

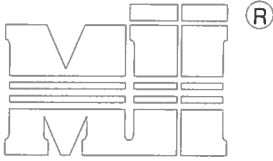
AUGUST 1, 2016

LATERAL BRACING RECOMMENDATIONS

MII-STRGBCK

MiTek USA, Inc.

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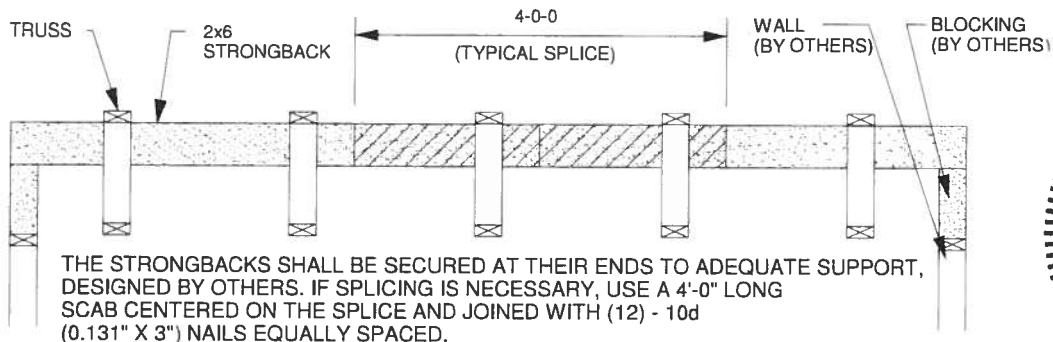
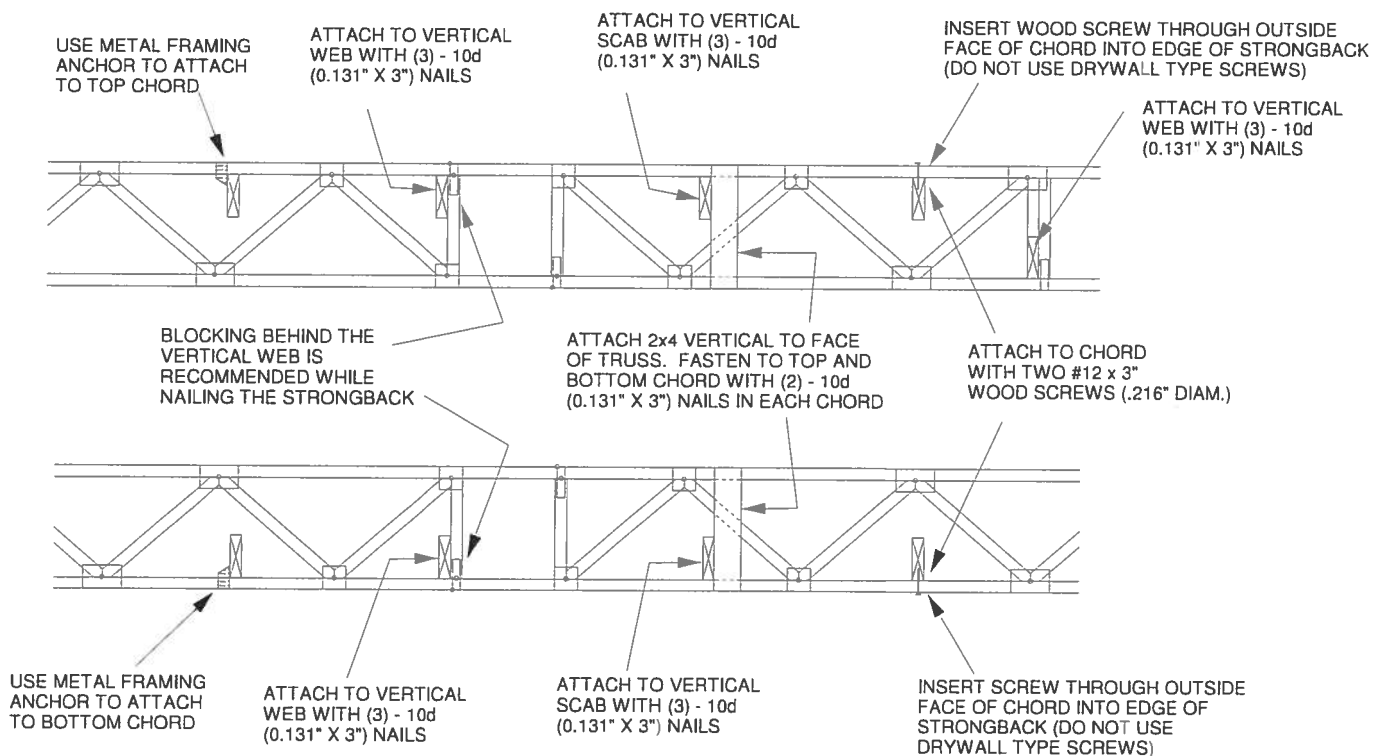
MiTek USA, Inc.

 ENGINEERED BY
TRENCO
 A MiTek Affiliate

TO MINIMIZE VIBRATION COMMON TO ALL SHALLOW FRAMING SYSTEMS, 2x6 "STRONGBACK" IS RECOMMENDED, LOCATED EVERY 8 TO 10 FEET ALONG A FLOOR TRUSS.

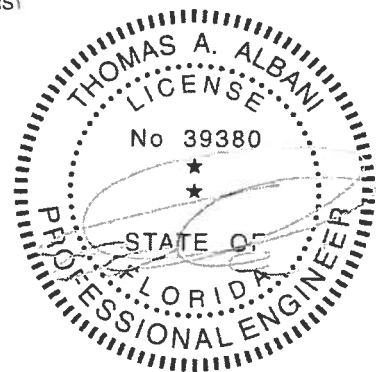
NOTE 1: 2X6 STRONGBACK ORIENTED VERTICALLY MAY BE POSITIONED DIRECTLY UNDER THE TOP CHORD OR DIRECTLY ABOVE THE BOTTOM CHORD. SECURELY FASTENED TO THE TRUSS USING ANY OF THE METHODS ILLUSTRATED BELOW.

NOTE 2: STRONGBACK BRACING ALSO SATISFIES THE LATERAL BRACING REQUIREMENTS FOR THE BOTTOM CHORD OF THE TRUSS WHEN IT IS PLACED ON TOP OF THE BOTTOM CHORD, IS CONTINUOUS FROM END TO END, CONNECTED WITH A METHOD OTHER THAN METAL FRAMING ANCHOR, AND PROPERLY CONNECTED, BY OTHERS, AT THE ENDS.



ALTERNATE METHOD OF SPLICING:

OVERLAP STRONGBACK MEMBERS A MINIMUM OF 4'-0" AND FASTEN WITH (12) - 10d (0.131" X 3") NAILS STAGGERED AND EQUALLY SPACED.
 (TO BE USED ONLY WHEN STRONGBACK IS NOT ALIGNED WITH A VERTICAL)



Thomas A. Albani PE No. 39380
 MiTek USA, Inc. FL Cert 6634
 6904 Parke East Blvd. Tampa FL 33610
 Date:

February 12, 2018

Residential System Sizing Calculation

Summary

DIY Development, LLC
576 SW KIRBY AVE
Lake City, FL 32024

Project Title:
DIY Spec House

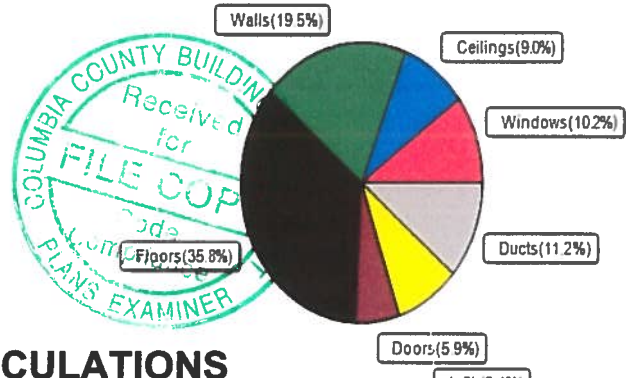
6/4/2019

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	21112	Btuh	Total cooling load calculation	15992	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	142.1	30000	Sensible (SHR = 0.80)	179.2	24000
Heat Pump + Auxiliary(0.0kW)	142.1	30000	Latent	230.8	6000
			Total (Electric Heat Pump)	187.6	30000

WINTER CALCULATIONS

Winter Heating Load (for 1496 sqft)

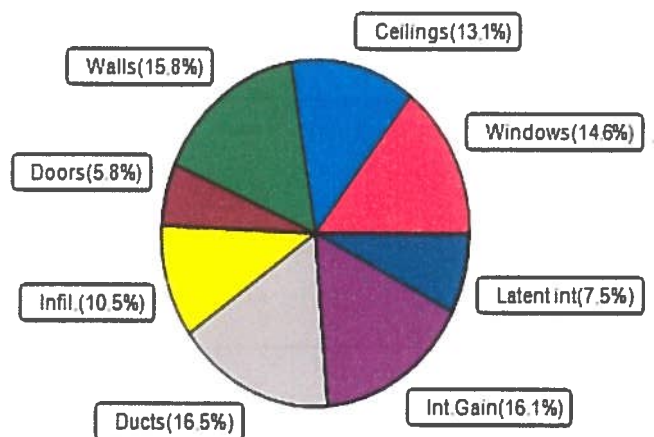
Load component			Load	
Window total	163	sqft	2152	Btuh
Wall total	1193	sqft	4115	Btuh
Door total	78	sqft	1244	Btuh
Ceiling total	1496	sqft	1906	Btuh
Floor total	1496	sqft	7552	Btuh
Infiltration	40	cfm	1773	Btuh
Duct loss			2370	Btuh
Subtotal			21112	Btuh
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			21112	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1496 sqft)

Load component			Load	
Window total	163	sqft	2327	Btuh
Wall total	1193	sqft	2529	Btuh
Door total	78	sqft	933	Btuh
Ceiling total	1496	sqft	2096	Btuh
Floor total			0	Btuh
Infiltration	30	cfm	632	Btuh
Internal gain			2580	Btuh
Duct gain			2295	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			13392	Btuh
Latent gain(ducts)			351	Btuh
Latent gain(infiltration)			1048	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			2600	Btuh
TOTAL HEAT GAIN			15992	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: DIY Spec House
 Street: 576 SW KIRBY AVE
 City, State, Zip: Lake City, FL, 32024
 Owner: DIY Development, LLC
 Design Location: FL, Gainesville

Builder Name: IC Construction
 Permit Office: Columbia County
 Permit Number:
 Jurisdiction:
 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 (ft ²)	1496
Conditioned floor area below grade (ft ²)	0
7. Windows(163.0 sqft.)	Description Area
a. U-Factor:	DbI, U=0.33 163.00 ft ²
SHGC:	SHGC=0.22
b. U-Factor:	N/A ft ²
SHGC:	
c. U-Factor:	N/A ft ²
SHGC:	
d. U-Factor:	N/A ft ²
SHGC:	
Area Weighted Average Overhang Depth:	1.500 ft.
Area Weighted Average SHGC:	0.220
8. Floor Types (1496.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1496.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

9. Wall Types(1434.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1248.00 ft ²
b. Frame - Wood, Adjacent	R=13.0 186.00 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
10. Ceiling Types (1496.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=30.0 1496.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
11. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, V: H: Main	8 299.2
12. Cooling systems	kBtu/hr Efficiency
a. Central Unit	30.0 SEER:15.00
13. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	30.0 HSPF:8.50
14. Hot water systems	
a. Electric	Cap: 40 gallons
b. Conservation features	EF: 0.920
None	
15. Credits	CF, Pstat

Glass/Floor Area: 0.109

Total Proposed Modified Loads: 40.43

Total Baseline Loads: 43.24

PASS

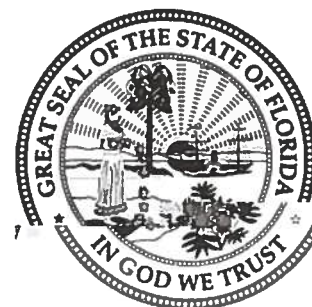
I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____
 DATE: _____

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

OWNER/AGENT: _____
 DATE: _____

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



BUILDING OFFICIAL: _____
 DATE: _____

- 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 5.00 ACH50 (R402.4.1.2).
- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	DIY Spec House	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1496	Lot #	11
Owner Name:	DIY Development, LLC	Total Stories:	1	Block/Subdivision:	Southwood Meado
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	IC Construction	Rotate Angle:	0	Street:	576 SW KIRBY AVE
Permit Office:	Columbia County	Cross Ventilation:		County:	columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL , 32024
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	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	1496	13464

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1496	13464	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	160 ft	0	1496 ft²	----	0.33	0.33	0.34

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	Metal	1673 ft²	374 ft²	Light	N	0.6	No	0.9	No	0	26.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1496 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	Blown	1496 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓ #	Omt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor	Below Grade%
1	N	Exterior	Frame - Wood	Main	13	31	4	9		282.0 ft²	0.625	0.23	0.75	0
2	E	Exterior	Frame - Wood	Main	13	48	4	9		435.0 ft²	0.625	0.23	0.75	0
3	S	Exterior	Frame - Wood	Main	13	30	4	9		273.0 ft²	0.625	0.23	0.75	0
4	W	Garage	Frame - Wood	Main	13	20	8	9		186.0 ft²	0.625	0.23	0.75	0
5	W	Exterior	Frame - Wood	Main	13	17	4	9	0	156.0 ft²	0.625	0.23	0.75	0
6	W	Exterior	Frame - Wood	Main	13	11	4	9		102.0 ft²	0.625	0.23	0.75	0

DOORS

✓ #	Omt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
1	E	Insulated	Main	None	.4	6		6	8	40 ft²
2	W	Insulated	Main	None	.4	2	8	6	8	17.8 ft²
3	W	Insulated	Main	None	.4	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Omt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
1	N	1	Vinyl	Low-E Double	Yes	0.33	0.22	N	4.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
2	E	2	Vinyl	Low-E Double	Yes	0.33	0.22	N	45.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
3	E	2	Vinyl	Low-E Double	Yes	0.33	0.22	N	20.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
4	E	2	Vinyl	Low-E Double	Yes	0.33	0.22	N	9.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
5	S	3	Vinyl	Low-E Double	Yes	0.33	0.22	N	16.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
6	W	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	54.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
7	W	6	Vinyl	Low-E Double	Yes	0.33	0.22	N	15.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None

GARAGE

✓ #	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
1	400 ft²	400 ft²	64 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1122	61.6	115.84	.1128	5

HEATING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump/	None	HSPF:8.5	30 kBtu/hr	1	sys#1

INPUT SUMMARY CHECKLIST REPORT

COOLING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit/	None	SEER: 15	30 kBtu/hr	900 cfm	0.8	1	sys#1

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Main	0.92	40 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	Cool
✓	1	Attic	8	299.2 ft	Attic	74.8 ft²	Prop. Leak Free	Main	— cfm	44.9 cfm	0.03	0.50	1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

Cooling	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec
Heating	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec
Venting	<input type="checkbox"/> Jan	<input type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec

Thermostat Schedule: HERS 2006 Reference

Schedule Type		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