

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

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Project Name: C9527-D PAC REGION 2A		Builder Name: Palm Harbor Homes	
Street:		Permit Office:	
City, State, Zip: , FL,		Permit Number:	
Owner:		Jurisdiction:	
Design Location: FL, Lakeland			

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 5 5. Is this a worst case? Yes 6. Conditioned floor area above grade (ft²) 2280 Conditioned floor area below grade (ft²) 0 7. Windows(266.4 sqft.) Description Area a. U-Factor: Dbl, U=0.33 266.39 ft² SHGC: SHGC=0.30 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: 1.000 ft. Area Weighted Average SHGC: 0.300 8. Floor Types (2280.0 sqft.) Insulation Area a. Raised Floor R=11.0 2280.00 ft² b. N/A R= ft² c. N/A R= ft²	9. Wall Types (1908.0 sqft.) Insulation Area a. Frame - Wood, Exterior R=23.0 1908.00 ft² b. N/A R= ft² c. N/A R= ft² d. N/A R= ft² 10. Ceiling Types (2280.0 sqft.) Insulation Area a. Under Attic (Vented) R=30.0 2280.00 ft² b. N/A R= ft² c. N/A R= ft² 11. Ducts R ft² a. Sup: Attic, Ret: Exterior, AH: Exterior 6 456 12. Cooling systems kBtu/hr Efficiency a. Central Unit 31.6 SEER:13.00 13. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 39.6 HSPF:7.70 14. Hot water systems a. Electric Cap: 50 gallons b. Conservation features EF: 0.910 None 15. Credits None
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Glass/Floor Area: 0.117	Total Proposed Modified Loads: 58.26	PASS
	Total Standard Reference Loads: 72.82	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. 2012.06.14 PREPARED BY: <u>Bruce Russell</u> 09:29:40 -04'00' DATE: _____ RATER ID=608 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: _____
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- Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist


 6/19/12

PROJECT

Title: C9527-D PAC REGION 2A	Bedrooms: 5	Address Type: Street Address
Building Type: FLProp2010	Conditioned Area: 2280	Lot #
Owner:	Total Stories: 1	Block/SubDivision:
# of Units: 1	Worst Case: Yes	PlatBook:
Builder Name: Palm Harbor Homes	Rotate Angle: 90	Street:
Permit Office:	Cross Ventilation:	County: POLK
Jurisdiction:	Whole House Fan:	City, State, Zip: , FL ,
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, Lakeland	FL_LAKELAND_LINDER	2	34	92	70	75	973	48	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2280	20520

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	RoomsInBlock1	2280	20520	Yes	5	5	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	R-Value	Area	Tile	Wood	Carpet
_____	1	Raised Floor	RoomsInBlock1	----	2280 ft²	11	0.24	0 0.76

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	2550 ft²	570 ft²	Medium	0.96	No	0.9	No	0	26.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	150	2280 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	RoomsInBlock1	30	2280 ft²	0.09	Wood

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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	RoomsInBloc	23	76		9		684 ft²		0.16	0.75	0
	2	S	Exterior	Frame - Wood	RoomsInBloc	23	76		9		684 ft²		0.16	0.75	0
	3	E	Exterior	Frame - Wood	RoomsInBloc	23	30		9		270 ft²		0.16	0.75	0
	4	W	Exterior	Frame - Wood	RoomsInBloc	23	30		9		270 ft²		0.16	0.75	0

DOORS

✓	#	Omt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
	1	N=>NW	Insulated	RoomsInBloc	None	0.4	38		80		21.11111
	2	S=>SE	Insulated	RoomsInBloc	None	0.4	38		80		21.11111
	3	N=>NW	Insulated	RoomsInBloc	None	0.4	38		80		21.11111

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

✓	#	Omt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Separation	Int Shade	Screening
	1	N=>NW	1	Vinyl	Low-E Double	Yes	0.33	0.3	N	60 ft²	0 ft 12 in	0 ft 25 in	HERS 2006	None
	2	N=>NW	1	Vinyl	Low-E Double	Yes	0.33	0.3	N	7.5 ft²	0 ft 12 in	0 ft 25 in	HERS 2006	None
	3	N=>NW	1	Vinyl	Low-E Double	Yes	0.33	0.3	N	3 ft²	0 ft 12 in	0 ft 25 in	HERS 2006	None
	4	N=>NW	1	Vinyl	Low-E Double	Yes	0.33	0.3	N	21.38888	0 ft 12 in	0 ft 31 in	HERS 2006	None
	5	S=>SE	2	Vinyl	Low-E Double	Yes	0.33	0.3	N	105 ft²	0 ft 12 in	0 ft 25 in	HERS 2006	None
	6	S=>SE	2	Vinyl	Low-E Double	Yes	0.33	0.3	N	6 ft²	0 ft 12 in	0 ft 25 in	HERS 2006	None
	7	E=>NE	3	Vinyl	Low-E Double	Yes	0.33	0.3	N	30 ft²	0 ft 12 in	0 ft 87 in	HERS 2006	None
	8	E=>NE	3	Vinyl	Low-E Double	Yes	0.33	0.3	N	3.5 ft²	0 ft 12 in	0 ft 112 in	HERS 2006	None
	9	W=>SW	4	Vinyl	Low-E Double	Yes	0.33	0.3	N	30 ft²	0 ft 12 in	0 ft 82 in	HERS 2006	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed SLA	0.000360	2152.9	118.19	222.28	0.2700	6.2952

HEATING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
	1	Electric Heat Pump	None	HSPF: 7.7	39.6 kBtu/hr	1	sys#1

COOLING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit	None	SEER: 13	31.6 kBtu/hr	948 cfm	0.75	1	sys#1

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 6/19/12

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
	1	Electric	None	RoomInBlock	0.91	50 gal	80 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	456 ft²	Exterior	120 ft²	DSE=0.88	Exterior 0.0 cfm	0.00 %	0.00	0.60	1 1

TEMPERATURES

Programable Thermostat: None													Ceiling Fans:	
Cooling	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ Dec		
Heating	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ Dec		
Venting	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☒ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☒ Oct	☒ Nov	☒ 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	78	78	78	78	78
	PM	78	78	78	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	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	68	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	68	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68	68

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Florida Code Compliance Checklist

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

ADDRESS:

, FL,

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	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.	

Manufacturer: Palm Harbor Homes of Florida - Plant City
Plan Number: NA

Manufacturer:
Plan Number:

NA

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As required by Florida Statute 533.8452 and Florida Administrative Code 9n-03, this document provides the information and the product approval number(s) on the building components listed below

ATTITUDE	CATEGORY	MANUFACTURER	PRODUCT DESCRIPTIONS	DP +	DP -	IMPACT	HVHZ	FPA
Active	Swinging Ext. Door	Dunbarton	SIX PANEL FIBERGLASS	65	70	No	No	8172.1
Active	Swinging Ext. Door	Dunbarton	SINGLE DOOR WITH GLASS (3 LITE, PALM TREE OR MINI BLIND)	45	50	No	No	8172.2
Active	Swinging Ext. Door	Dunbarton	Achiever "ES" Single fiberglass door with glass and the sidelite	50	55	No	No	10079.5
Active	Swinging Ext. Door	Dunbarton	Achiever "ES" Single Steel door with glass and the sidelite	45	50	No	No	10079.5
Active	Swinging Ext. Door	Dunbarton	DOUBLE SIDE LITE	56	56	No	No	8172.4
Active	Swinging Ext. Door	Dunbarton	COVERS BOTH THE SINGLE SIDELITE DOOR AS WELL AS THE CENTER HINGED PATIO DOOR (THE 6068 DOUBLE ATRUJIM TYPE)	45	50	No	No	8172.5
Active	Swinging Ext. Door	Therma-Tru	INSWINGING/OUT SWINGING 6 PANEL FIBERGLASS IMPACT (CLASSIC CRAFT ONLY)	100	100	Yes	Yes	7130_R2_1*
Active	Swinging Ext. Door	Kirco	9750 SERIES IMPACT RESISTANT	56	66	Yes	No	993.3
Active	Windows - SH	Kirco	9750 SERIES NON-IMPACT	50	66	No	No	993.2
Active	Windows - SH	PGT	500 SERIES VINYL IMPACT	60	70	Yes	Yes	239.1
Active	Swinging Ext. Door	Schincio	9000 SERIES IMPACT VINYL	100	100	Yes	CHECK	8153.1
Active	Sliding Glass door	Atrium	72X80 332/2352 IMPACT MODEL SGD	60	60	Yes	No	11646.3
Active	Sliding Glass door	Atrium	72X80 352/2352 MODEL SGD	60	60	No	No	11646.4
Active	Sliding Glass door	PGT	106X80 770 SERIES	90	90	Yes	Yes	251.6
Active	Windows - Fixed	PGT	PGT FIXED PW WINDOWS	80	80	Yes	Yes	243.2
Active	Sliding	StyleCrest	HARBOR CREST SIDING D3	NA	***175	No	No	12231.6
Active	Sliding	Hardie	4XV VERTICAL 5/16 PANELS	NA	***	No	No	13223.1
Active	Sliding	Hardie	6.25 EXP. X 12"	NA	***130.2	Yes	Yes	13192.1
Active	Shingles	GAF	ASPHALT SHINGLES	NA	NA	No	No	10674.1
Active	Underlayment	Tamco	ASPHALT UNDERLAYMENT	NA	NA	No	No	12328.6
Active	Wood Connector	Simpson	H7/H10	NA	NA	No	CHECK	
Active	Wood Connector	Simpson	LSTA STRAPS	NA	NA	No	CHECK	10852.4
Active	Wood Connector	Simpson	MSTA STRAPS	NA	NA	No	CHECK	10852.7
Active	Wood Connector	Simpson	MSTA STRAPS	NA	NA	No	CHECK	10852.7
Active	Engineered Lumber	Universal Forest Products	OPEN JOIST 2000	NA	NA	No	NA	
Active	Windows - SH	Custom Window Systems	8100 SERIES VINYL SINGLE HUNG (IMPACT)	75	75	Yes	Yes	5823.1
Active	Windows - SH	Custom Window Systems	8100 SERIES VINYL SINGLE HUNG	75	75	No	Yes	5823.1
Active	Wood Connector	Master Craft	1 1/2" X 12" AND 18" NAILING STRIPS	NA	NA	NA	Yes	9159.3 (4)
Active	Windows - SH	Custom Window Systems	8100 SERIES "HEAVY DUTY" IMPACT	100	100	Yes	Yes	5823.3
Active	Sliding	StyleCrest	INSULSIDE D6 (FOUR SEASONS)	79.9/163	79.9/163	NA	No	12231.6
Active	Metal Roofing	Advanced Aluminum	METAL ROOF	125.3	125.3	NA	Yes	5284-R1
Active	Swinging Ext. Door	Therma-Tru	6 PANEL EXTERIOR DOOR SWINGING	67	67	Yes	No	5891.1
Active	Swinging Ext. Door	Right Concepts	6 PANEL EXTERIOR DOOR ISOS IMPACT	75	75	Yes	Yes	FL8535 R1
Active	Sliding Glass door	Custom Window Systems	SGD 8920/8950 0XXXX 6", 8" OR 9" UP TO 192"	67.5	67.5	CHECK	CHECK	FL10272.1
Active	Ext. Double French: XX	Custom Window Systems	8750 SERIES SD FRENCH (PATIO) DOUBLE FRENCH DOOR XX	70	70	Yes	Yes	14850.1
Active	Metal Roofing	SEMCO	STANDING SEAM 5/16" RIM 16" PANEL GALV OR STEEL	-	106.75	NA	Yes	11175
Active	Underlayment	Tamco	TW METAL AND TILE UNDERLAYMENT	NA	NA	NA	Yes	3664.1
Active	REVISIONS							
Active	713111 ADDED PGT 500 SERIES							
Active	713111 ADDED PGT 770 SERIES sgd							
Active	722111 ADDED SCHINCO 9000 SERIES WINDOWS							
Active	915111 ADDED THRMATRU 100 DP SIX PANEL							
Active	111811 ADDED CWS SGD 8920/8950							
Active	3/19/2012 ADDED SEMCO METAL ROOF							
Active	3/19/2012 ADDED TAMCO TW UNDERLAYMENT							