FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Lastas Residence	Builder Name:	Custom Homes By Adam
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32025-	Permit Number:	
Owner:	Kathy Lastas	Jurisdiction:	
Design Location:	FL, Gainesville		

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)	2597
Conditioned floor area below grade (ft²)	0

7. Windows (420.5 sqft.)	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.30 SHGC=0.50	420.50 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		1.993 ft.
Area Weighted Average SHGC:		0.500

8. Floor Types (2597.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=5.0	2315.00 ft²
b. Floor over Garage	R=19.0	282.00 ft²
c. N/A	R=	ft²

9. Wall Types (2631.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	2361.00 ft²
b. Frame - Wood, Adjacent	R=13.0	270.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (2597.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	2597.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: RoomsInBlock1	6	649.25

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	54.1	SEER:13.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	54.1	HSPF:7.70

14. Hot water systems	
a. Electric	Cap: 80 gallons EF: 0.920
b. *Conservation features* None	
15. Credits	CV, Pstat

Glass/Floor Area: 0.162

Total Proposed Modified Loads: 41.62

Total Standard Reference Loads: 52.91

PASS

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

PREPARED BY: _____

DATE: 5/2/12

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

OWNER/AGENT: _____

DATE: 6-11-12

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: _____

GREAT SEAL OF THE STATE OF FLORIDA * IN GOD WE TRUST *

COLUMBIA COUNTY BUILDING DEPARTMENT PLANS EXAMINER

FILE COPY

Received for Compliance Code

- **Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist**

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 79

The lower the EnergyPerformance Index, the more efficient the home.

, Lake City, FL, 32025-

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 (ft²)		2597

7. Windows**	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.30 SHGC=0.50	420.50 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		1.993 ft.
Area Weighted Average SHGC:		0.500

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=5.0	2315.00 ft²
b. Floor over Garage	R=19.0	282.00 ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	2361.00 ft²
b. Frame - Wood, Adjacent	R=13.0	270.00 ft²
c. N/A	R=	ft²
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12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	54.1	SEER:13.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	54.1	HSPF:7.70

14. Hot water systems	
a. Electric	Cap: 80 gallons EF: 0.92
b. Conservation features None	
15. Credits	CV, Pstat

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

Builder Signature: X _____ Date: 6-11-12

Address of New Home: 405 SW Morning Glory Dr City/FL Zip: 32024

Lake City, FL 32024

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

PROJECT

Title:	Lastas Residence	Bedrooms:	3	Address Type:	Lot Information
Building Type:	FLProp2010	Conditioned Area:	2597	Lot #	14
Owner:	Kathy Lastas	Total Stories:	1	Block/SubDivision:	Rolling Meadows
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Custom Homes By Adam	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32025-
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	IECC Zone	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	2	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2597	24248.5

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	RoomsInBlock1	2597	24248.5	Yes	3	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	RoomsInBlock1	249 ft	5	2315 ft²	----	0	0	1
_____	2	Floor over Garage	RoomsInBlock1	----	----	282 ft²	19	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	3380 ft²	1082 ft²	Dark	0.96	No	0.9	No	0	39.8

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	303	2597 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	RoomsInBlock1	30	2315 ft²	0.11	Wood
_____	2	Under Attic (Vented)	RoomsInBlock1	30	282 ft²	0.11	Wood

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	Exterior	Frame - Wood	RoomsInBlock	13	219		9	6	2080.5 ft²		0.23	0.75	0
	2	E	Garage	Frame - Wood	RoomsInBlock	13	30		9	0	270 ft²		0.23	0.01	0
	3	W	Exterior	Frame - Wood	RoomsInBlock	13	11		25	6	280.5 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	Insulated	RoomsInBlock	None	0.460000	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
	1	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	30 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None
	2	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	4 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None
	3	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	28 ft²	3 ft 0 in	1.5 ft 0 in	HERS 2006	None
	4	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	13.33 ft²	2 ft 0 in	7 ft 0 in	HERS 2006	None
	5	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	6.67 ft²	0 ft 6 in	7 ft 0 in	HERS 2006	None
	6	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	20 ft²	2 ft 0 in	7 ft 0 in	HERS 2006	None
	7	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	12 ft²	6 ft 0 in	6 ft 0 in	HERS 2006	None
	8	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	24 ft²	1 ft 0 in	5 ft 0 in	HERS 2006	None
	9	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	12 ft²	1 ft 0 in	6 ft 0 in	HERS 2006	None
	10	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	12.5 ft²	4 ft 0 in	1.5 ft 0 in	HERS 2006	None
	11	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	9 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None
	12	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	3 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None
	13	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	18 ft²	1 ft 0 in	2 ft 6 in	HERS 2006	None
	14	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	18 ft²	1 ft 0 in	4 ft 0 in	HERS 2006	None
	15	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	18 ft²	1 ft 0 in	5 ft 0 in	HERS 2006	None
	16	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	84 ft²	2 ft 0 in	11 ft 0 in	HERS 2006	None
	17	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	8 ft²	1 ft 0 in	11 ft 0 in	HERS 2006	None
	18	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	15 ft²	2 ft 0 in	7 ft 0 in	HERS 2006	None
	19	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	45 ft²	4 ft 0 in	1 ft 0 in	HERS 2006	None
	20	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	18 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
	21	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	6 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None
	22	N	1	Wood	Low-E Double	Yes	0.3	0.5	N	16 ft²	1 ft 0 in	1.5 ft 0 in	HERS 2006	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
	1	641.6675 ft²	282 ft²	70.6667 ft	9 ft	13

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed SLA	0.000360	2186.02	120.009	225.695	0.27719	5.96391

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump	None	HSPF: 7.7	54.1 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit	None	SEER: 13	54.1 kBtu/hr	1623 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	RoomsInBlock	10.92	80 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	Percent Leakage	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	649.25 f	Attic	129.85 f	DSE=0.88	RoomsInBlo	0.0 cfm	0.00 %	0.00	0.60	1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

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

Thermostat Schedule: HERS 2006 Reference		Hours											
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

MECHANICAL VENTILATION

Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System
None	0	0	0	0	1 - Electric Heat Pump	0%	1 - Central Unit

FORM 405-10

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS:	PERMIT #:
Lake City, FL, 32025-	

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

COMPONENT	SECTION	SUMMARY OF REQUIREMENT(S)	CHECK
Air leakage	402.4	To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq.ft. Testing or visual inspection required. Fireplaces: gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2.	
Thermostat & controls	403.1	At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load.	
Ducts	403.2.2 403.3.3	All ducts, air handlers, filter boxes and building cavities which 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 503.2.7.2 of this code. Building framing cavities shall not be used as supply ducts.	
Water heaters	403.4	Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch.	
Mechanical ventilation	403.5	Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas.	
Swimming Pools & Spas	403.9	Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0.	
Cooling/heating equipment	403.6	Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages.	
Ceilings/knee walls	405.2.1	R-19 space permitting.	