

**FORMS**

**FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION  
CHAPTER 5 — BUILDING ENVELOPE PRESCRIPTIVE METHOD**

**Form 502-2010**

**All Climate Zones**

Project Name:	Buildings that may comply by this form: shell buildings (preliminary), renovation, change of occupancy type permitted before 1979, limited or special use building, building system changeouts).
Address:	
City, Zip Code:	Building Permit No.:
Builder:	Permitting Office:
Owner:	Jurisdiction No.:

**BUILDING ENVELOPE INFORMATION**

ENVELOPE COMPONENT	SHELL BUILDING	RENOVATION; CHANGE OF OCCUPANCY TYPE; LIMITED/SPECIAL USE BUILDING; LIGHTING OR EQUIPMENT CHANGEOUT
Roof: Absorptance: R-value (U-value):		
Wall: Above grade wall Absorptance: R-value (U-value): Below grade wall		
Floor: Raised Floor Insulation: R-value (U-value): Slab-on-grade: No requirement unless heated:		
Fenestration: U- factor SHGC (by percent of wall area): Overhang Projection Factor (PF):		N.A.
Skylights: SHGC: U- factor: Percent of roof area:		N.A.

**SYSTEMS INFORMATION**

SYSTEM	Type (describe system)	Size (capacity)	Sizing calculation	Efficiency Rating
Air-conditioning system				
Heating system				
Ventilation				CFM
Ducts	Location:	Fan Power:		R-value
Piping	Fluid design operating temp:	Size of pipe:	-----	Inches
Hot water			-----	EF
Electric power	Drawings	Y	N	Operations manual available upon completion: Y N
Motors	Open or enclosed		Poles & speed	Horsepower:
Lighting	Space type:		Lighting power density	

**PRESCRIPTIVE MEASURES**

Components	Section	Requirements	Check
Operations Manual	303.3.1	Operations manual provided to owner.	
Air Infiltration: Windows & Doors Joints/Cracks Dropped Ceiling Cavity	502.3	Per 402.4.4: Windows, skylights & sliding glass doors air infiltration = .3 cfm/sq.ft. Swinging doors = 0.5 cfm/sq.ft. To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lights IC-rated and labeled to ASTM E 283. Vented: seal & insulated ceiling. Unvented seal & insulate roof & side walls.	
Dehumidification	503.4.5	Simultaneous heating/cooling prohibited, Exceptions.	
HVAC Efficiency	503.2.3	Minimum efficiencies: Tables 503.2.3(1)-(8)	
HVAC Controls	503.2.4	Zone controls prevent reheat (exceptions); separate thermostatic control per zone; combined HAC control 5°F deadband, Exceptions.	
Ventilation	503.2.5	Outdoor air supply & exhaust ducts shall have dampers that automatically shut when systems or spaces served are not in use. Exhaust air energy recovery required for cooling systems (Exceptions).	
HVAC Ducts	503.2.7	Air ducts, fittings, mechanical equipment & plenum chambers shall be mechanically attached, sealed, insulated & installed per Table 503.2.7.2. Fan power limitations.	
Balancing	503.2.9.1	HVAC distribution system(s) tested & balanced. Report in construction documents.	
Piping Insulation	503.2.8	HAC and service hot water. In accordance with Table 503.2.8	
Water Heaters	504	Performance requirements in accordance with Table 504.2. Heat trap required.	
Swimming Pools	504.7	Vapor-retardant or liquid cover or other means proven to reduce heat loss on heated pools; Time switch (exceptions); Readily accessible on/off switch	
Lighting Controls	505.2, 502.3	Automatic control required for interior lighting in buildings > 5,000 s.f.; Space control; Exterior photo sensor; Tandem wiring where 1-3 linear fluorescent lamps > 30W	

I hereby certify that the plans and specifications covered by the calculation are in compliance with the Florida Energy Code. PREPARED BY: _____ DATE: _____ I hereby certify that this building is in compliance with the Florida Energy Code: OWNER AGENT: _____ DATE: _____	Review of 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 in accordance with Section 553.908, F.S. BUILDING OFFICIAL: _____ DATE: _____
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BUILDING ENVELOPE REQUIREMENTS			
SHELL BUILDINGS		RENOVATIONS; CHANGE OF OCCUPANCY; LIMITED/SPECIAL USE BUILDING; LIGHTING OR EQUIPMENT CHANGEOUT <sup>1</sup>	
BUILDING COMPONENT	REQUIREMENT	BUILDING COMPONENT	REQUIREMENT
Roof: Absorptance R-value (U-value)	≤ 0.22 R-40 (U ≤ 0.025)	Roof: Absorptance U-value	≤ 0.22 R-38(U ≤ 0.033)
Wall: Above grade wall Absorptance R-value (U-value) Below grade wall	≤ 0.30 R-30 (U ≤ 0.032) No requirement	Wall: Above grade wall Absorptance R-value (U-value) Below grade wall	≤ 0.30 R-19 (U ≤ 0.052) No requirement
Raised Floor Insulation: R-value (U-value):	R-30 (U ≤ 0.032)	Raised Floor Insulation: R-value (U-value)	R-19 (U ≤ 0.052)
Windows: U- factor SHGC (by window area) <sup>2</sup> 0-40% WW Ratio 40-50% WW Ratio > 50 % Not allowed	≤ 0.45 0.25 0.19	Windows: U-factor SHGC (by window area) 0-40% WW Ratio > 40% WW Ratio	≤ 0.45 0.25 0.25
Skylights: SHGC U- factor Maximum percent of roof area	≤ 0.19 ≤ 1.36 ≤ 3%	Skylights: SHGC Skylight U-factor	≤ 0.19 ≤ 1.36
Opaque Door U- value: Swinging Non-swinging	≤ 0.70 ≤ 1.45	Opaque Door U-value: Swinging Non-swinging	≤ 0.70 ≤ 1.45
BUILDING SYSTEM REQUIREMENTS			
<b>SHELL BUILDINGS:</b> Lighting and HVAC must be sufficiently efficient to meet Method A criteria for the entire space at time of build-out.		<b>OTHER BUILDINGS:</b> Replacement systems <sup>3</sup>	
HVAC Equipment			
Air conditioner (0-65 KBtuh)	13.0 SEER	Heat pump (0 – 65 KBtuh)	13.0 SEER/ 7.7 HSPF
Air conditioner (> 65-135 KBtuh)	11.2 EER	Heat pump (> 65 – 135 KBtuh)	10.8 EER/3.3 COP
Air conditioner (>135-240 KBtuh)	11.0 EER, 11.2 IEER	Heat pump (>135-240 KBtuh)	10.4 EER/3.2 COP
Air conditioner (> 240-760 KBtuh)	10.0 EER, 10.1 IEER	Heat pump (> 240 KBtuh)	9.3 EER, 9.0 IPLV/3.1 COP
Air conditioner (> 760 KBtuh)	9.7 EER, 9.8 IEER	Gas furnace (0-225 KBtuh)	80% AFUE
		Gas furnace (>225 KBtuh)	80% E <sub>c</sub>
Service Hot Water		Lighting	
Gas storage ≤ 75,000 Btu/h, ≥ 20 gallons	0.67-0.0019V EF	LPD for space type on Table 505.5.3	
Gas storage > 75,000 Btu/h	80% E <sub>c</sub>		
Gas instantaneous	80% E <sub>c</sub>		
Electric storage ≤ 12 kW	0.97 – 0.0032xV EF		
Pipe insulation (d < 1.5", d ≥ 1.5") Diameter ≤ 1.5 inches Diameter > 1.5 inches	0.5 inch 1.0 inch		

1 See *FBC-EC* Table 101.4.1; meet code for component being changed as applicable.

2 Building with greater than 50% WWR shall comply with Section 506.

3 Other types of replacement equipment shall meet the code minimum for that type of equipment in the applicable table of Section 503.2.3 and 504.2.