fir	
#2	Stud
#3	Standard

Douglas Fir-Larch
#3
Stud
Standard

Southern Pine**
#3
Stud
Standard

Group B:

Hem-Fir
#1 & Btr
#1

Douglas Fir-Larch
#1
#2

Southern Pine**
#1
#2

1x4 Braces shall be SRB (Stress-Rated Board).
**For 1x4 So. Pine use only Industrial 55 or Industrial 45 Stress-Rated Boards. Group B values may be used with these grades.

Gable Truss Detail Notes:

Wind Load deflection criterion is L/240.

Provide uplift connections for 55 plf over continuous bearing (3 psf TC Dead Load).

Gable end supports load from 4' 0" outlookers with 2' 0" overhang, or 12" plywood overhang.

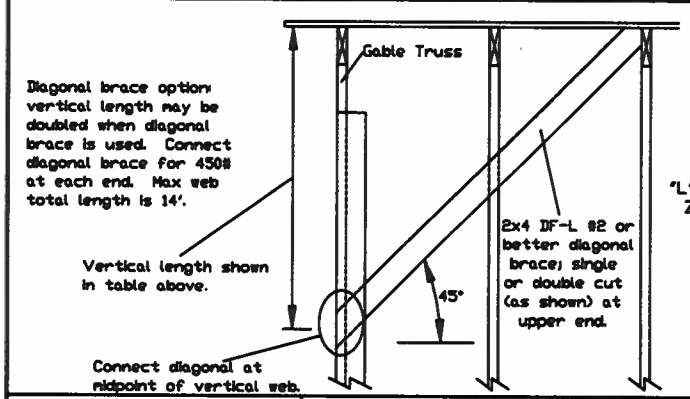
Attach "L" braces with 10d (0.128"x3.0" min) nails.
* For (1) "L" brace: space nails at 2" o.c. in 18" end zones and 4" o.c. between zones.
**For (2) "L" braces: space nails at 3" o.c. in 18" end zones and 6" o.c. between zones.

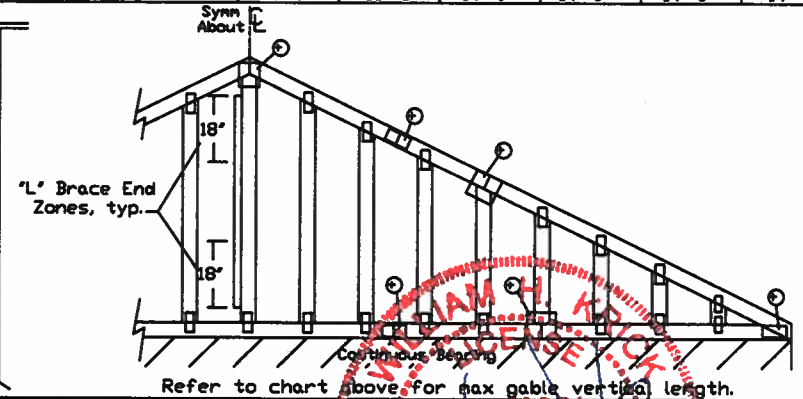
"L" bracing must be a minimum of 80% of web member length.

Gable Vertical Plate Sizes	
Vertical Length	No Splice
Less than 4' 0"	1X4 or 2X3
Greater than 4' 0"	3X4

+ Refer to common truss design for peak, splice, and heel plates.

Refer to the Building Designer for conditions not addressed by this detail.





Refer to chart above for max gable vertical length.

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ALPINE AN ITW COMPANY
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Maryland Heights, MO 63043

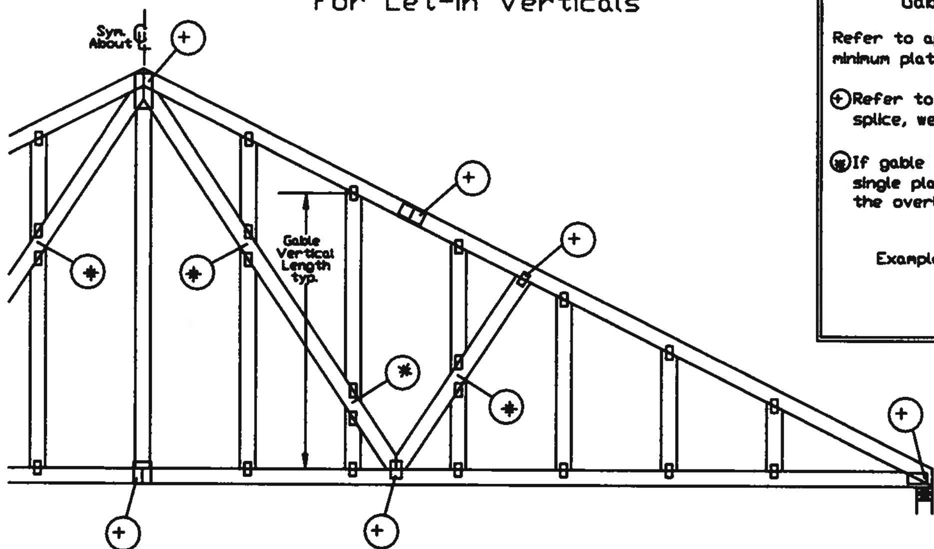
MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-16-GAB14015
DATE	01/26/2018
DRWG	A14015ENC160118

Gable Detail

For Let-in Verticals



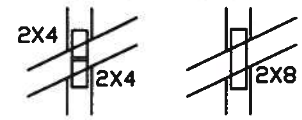
Gable Truss Plate Sizes

Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

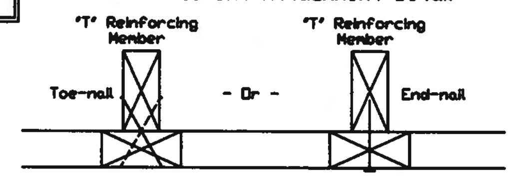
(+) Refer to Engineered truss design for peak, splice, web, and heel plates.

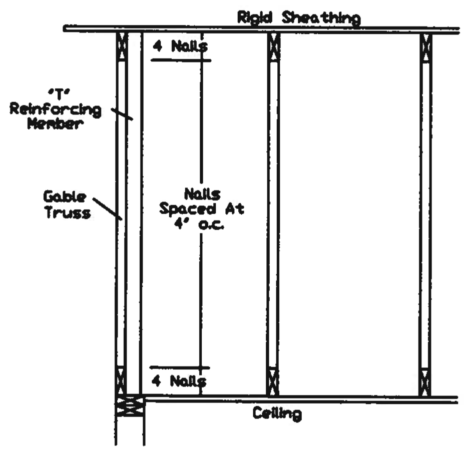
(*) If gable vertical plates overlap, use a single plate that covers the total area of the overlapped plates to span the web.

Example:



"T" Reinforcement Attachment Detail





Provide connections for uplift specified on the engineered truss design.

Attach each "T" reinforcing member with
End Driven Nails:
10d Common (0.148"x 3.",min) Nails at 4" o.c. plus
(4) nails in the top and bottom chords.

Toenailed Nails:
10d Common (0.148"x3",min) Toenails at 4" o.c. plus
(4) toenails in the top and bottom chords.

This detail to be used with the appropriate Alpine gable detail for ASCE wind load.

ASCE 7-05 Gable Detail Drawings
A13015051014, A12015051014, A11015051014, A10015051014, A14015051014,
A13030051014, A12030051014, A11030051014, A10030051014, A14030051014

ASCE 7-10 & ASCE 7-16 Gable Detail Drawings
A11515ENC100118, A12015ENC100118, A14015ENC100118, A16015ENC100118,
A18015ENC100118, A20015ENC100118, A20015END100118, A20015PED100118,
A11530ENC100118, A12030ENC100118, A14030ENC100118, A16030ENC100118,
A18030ENC100118, A20030ENC100118, A20030END100118, A20030PED100118,
S11515ENC100118, S12015ENC100118, S14015ENC100118, S16015ENC100118,
S18015ENC100118, S20015ENC100118, S20015END100118, S20015PED100118,
S11530ENC100118, S12030ENC100118, S14030ENC100118, S16030ENC100118,
S18030ENC100118, S20030ENC100118, S20030END100118, S20030PED100118

See appropriate Alpine gable detail for maximum unreinforced gable vertical length.

To convert from "L" to "T" reinforcing members, multiply "T" increase by length (based on appropriate Alpine gable detail).

Maximum allowable "T" reinforced gable vertical length is 14' from top to bottom chord.

"T" reinforcing member material must match size, specie, and grade of the "L" reinforcing member.

Web Length Increase w/ "T" Brace

"T" Reinf. Mbr. Size	"T" Increase
2x4	30 %
2x6	20 %

Example:
ASCE 7-10 Wind Speed = 120 mph
Mean Roof Height = 30 ft, Kzt = 1.00
Gable Vertical = 24"o.c. SP #3
"T" Reinforcing Member Size = 2x4
"T" Brace Increase (From Above) = 30% = 1.30
(1) 2x4 "L" Brace Length = 8' 7"
Maximum "T" Reinforced Gable Vertical Length
1.30 x 8' 7" = 11' 2"

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For more information see this job's general notes page and these web sites:
ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCA: www.sbcindustry.org; ICC: www.iccsafe.org

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WILLIAM ... LICENSE ... No. 70861 STATE OF FLORIDA PROFESSIONAL ENGINEER
COA #0 278 01/30/2020

MAX. TOT. LD.	60 PSF
DUR. FAC.	ANY
MAX. SPACING	24.0"

REF	LET-IN VERT
DATE	01/02/2018
DRWG	GBLLETIN0118

Piggyback Detail - ASCE 7-16: 160 mph, 30' Mean Height, Enclosed, Exposure C, Kzt=1.00

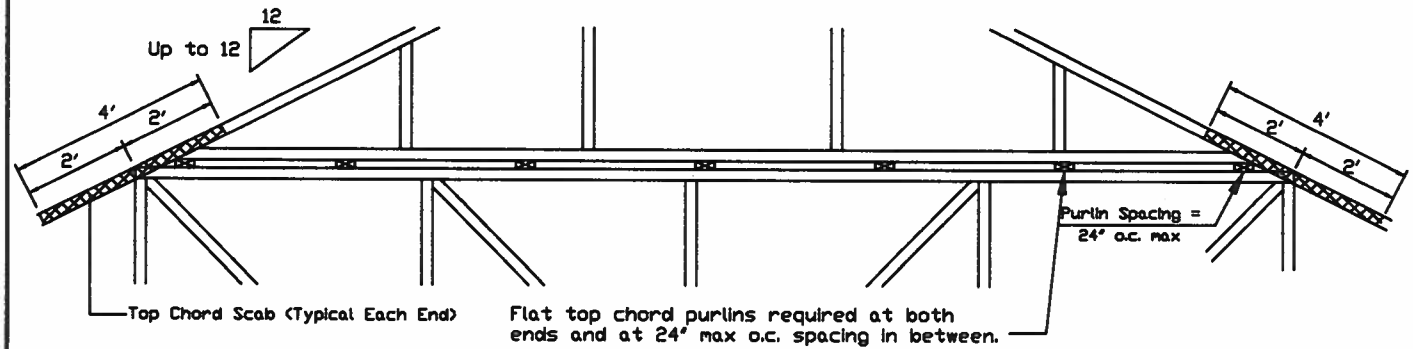
160 mph Wind, 30.00 ft Mean Hgt, ASCE 7-16, Enclosed Bldg. located anywhere in roof, Exp C, Wind DL= 5.0 psf (min), Kzt=1.0.
Or 140 mph wind, 30.00 ft Mean Hgt, ASCE 7-16, Enclosed Bldg. located anywhere in roof, Exp D, wind DL= 5.0 psf (min), Kzt=1.0.

Note: Top chords of trusses supporting piggyback cap trusses must be adequately braced by sheathing or purlins. The building Engineer of Record shall provide diagonal bracing or any other suitable anchorage to permanently restrain purlins, and lateral bracing for out of plane loads over gable ends.

Maximum truss spacing is 24" o.c. detail is not applicable if cap supports additional loads such as cupola, steeple, chimney or drag strut loads.

** Refer to Engineer's sealed truss design drawing for piggyback and base truss specifications.

Detail A : Purlin Spacing = 24" o.c. or less



Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4" o.c.

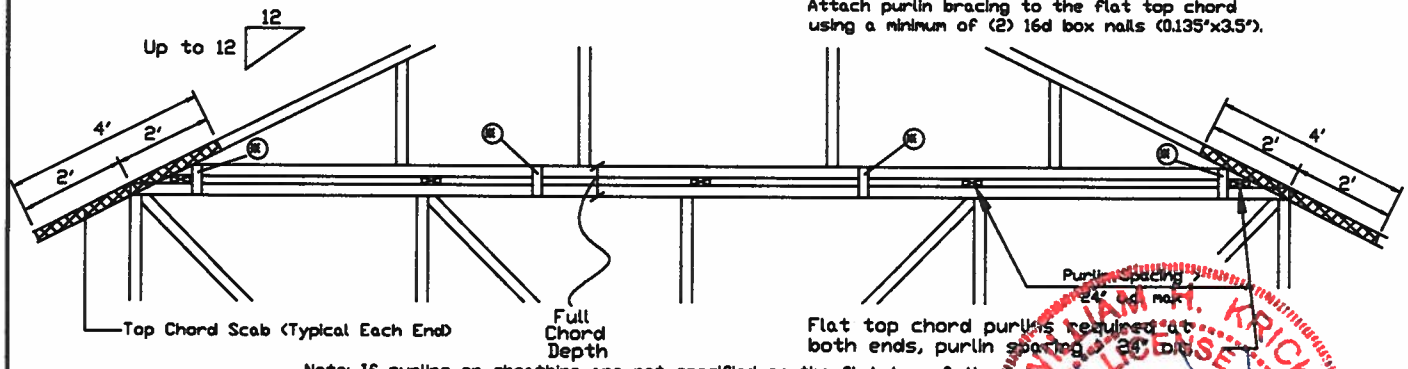
Attach purlin bracing to the flat top chord using (2) 16d box nails (0.135"x3.5").

The top chord #3 grade 2x4 scab may be replaced with either of the following: (1) 3X8 Trulox plate attached with (8) 0.120"x1.375" nails, (4) into cap TC & (4) into base truss TC or (1) 28PB wave piggyback plate plated to the piggyback truss TC and attached to the base truss TC with (4) 0.120"x1.375" nails. Note: Nailing thru holes of wave plate is acceptable.

Detail B : Purlin Spacing > 24" o.c.

Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4" o.c.

Attach purlin bracing to the flat top chord using a minimum of (2) 16d box nails (0.135"x3.5").



Note: If purlins or sheathing are not specified on the flat top of the base truss, purlins must be installed at 24" o.c. max. and use Detail A.

** In addition, provide connection with one of the following methods:

Trulox
Use 3X8 Trulox plates for 2x4 chord member, and 3X10 Trulox plates for 2x6 and larger chord members. Attach to each face @ 8" o.c. with (4) 0.120"x1.375" nails into cap bottom chord and (4) in base truss top chord. Trulox plates may be staggered 4" o.c. front to back faces.

APA Rated Gusset
8"x8"x7/16" (min) APA rated sheathing gussets (each face). Attach @ 8" o.c. with (8) 6d common (0.113"x2") nails per gusset, (4) in cap bottom chord and (4) in base truss top chord. Gussets may be staggered 4" o.c. front to back faces.

2x4 Vertical Scabs
2x4 SPF #2, full chord depth scabs (each face). Attach @ 8" o.c. with (6) 10d box nails (0.128"x3") per scab, (3) in cap bottom chord and (3) in base truss top chord. Scabs may be staggered 4" o.c. front to back faces.

28PB Wave Piggyback Plate
One 28PB wave piggyback plate to each face @ 8" o.c. Attach teeth to piggyback at time of fabrication. Attach to supporting truss with (4) 0.120"x1.375" nails per ply. Piggyback plates may be staggered 4" o.c. front to back faces.

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WILLIAM T. KRICK
LICENSE
No. 70861
STATE OF FLORIDA
PROFESSIONAL ENGINEER
COA #0278
01/30/2020

REF	PIGGYBACK
DATE	01/02/2018
DRWG	PB160160118
SPACING	24.0"

Piggyback Detail - ASCE 7-16: 180 mph, 30' Mean Hgt, Partially Enclosed, Exp. C, Kzt=1.00

180 mph Wind, 30.00 ft Mean Hgt, ASCE 7-16, Part. Enclosed Bldg. located anywhere in roof, Exp C, Wind DL= 5.0 psf (min), Kzt=1.0.
Or 160 mph wind, 30.00 ft Mean Hgt, ASCE 7-16, Part. Enclosed Bldg. located anywhere in roof, Exp D, wind DL= 5.0 psf (min), Kzt=1.0.

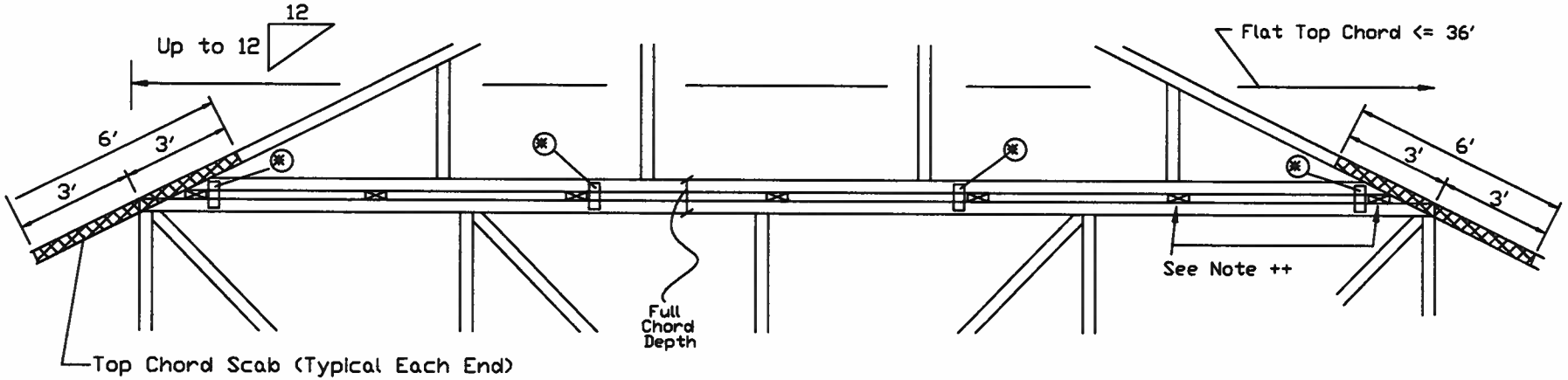
Note: Top chords of trusses supporting piggyback cap trusses must be adequately braced by sheathing or purlins. The building Engineer of Record shall provide diagonal bracing or any other suitable anchorage to permanently restrain purlins, and lateral bracing for out of plane loads over gable ends.

Maximum truss spacing is 24" o.c. detail is not applicable if cap supports additional loads such as cupola, steeple, chimney or drag strut loads.

※※ Refer to Engineer's sealed truss design drawing for piggyback and base truss specifications.

Piggyback cap truss slant nailed to all top chord purlin bracing with (2) 16d box nails (0.135"x3.5") and secure top chord with 2x4 #3 grade scab (1 side only at each end) attached with 2 rows of 10d box nails (0.128"x3") at 4' o.c.

++ Flat top chord purlins required at both ends and at a maximum of 24" intervals unless otherwise noted on base truss design drawing. Attach purlin bracing to the flat top chord using a minimum of (2) 16d box nails (0.135"x3.5").



※ In addition, provide connection with one of the following methods:

Trulox Use 3X8 Trulox plates for 2x4 chord member, and 3X10 Trulox plates for 2x6 and larger chord members. Attach to each face @ 8' o.c. with (4) 0.120"x1.375" nails into cap bottom chord and (4) in base truss top chord. Trulox plates may be staggered 4' o.c. front to back faces.	**28PB Wave Piggyback Plate** One 28PB wave piggyback plate to each face @ 8' o.c. Attach teeth to piggyback at time of fabrication. Attach to supporting truss with (4) 0.120"x1.375" nails per face per ply. Piggyback plates may be staggered 4' o.c. front to back faces.
APA Rated Gusset 8"x8"x7/16" (min) APA rated sheathing gussets (each face). Attach @ 8' o.c. with (8) 6d common (0.113"x2") nails per gusset, (4) in cap bottom chord and (4) in base truss top chord. Gussets may be staggered 4' o.c. front to back faces.	**2x4 Vertical Scabs** 2x4 SPF #2, full chord depth scabs (each face). Attach @ 8' o.c. with (6) 10d box nails (0.128"x3") per scab, (3) in cap bottom chord and (3) in base truss top chord. Scabs may be staggered 4' o.c. front to back faces.

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WILLIAM H. KRICK
LICENSE
No. 70861
STATE OF FLORIDA
PROFESSIONAL ENGINEER
COA #0278
01/30/2020

REF	PIGGYBACK
DATE	01/02/2018
DRWG	PB180160118
SPACING	24.0"

Cracked or Broken Member Repair Detail

This drawing specifies repairs for a truss with broken chord or web member.

This design is valid only for single ply trusses with 2x4 or 2x6 broken members. No more than one break per chord panel and no more than two breaks per truss are allowed. Contact the truss manufacturer for any repairs that do not comply with this detail.

(B) = Damaged area, 12" max length of damaged section

(L) = Minimum nailing distance on each side of damaged area (B)

(S) = Two 2x4 or two 2x6 side members, same size, grade, and species as damaged member. Apply one scab per face.
Minimum side member length(s) = (2)(L) + (B)

Scab member length (S) must be within the broken panel.

Nail into 2x4 members using two (2) rows at 4" o.c., rows staggered.
Nail into 2x6 members using three (3) rows at 4" o.c., rows staggered.

Nail using 10d box or gun nails (0.128"x3", min) into each side member.

The maximum permitted lumber grade for use with this detail is limited to Visual grade #1 and MSR grade 1650f.

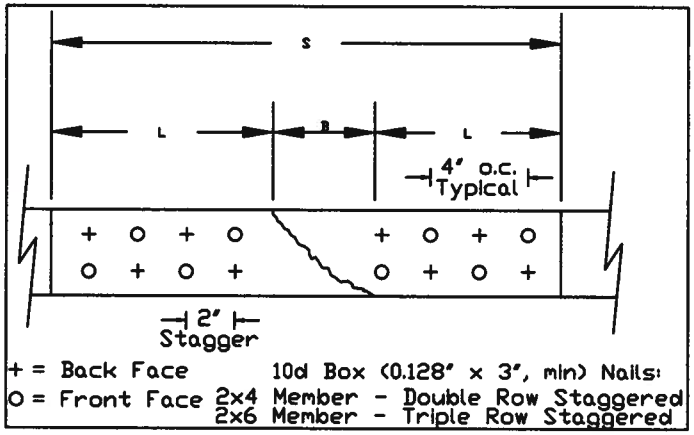
This repair detail may be used for broken connector plate at mid-panel splices.

This repair detail may not be used for damaged chord or web sections occurring within the connector plate area.

Broken chord may not support any tie-in loads.

Load Duration = 0%
Member forces may be increased for Duration of Load

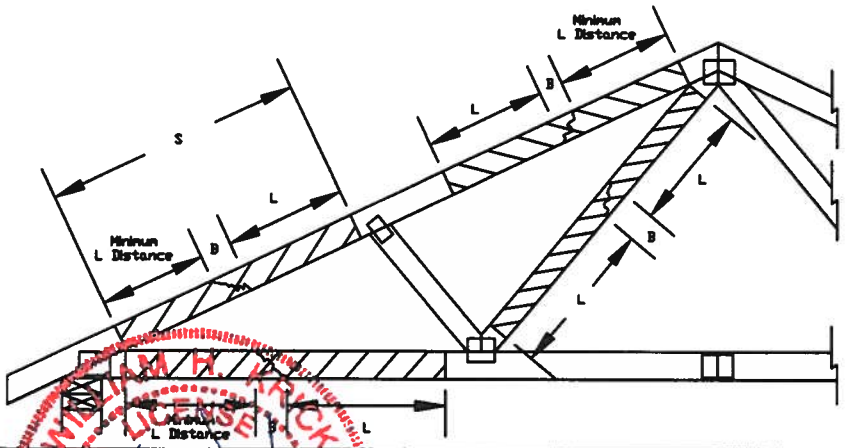
Member	Size	L	Maximum Member Axial Force			
			SPF-C	HF	DF-L	SYP
Web Only	2x4	12"	620#	635#	730#	800#
Web Only	2x4	18"	975#	1055#	1295#	1415#
Web or Chord	2x4	24"	975#	1055#	1495#	1745#
Web or Chord	2x6		1465#	1585#	2245#	2620#
Web or Chord	2x4	30"	1910#	1960#	2315#	2555#
Web or Chord	2x6		2230#	2365#	3125#	3575#
Web or Chord	2x4	36"	2470#	2530#	2930#	3210#
Web or Chord	2x6		3535#	3635#	4295#	4745#
Web or Chord	2x4	42"	2975#	3045#	3505#	3835#
Web or Chord	2x6		4395#	4500#	5225#	5725#
Web or Chord	2x4	48"	3460#	3540#	4070#	4445#
Web or Chord	2x6		5165#	5280#	6095#	6660#



+ = Back Face
O = Front Face

10d Box (0.128" x 3", min) Nails:
2x4 Member - Double Row Staggered
2x6 Member - Triple Row Staggered

Nail Spacing Detail



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COA #0278 01/30/2020

SPACING 24.0" MAX

REF	MEMBER REPAIR
DATE	10/01/14
DRWG	REPCHRD1014

Commentary: Deflection and Camber

Camber may be built into trusses to compensate for the vertical deflection that results from the application of loads. Providing camber has the following advantages:

- Helps to ensure level ceilings and floors after dead loads are applied.
- Facilitates drainage to avoid ponding on flat or low slope roofs.
- Compensates for different deflection characteristics between adjacent trusses.
- Improves appearance of garage door headers and other long spans that can appear to "sag."
- Avoids "dips" in roof ridgelines at the transition from the gable to adjacent clear span trusses.

In accordance with ANSI/TPI 1 the Building Designer, through the Construction Documents, shall provide the location, direction, and magnitude of all loads attributable to ponding that may occur due to the design of the roof drainage system. The Building Designer shall also specify any dead load, live load, and in-service creep deflection criteria for flat or low-slope roofs subject to ponding loads.

The amount of camber is dependent on the truss type, span, loading, application, etceteras.

More restrictive limits for allowable deflection and slenderness ratio (L/D) may be required to help control vibration.

The following tables are provided as guidelines for limiting deflection and estimating camber. Conditions or codes may exist that require exceeding these recommendations, or past experience may warrant using more stringent limitations.

L = Span of Truss (inches)
D = Depth of Truss at Deflection Point (inches)

Recommended Truss Deflection Limits

Truss Type	L/D	Deflection Limits	
		Live Load	Total Load
Pitched Roof Trusses	24	L/240 (vertical)	L/180 (vertical)
Floor of Room-In-Attic Trusses	24	L/360 (vertical)	L/240 (vertical)
Flat or Shallow Pitched Roof Trusses	24	L/360 (vertical)	L/240 (vertical)
Residential Floor Trusses	24	L/360 (vertical)	L/240 (vertical)
Commercial Floor Trusses	20	L/480 (vertical)	L/240 (vertical)
Scissors Trusses	24	0.75" (horizontal)	1.25" (horizontal)

Truss Type	Recommended Camber
Pitched Trusses	1.00 x Deflection from Actual Dead Load
Sloping Parallel Chord Trusses	1.5 x Vertical Deflection from Actual Dead Load
Floor Trusses	(0.25 x Deflection from Live Load) + Actual Dead Load
Flat Roof Trusses	(0.25 x Deflection from Live Load) + (1.5 x Design Dead Load Deflection)

Note: The actual dead load may be considerably less than the design dead load.

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COA #0 278

01/30/2020

REF	DEFLEC/CAMB
DATE	10/01/14
DRWG	DEFLCAMB1014

CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforecement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

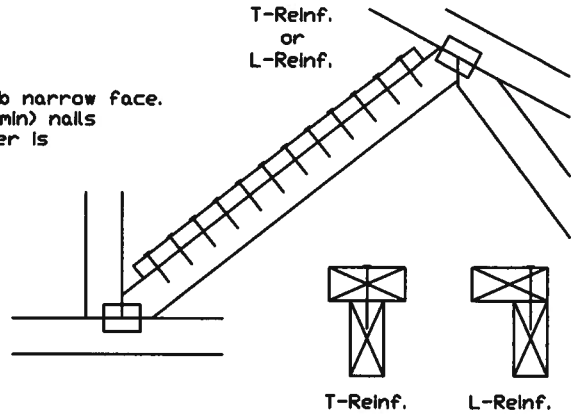
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Alternative Reinforecement Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4 (#)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6 (#)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

(#) Center scab on wide face of web. Apply (1) scab to each face of web.

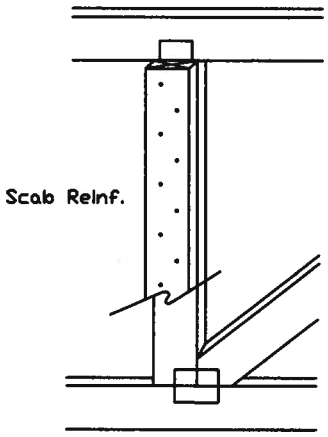
T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



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01/30/2020

TC LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 01/02/19
BC DL	PSF	DRWG BRCLBSUB0119
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		