FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Sample 2 zone home	Builder Name:	BUILDER
Street:	123 Main Street	Permit Office:	
City, State, Zip:	Orlando , FL , 32922-	Permit Number:	
Owner:	OWNER	Jurisdiction:	
Design Location:	FL, Orlando		

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	6
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	2400
Conditioned floor area below grade (ft²)	0

7. Windows(416.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.75	276.00 ft²
SHGC:	SHGC=0.40	
b. U-Factor:	Dbl, U=0.60	40.00 ft²
SHGC:	SHGC=0.30	
c. U-Factor:	Dbl, U=0.50	40.00 ft²
SHGC:	SHGC=0.35	
d. U-Factor:	other (see details)	60.00 ft²
SHGC:	other (see details)	
Area Weighted Average Overhang Depth:		2.000 ft.
Area Weighted Average SHGC:		0.406

8. Floor Types (2400.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1200.00 ft²
b. Interior Floor	R=0.0	1200.00 ft²
c. N/A	R=	ft²

9. Wall Types (2350.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1230.00 ft²
b. Concrete Block - Int Insul, Exterior	R=5.0	944.00 ft²
c. Frame - Wood, Adjacent	R=13.0	176.00 ft²
d. N/A	R=	ft²

10. Ceiling Types (1200.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	1200.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Main, Ret: Main, AH: Main	6	240
b. Sup: Attic, Ret: Attic, AH: 2nd Floor	6	240

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	20.0	SEER:13.00
b. Central Unit	18.0	SEER:13.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	20.0	HSPF:7.70
b. Natural Gas Furnace	18.0	AFUE:0.78

14. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.9
b. Conservation features	
None	
15. Credits	Pstat

Glass/Floor Area: 0.173

Total Proposed Modified Loads: 47.03

Total Baseline Loads: 58.94

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 403.2.2.1.1.**
- **Compliance requires an envelope leakage test report, by a Florida Class 1 Rater, in accordance with Table B-1.1.2.**
- **Compliance requires a roof absorptance test and a roof emittance test in accordance with 405.6.2**
- **Compliance requires an air distribution system test report, by a Florida Class 1 Rater, confirming system leakage to outdoors tested at 25 pascals pressure difference in accordance with 403.2.2.1. is not greater than (36 cfm:Duct#1) (36 cfm:Duct#2)**

PROJECT

Title:	Sample 2 zone home	Bedrooms:	6	Adress Type:	Street Address
Building Type:	FLProp2010	Conditioned Area:	2400	Lot #	
Owner:	OWNER	Total Stories:	2	Block/SubDivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	BUILDER	Rotate Angle:	0	Street:	123 Main Street
Permit Office:		Cross Ventilation:	No	County:	Orange
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Orlando , FL , 32922-
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:	High Performance Florida Home				

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, Orlando	FL_ORLANDO_INTL_AR	2	41	91	75	70	526	44	Medium

BLOCKS

Number	Name	Area	Volume
1	Zone1	1200	9600
2	Zone2	1200	9600

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Cooled	Heated
1	Main	1200	9600	Yes	3.5	3	1	Yes	Yes
2	2nd Floor	1200	9600	No	3.5	3	2	Yes	Yes

FLOORS

√	#	Floor Type	Room	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	140 ft	0	1200 ft²	----	0.2	0	0.8
_____	2	Interior Floor	2nd Floor	----	----	1200 ft²	0	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1300 ft²	0 ft²	White	0.85	Yes	0.9	Yes	0	22.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	150	1200 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	2nd Floor	30	1200 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	Concrete Block - Int Insul	Main	5	40		8		320 ft²	0	0	0.5	0
_____	2	E	Exterior	Concrete Block - Int Insul	Main	5	30		8		240 ft²	0	0	0.5	0
_____	3	S	Exterior	Concrete Block - Int Insul	Main	5	40		8		320 ft²	0	0	0.5	0
_____	4	W	Exterior	Concrete Block - Int Insul	Main	5	8		8		64 ft²	0	0	0.5	0
_____	5	W	Garage	Frame - Wood	Main	13	22		8		176 ft²	0	0	0.01	0
_____	6	N	Exterior	Frame - Wood	2nd Floor	13	40		9		360 ft²	0	0.23	0.5	0
_____	7	E	Exterior	Frame - Wood	2nd Floor	13	30		9		270 ft²	0	0.23	0.5	0
_____	8	S	Exterior	Frame - Wood	2nd Floor	13	40		9		360 ft²	0	0.23	0.5	0
_____	9	W	Exterior	Frame - Wood	2nd Floor	13	30		8		240 ft²	0	0.23	0.5	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	N	Insulated	Main	None	0.2	3		6	8	20 ft²
_____	2	S	Insulated	Main	None	0.2	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	N	Vinyl	Low-E Double	Yes	0.75	0.4	N	48 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	2	N	None	Glazed Block	No	0.6	0.6	N	24 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	3	E	Vinyl	Low-E Double	Yes	0.75	0.4	N	24 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	4	E	Vinyl	Low-E Double	Yes	0.75	0.4	N	24 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	5	S	Vinyl	Low-E Double	Yes	0.75	0.4	N	36 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	6	S	Vinyl	Low-E Double	Yes	0.5	0.35	N	40 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	7	W	Vinyl	Low-E Double	Yes	0.6	0.3	N	16 ft²	2 ft 0 in	10 ft 4 in	HERS 2006	None
_____	8	N	Vinyl	Low-E Double	Yes	0.75	0.5	N	36 ft²	2 ft 0 in	1 ft 4 in	HERS 2006	None
_____	9	E	Vinyl	Low-E Double	Yes	0.75	0.4	N	48 ft²	2 ft 0 in	1 ft 4 in	HERS 2006	None
_____	10	S	Vinyl	Low-E Double	Yes	0.75	0.4	N	48 ft²	2 ft 0 in	1 ft 4 in	HERS 2006	None
_____	11	S	Vinyl	Low-E Double	Yes	0.75	0.4	N	48 ft²	2 ft 0 in	1 ft 4 in	HERS 2006	None
_____	12	W	Vinyl	Low-E Double	Yes	0.6	0.3	N	24 ft²	2 ft 0 in	1 ft 4 in	HERS 2006	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	384 ft²	384 ft²	64 ft	8 ft	13

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed ACH(50)	0.000360	1133.1	62.208	116.99	0.3235	7.0821
2	BySpaces	Proposed ACH(50)	0.000355	1120	61.486	115.63	0.3197	7

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump	None	HSPF: 7.7	20 kBtu/hr	1	sys#1
_____	2	Natural Gas Furnace	None	HSPF: 0.78	18 kBtu/hr	2	sys#2

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit	None	SEER: 13	20 kBtu/hr	600 cfm	0.75	1	sys#1
_____	2	Central Unit	None	SEER: 13	18 kBtu/hr	540 cfm	0.75	2	sys#2

HOT WATER SYSTEM

√	#	System Type	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	0.9	50 gal	90 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	Main	6	240 ft²	Main	60 ft²	Proposed Qn	Main	36.0 cfm	6.00 %	0.03	0.50	1	1
_____	2	Attic	6	240 ft²	Attic	60 ft²	Proposed Qn	2nd Floor	36.0 cfm	6.67 %	0.03	0.50	2	2

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

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

FORM 405-10

Florida Code Compliance Checklist

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

ADDRESS: 123 Main Street
Orlando, FL, 32922-

PERMIT #:

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.	