FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Rambo Residence Street: 305 S. 27th St City, State, Zip: Flagler Beach , FL , 32136 Owner: Design Location: FL, Daytona Beach	Builder Name: Lawrence Rambo Permit Office: Flagler Beach Permit Number: Jurisdiction: 281300
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 2 5. Is this a worst case? No 6. Conditioned floor area above grade (ft²) 2711 Conditioned floor area below grade (ft²) 0 7. Windows(171.0 sqft.) Description Area a. U-Factor: Dbl, U=0.60 171.00 ft² SHGC: SHGC=0.40 171.00 ft² b. U-Factor: N/A ft² SHGC: C. U-Factor: d. U-Factor: N/A ft² SHGC: G. G. d. U-Factor: N/A ft² SHGC: G.	9. Wall Types (3135.0 sqft.) Insulation Area a. Concrete Block - Polystyrene Bead AggR=7.0 2445.00 ft² b. Frame - Wood, Adjacent R=11.0 345.00 ft² c. Interior Wall, Interior R=11.0 345.00 ft² d. N/A R= ft² 10. Ceiling Types (1200.0 sqft.) Insulation Area a. Cathedral/Single Assembly (Unvented) R=19.0 1200.00 ft² b. N/A R= ft² c. N/A R= ft² 11. Ducts R ft² a. Sup: Attic, Ret: Attic, AH: RoomsInBlock1 6 400 b. Sup: RoomsInBlock2, Ret: RoomsInBlock2, AH: 6 50 50 12. Cooling systems kBtu/hr Efficiency a. Central Unit 23.5 SEER:13.00 b. Central Unit 17.4 SEER:13.00 13. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 23.4 HSPF:7.70 b. Electric Heat Pump 17.4 HSPF:8.00 14. Hot water systems EF: 0.920 EF: 0.920 b. Conservation features None EF: 0.920
Glass/Floor Area: 0.063 Total Proposed Modified Total Standard Reference	d Loads: 34.96 PASS e Loads: 61.59
Jou ATHAN JACOBS 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.

- 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 completion of a Florida Air Barrier and Insulation Inspection Checklist

PROJECT									
Title:Rambo ResidenceBuilding Type:FLProp2010Owner:## of Units:1Builder Name:Lawrence RamboPermit Office:Flagler BeachJurisdiction:281300Family Type:Single-familyNew/Existing:New (From Plans)Comment:	e Be Co Toi Wo Ro Cro Wr	drooms: inditioned Area: tal Stories: orst Case: tate Angle: oss Ventilation: nole House Far	2 1793 3 No 0 No n: No			Address T Lot # Block/Sub PlatBook: Street: County: City, State	ype: S Division: 3 F , Zip: F F	Street Addres 05 S. 27th S lagler lagler Beacl L, 3213	ss St n , 6
	CLIMATE								
✓ Design Location	TMY Site	IECC Zone	Design T 97.5 %	emp 2.5 %	Int Desig Winter	n Temp Summer [Heating Degree Day	Design /s Moisture	Daily Temp Range
FL, Daytona Beach FI	L_DAYTONA_BEACH_	<u> </u>	38	92	70	75	789	56	Low
BLOCKS									
Number Name	Area \	/olume							
1 Block1	2424	24240							
2 Block2	287	2870							
		SP	ACES						
Number Name	Area Volui	me Kitchen	Occup	ants	Bedrooms	Infil ID	Finishe	d Cool	ed Heated
1 RoomsInBlock1	2424 2424	0 Yes		1.788270	01 1	1	Yes	Yes	Yes
2 RoomsinBlock2	287 2870			0.211729	98 1	2	Yes	Yes	Yes
V # Elect Type	Space	FLV Derimeter [JUK5		Area	loiot P V	alua		d Carnot
1 Floor over Garage	RoomsInBlock	k1		-value	913 ft ²	19	alue	0 0	1
2 Slab-On-Grade Edge Ins	sulatio RoomsInBlock	k2 34.5 ft	0		287 ft²			0 0	1
ROOF									
√	Materials	Roof G Area A	able Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt D Tested Ir	eck Pitch Isul. (deg)
1 Flat	Flat tile/slate	1204 ft ² 5	0 ft² N	ledium	0.5	Ν	0.5	No	0 4.8
		A	ГТІС						
	Ventilation	Vent I	Ratio (1 in)	ŀ	Area	RBS	IRCC		
1 No attic	Unvented		0	12	00 ft ²	N	N		

	CEILING																
\sim		#	C	eiling	Туре		Space	R-V	alue		Are	a	Frar	ning Frac	Т	russ Typ	be
	-	1	C	athed	ral/Sing	le Assembly	(UnverteendmsInBloc	:k1 19	9		120	0 ft²		0.1		Wood	
	WALLS																
\checkmark	#	Ornt	A	djace	ent Wall	Type	Space	Cavity R-Value	Wic 5 Et	lth In	Ft	leight In	Area	Sheathing R-Value	Framing	Solar	Below Grade%
	_ 1	N	Ex	terior	Con	crete Block	- Polyst reo msInBlo	oc 7	47	6	10	0	475 ft ²	0	0	0.5	0
	2	Е	Ex	terior	Con	crete Block	- Polyst reo msInBlo	oc 7	58	0	10	0	580 ft²	0	0	0.5	0
	_ 3	S	Ex	terior	Con	crete Block	- Polyst freo msInBlo	oc 7	47	6	10	0	475 ft²	0	0	0.5	0
	_ 4	W	Ex	terior	Con	crete Block	- Polyst irteo msInBlo	oc 7	57	6	10	0	575 ft²	0	0	0.5	0
	5	Ν	Ga	arage	Fran	ne - Wood	RoomsInBlo	oc 11	34	6	10	0	345 ft²	0	0.25	0.01	0
	6	Ν	Ex	terior	Con	crete Block	- Polyst βteo msInBlo	oc 7	14		10		140 ft ²	0	0	0.5	0
	7	Ν	Ex	terior	Con	crete Block	- Polyst Freo msInBlo	oc 7	20		10		200 ft ²	0	0	0.5	0
	8	Ν	Roo	omsIn	Inte	rior Wall	RoomsInBlo	oc 11	34	6	10		345 ft²	0	0	0.5	0
DOORS																	
\checkmark		#		Ornt		Door Type	Space			Storm	IS	U-Valu	e F	Width t In	Heigh [:] Ft	t In	Area
	_	1		Ν		Wood	RoomsInBloc			None	9	0.39	6	0	7	0	42 ft²
	_	2		Ν		Wood	RoomsInBloc			None	•	0.39	6	0	7	0	21 ft ²
	_	3		S		Wood	RoomsInBloc			None	•	0.39	6	0	7	0	42 ft²
	-	4		Ν		Wood	RoomsInBloc			None	9	0.39	6	0	7	0	63 ft²
							Orientation show	WIN	DOWS	Propos	ed o	rientation					
/			,	Wall			Chontation choi		intoi o'a, i	Topoo	00.01	lonation	Ove	rhang			
\checkmark		#	Ornt	ID	Frame	Panes	NFRC	U-Factor	SHGC	Storr	ns	Area	Depth	Separation	Int Sha	ade	Screening
	-	1	Ν	1	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		20 ft ²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	-	2	Е	2	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		4 ft²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	-	3	Е	2	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		30 ft ²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	_	4	S	3	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		40 ft ²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	-	5	W	4	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		30 ft ²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	-	6	W	4	Metal	Low-E Dou	ble Yes	0.6	0.4	Ν		27 ft ²	0 ft 1 in	4 ft 0 in	HERS 2	2006	None
	-	7	N	6	Metal	Low-E Dou	ble Yes	0.6	0.4	N		20 ft ²	0 ft 1 in	14 ft 0 in	HERS 2	2006	None
	GARAGE																
		#		Floo	r Area	C	Ceiling Area	Exposed \	Wall Per	imeter		Avg. Wa	II Height	Expose	ed Wall Ins	sulation	
	-	1		912	.9 ft²		0 ft²	I	64 ft			8	ft		1		

INFILTRATION														
#	Scope	Method		SLA	CFM 50	ELA	EqL	A A	СН	ACH	50			
1	BySpaces	Proposed SL	A	0.000360	1422.0	78.071	146.	82 0.3	653	5.66	57			
2	BySpaces	Proposed SL	A	0.000360	271.01	14.878	27.9	80 0.3	653	5.66	57			
	HEATING SYSTEM													
\vee	, #	System Type		Subtype		Effi	ciency	Сара	acity			Block	Du	ucts
	1	Electric Heat Pun	np	None		HSF	PF: 7.7	23.4 kE	Btu/hr			1	sy	s#1
	2	Electric Heat Pun	np	None		HS	PF: 8	17.4 kE	Btu/hr			2	sys	s#2
COOLING SYSTEM														
\vee	#	System Type		Subtype		Effic	iency	Capacity	Air Fl	low SH	IR	Block	Du	ucts
	1	Central Unit		Split		SEE	R: 13 2	23.5 kBtu/hr	720 c	cfm 0.7	75	1	sys	s#1
	2	Central Unit		Split		SEE	R: 13 1	17.4 kBtu/hr	522 c	ofm 0.	7	2	sys	s#2
					HOT WA	TER SYST	ЕМ							
	#	System Type	SubType	Location	EF	Сар		Use	SetPnt		Cons	ervatior	ı	
	1	Electric	None	RoomsInB	lock10.92	50 gal	5	0 gal 1	20 deg		١	lone		
				SOL	AR HOT	WATER SY	STEN	И						
\vee	FSE Cert	C # Company Na	ime		System M	lodel #	Coll	ector Model	Col # A	lector .rea	Storag Volum	je e	FEF	
	Non	e None								ft²				
					[DUCTS								
. /	/	Supp	ly	Ret	urn			Air		Percent			HV	AC #
	#	Location R-	Value Area	Location	Area	Leakage T	уре	Handler	CFM 25	Leakage	QN	RLF	Heat	Cool
I	1	Attic	6 400 ft ²	Attic	1 ft ²	DSE=0.8	8	RoomsInBl	0.0 cfm	0.00 %	0.00	0.60	1	1
	2	RoomsInBloc	6 50 ft ²	RoomsInBlo	c 20 ft ²	DSE=0.8	8	RoomsInBl	0.0 cfm	0.00 %	0.00	0.60	2	2

	TEMPERATURES													
Programa	able Thermo	ostat: Y			С	eiling Fans	6:							
Cooling Heating Venting	[X] Jan [X] Jan [X] Jan	[X] Feb [X] Feb [X] Feb	[X] Mar [X] Mar [X] Mar	[X] Apı [X] Apı [X] Apı	•	[X] May [X] May [X] May	[X] Jun [X] Jun [X] Jun	[X] Jul [X] Jul [X] Jul	[X] Aug [X] Aug [X] Aug	[X] 5 [X] 5	Sep Sep Sep	X Oct X Oct X Oct	[X] Nov [X] Nov [X] Nov	[X] Dec [X] Dec [X] Dec
Thermostat	Schedule:	HERS 200	6 Reference	9				Ho	urs					
Schedule T	уре		1	2	3	4	5	6	7	8	9	10	11	12
Cooling (W	D)	AM PM	78 80	78 80	78 78	78 78	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78
Cooling (W	EH)	AM PM	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78
Heating (WD)		AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66
Heating (W	EH)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66

Florida Code Compliance Checklist Florida Department of Business and Professional Regulations

Residential Whole Building Performance Method

ADDRESS: 305 S. 27th St

PERMIT #:

Flagler Beach, FL, 32136

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	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.	
	403.3.3	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.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 57 The lower the EnergyPerformance Index, the more efficient the home.

305 S. 27th St, Flagler Beach, FL, 32136

1.	New construction or exis	New (F	rom Plans)		
2.	Single family or multiple	Single-	Single-family		
3.	Number of units, if multip	ole family	1		
4.	Number of Bedrooms		2		
5.	Is this a worst case?		No		
6.	Conditioned floor area (fl	t²)	1793		
7.	Windows** a. U-Factor: SHGC: b. U-Factor: SHGC: c. U-Factor: SHGC: d. U-Factor: SHGC: Area Weighted Average Area Weighted Average	Description Dbl, U=0.60 SHGC=0.40 N/A N/A N/A Overhang Depth SHGC:	:	Area 171.00 ft² ft² ft² ft² 0.083 ft. 0.400	
8.	Floor Types a. Floor over Garage b. Slab-On-Grade Edge I c. N/A	nsulation	Insulation R=19.0 R=0.0 R=	Area 913.00 ft² 287.00 ft² ft²	

9. Wall Types	Insulation	Area
a. Concrete Block - Polystyrene Bead Ag	gR=7.0	2445.00 ft ²
b. Frame - Wood, Adjacent	R=11.0	345.00 ft ²
c. Interior Wall, Interior	R=11.0	345.00 ft ²
d. N/A	R=	ft²
10. Ceiling Types	Insulation	Area
a. Cathedral/Single Assembly (Unvented))R=19.0	1200.00 ft ²
b. N/A	R=	ft²
c. N/A	R=	ft²
11. Ducts		R ft ²
a. Sup: Attic, Ret: Attic, AH: RoomsInBlo	ck1	6 400
b. Sup: RoomsInBlock2, Ret: RoomsInB	lock2, AH:	6 50
12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	23.5	SEER:13.00
b. Central Unit	17.4 \$	SEER:13.00
13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	23.4	HSPF:7.70
b. Electric Heat Pump	17.4	HSPF:8.00
14. Hot water systems		
a. Electric	Cap	b: 50 gallons
		EF: 0.92
 b. Conservation features 		
None		
15 Credits		Petat
		1 3141

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:	Date:	
Address of New Home:	City/FL Zip:	

*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.

EnergyGauge® USA - FlaRes2010 Section 405.4.1 Compliant Software

