



Board of Rules and Appeals

Residential Energy Guidelines

R401.2 (2): FBCEC Total Building Performance Compliance Option
Compliance with Section C405, and only the provisions
Labeled "Mandatory" found in sections R401 through R404.

Energy Conservation Eighth Edition (2023)

Effective: 12/31/2023

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Overview

To obtain uniform energy code enforcement in commercial buildings in Broward County, the Energy Conservation Committee has developed guidelines to aid jurisdictions in determining which discipline-specific plans examiner and inspector enforce certain sections of the Florida Building Code, Eighth Edition (2023) Energy Conservation. The following code sections regarding enforcement duties are as stated:

R103.3 & C103.3 Examination of documents.

The code official (plans examiner) shall examine or cause to be examined the accompanying construction documents and shall ascertain whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

R103.3.1 & C103.3.1 Approval of construction documents.

When the code official (chief inspector or plans examiner) issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "reviewed for code compliance."

R104.1 & C104.1 General

Construction or work for which a permit is required shall be subject to inspection by the code official (inspector) or their designated agent, and such construction or work shall remain accessible and exposed for inspection purposes until approved.

The Basis for the Guidelines:

The Florida Building Code, Eighth Edition (2023) Energy Conservation for new and existing buildings has designated that the code official (building official) is responsible for both the construction document and construction inspection approval.

Unfortunately, the Florida Building Code Energy Conservation administrative chapters do not designate which discipline-specific plans examiner and inspector will review compliance documents and building plans and which inspector will enforce specific items for code compliance found in the Energy Conservation Code. Subsequently, uniformity needs to be improved in enforcing the energy code, which created confusion among code officials over which specific disciplines will enforce certain code provisions.

The building official or code official for energy code purposes shall be defined as the officer or other designated authority having jurisdiction charged with the administration and enforcement of this standard or a duly authorized representative. Broward County is unique in that we have individual certified plan review and inspection personnel for each discipline and that a multi-discipline code official is not the norm.

This guide can be used as a tool for the Building Official to determine which discipline-specific code official will review and inspect specific sections of the Energy Code for code compliance to address those issues. This guide shall not prevent any certified code official (plans examiner or inspector) from issuing a correction notice for any Energy Code deficiency found in another discipline if they notify the Chief Inspector of that discipline of the correction notice.

These guidelines are minimum checklists. The local AHJ may have additional checklist items.

Building Code Administrators Checklist

Performance Pathway Only

Plan Review	Code Section
Scope and Administrative	Chapter 1
<input type="checkbox"/> <p>1. The building official shall appoint a plans examiner to verify that all disciplines have reviewed the plans and the code compliance report for energy code compliance. The plans examiner shall sign the code compliance report stating that the plans have been reviewed by all disciplines and the plans will be inspected according to the FECC. The building department may use Appendix A as a compliance tool.</p>	R103.3 R103.3.1 FS 553.908
Reporting Schedule	
<input type="checkbox"/> <p>2. A reporting form shall be submitted to the local building department by the owner or owner’s agent with the submittal certifying compliance with this code. Reporting forms shall be a copy of the front page of the compliance form applicable for the code chapter under which compliance is demonstrated (R405-2023). It shall be the responsibility of the local building official to forward the reporting section of the proper form to the entity representing the Florida Building Commission on a quarterly basis.</p> <p>Mail reporting form to: M. E. Rinker, Sr. School of Construction Management University of Florida PO Box 115703 304 Rinker, Third Floor Gainesville, FL 32611-5703 USA</p> <p>OR</p> <p>Upload Forms to: https://coremng.dcp.ufl.edu/epi/ Note: Scan in format 300dpi or smaller.</p>	R103.1.1.2.1 R103.1.1.2.1.1
Certificate of Occupancy	
<input type="checkbox"/> <p>3. The building official shall require that an energy performance level (EPL) display card be completed and signed by the building qualifier that it is accurate and correct before final approval for the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and non-presold residential buildings.</p>	R401.3 R405.4.3 (1)

Administrative Checklist

All Disciplines

Plan Review	Code Section
Scope and Administrative	Chapter 1
<input type="checkbox"/> 1. New residential buildings shall comply with the Florida Building Code 8th Edition (2023) Energy Conservation. Additions to buildings shall be considered new construction.	R101.2 R502
<input type="checkbox"/> 2. Buildings defined as residential, which are three stories and less in height, shall comply with the residential energy code. Mixed-use buildings shall submit separate compliance reports.	R101.5.1.2 R101.4.1
<input type="checkbox"/> 3. Existing buildings shall be classified as exempt, except those defined as renovated buildings in which the total work exceeds 30% of the value of the structure. Buildings with a change of occupancy type or unconditioned buildings to which comfort cooling is added are not exempt. Buildings specified in Sections R101.4.2.1 through R101.4.2.4 are exempt.	R101.4.2
<input type="checkbox"/> 4. An existing building or portion thereof shall not be altered to become less energy efficient.	EBC701.2
<input type="checkbox"/> 5. The complete energy compliance report shall be provided. Forms generated from computer software approved by the Florida Building Commission shall show <i>Pass</i> .	R101.5.1
<input type="checkbox"/> 6. The building's owner, or architect, or owner/agent shall certify compliance with the Florida Energy Conservation Code by signing the prepared compliance report.	C103.1.1.2
<input type="checkbox"/> 7. Any changes that affect the energy efficiency of the building shall require revised plans and a revised energy compliance report.	C103.4
Performance Alternative	R405
<input type="checkbox"/> 8. The energy compliance report shall match the plans and shall comply with the following:	R405.4.2
<input type="checkbox"/> The building street address and climate zone #1 shall be selected for Broward County from Table R301.1.	
<input type="checkbox"/> The name of the person who prepared the report and a signature are required to certify that the proposed design complies with the energy code.	
<input type="checkbox"/> The compliance report code version shall match the plans.	

BORA Structural Checklist
Performance Pathway Only

Plan Review		Code Section
Scope and Administrative		Chapter 1
<input type="checkbox"/>	1. The administrative checklist on page #5 has been completed.	
<input type="checkbox"/>	2. The energy compliance report shall match the plans and shall comply with the following:	R405.4.2
<input type="checkbox"/>	The number of bedrooms shall be shown. (Item 4)	R405.4.2
<input type="checkbox"/>	The solar heat gain coefficient (SHGC) of the windows. (Item 7)	
<input type="checkbox"/>	The R-values of the floor above the garage and any entry area ceiling in a two-story home shall be shown separately. (Item 9)	
<input type="checkbox"/>	Insulation R-values and areas of exterior walls, and adjacent walls. (Item10)	
<input type="checkbox"/>	The R-value of the ceiling area and knee walls adjacent to the attic space. (Item 11) (M-1)	
<input type="checkbox"/>	Reports that claim a cool roof option shall provide documentation of testing. (See Notes)	R405.7.2
<input type="checkbox"/>	3. The following information shall be submitted and shown on the plans.	R103.2
<input type="checkbox"/>	The building's thermal envelope shall be shown.	R103.2.1
<input type="checkbox"/>	Air Barrier sealing details and materials used shall be shown.	R103.2(8)
<input type="checkbox"/>	Window schedules shall include the "NFRC tested" U-factors and SHGC values. Note: Submittals may use the Residential Fenestration Submittal Form [Appendix A (S-1)]	R103.2(2)
<input type="checkbox"/>	Wall sections shall show the ceiling and wall insulation and shall show design R-values.	R405.4.3(2)
<input type="checkbox"/>	The conditioned floor area shall be shown on the architectural plans.	R103.2(1)
Rough Inspection		R104.2.2
<input type="checkbox"/>	1. A continuous air barrier shall be installed in the exterior building's thermal envelope.	R402.4
<input type="checkbox"/>	2. Windows and door jambs, framing, and skylights shall be sealed.	Table R402.4.1.1
<input type="checkbox"/>	3. Ceiling and wall insulation R-Values shall match the plans. Manufacturer's instructions shall be followed, and attic vents shall not be blocked. (S-2)	R104.2.2 R303.2
<input type="checkbox"/>	4. A label shall be affixed to the window showing the tested U-Value and SHGC. These values shall match the values shown on the plans. (S-1)	R104.2.2 R303.1.3
Final Inspection		
<input type="checkbox"/>	1. All installed attic insulation shall have an insulation certificate posted at or near the attic's opening, and an insulation certificate shall be submitted to the AHJ.	R303.1.1.1 R303.1.1.2
<input type="checkbox"/>	2. Blown or sprayed insulation shall be installed per inch according to plans. Blown insulation thickness shall be verified with markers installed every 300 sq. ft. Attic vents shall not be blocked.	R303.1.1.2.1 R402.2.3 R402.4
<input type="checkbox"/>	3. Access-openings, drop-down stairs, or knee wall doors to unconditioned attic spaces shall be sealed and baffled to maintain blown insulation. The attic hatch shall be insulated.	R402.2.4
<input type="checkbox"/>	4. Air sealing shall be provided for the interior garage door and the walls that separate conditioned spaces from the garage area.	Table R402.4.1.1
<input type="checkbox"/>	5. Windows and door jambs, framing, and skylights shall be sealed on the exterior frame.	Table R402.4.1.1
<input type="checkbox"/>	6. Mechanical closets shall be sealed to prevent leakage.	R403.3.2 C403.2.9.2

BORA Mechanical Checklist

Performance Pathway Only

Plan Review	Code Section
Scope and Administrative	Chapter 1
<input type="checkbox"/> 1. The administrative checklist on page #5 has been completed.	
<input type="checkbox"/> 2. The energy compliance report shall match the plans and shall comply with the following:	R405.4.2
<input type="checkbox"/> The site plan showing actual home orientation shall be shown. Worst-case orientations shall be accepted. HVAC load calculations shall be site-specific. (Item 5)	
<input type="checkbox"/> Window areas shall be shown. Sliding glass doors and opaque doors with glazing equal to or over 30% of the total area shall be included in the windows section. (Item 7)	
<input type="checkbox"/> The overhang effect shall be shown. (Item 7) (M-2)	R405.5.3.2
<input type="checkbox"/> Ceiling areas and insulation values shall be shown. Knee walls shall be shown separately as ceiling areas. (Item 11) (M-1)	
<input type="checkbox"/> The R-value of ducts, surface area, and the location of the ductwork shall be shown. (Item 13)	
<input type="checkbox"/> Ductwork classified as "leak-free" requires a duct leakage test report and shall be required for the final inspection. See notes at bottom of the report. (Item 13)	R405.2 R405.2.3
<input type="checkbox"/> The number of A/C systems, each system's efficiency rating, and the equipment's size shall be shown. (Item 14) (M-5)	R103.2 (6)
<input type="checkbox"/> The heater type, size, and fuel source shall be shown. (Item 15)	
<input type="checkbox"/> Energy credits shall be shown. (Item 17) (M-3)	R405.7
<input type="checkbox"/> 3. The following information shall be submitted and shown on the plans.	
<input type="checkbox"/> The cooling and heating load calculations shall be submitted with the mechanical plans.	R403.7.1
<input type="checkbox"/> The cooling equipment design capacity shall not exceed 1.15 times greater than the total calculated load. (See exceptions)	R403.7.1.1
<input type="checkbox"/> Strip heaters shall be sized within 4 kW of the design requirements.	R403.7.1.2.2
<input type="checkbox"/> Mechanical design criteria and controls (T-stat) shall be shown.	R103.2 (7)
<input type="checkbox"/> Duct sealing methods, duct and pipe insulation values, and duct locations shall be shown.	R103.2 (8)
<input type="checkbox"/> Outdoor air intakes and exhausts shall have automatic or gravity dampers and shall be shown.	R403.6
<input type="checkbox"/> Replacement outdoor combustion air and tight-fitting flue dampers or doors for wood-burning fireplaces shall be shown.	R402.4.2
Rough Inspection	R104.2.4
<input type="checkbox"/> 1. Building framing cavities shall not be used as ducts or plenums.	R403.3.5
<input type="checkbox"/> 2. Air-handling units may only be installed in the attic if all code exceptions are met. Note: The service panel of the equipment shall be located within 6 feet of an attic access.	R403.3.6
<input type="checkbox"/> 3. All supply and return ducts not completely inside the <i>building thermal envelope</i> shall be insulated to a minimum of R-6. Site-wrapped supply ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-8.	R405.2
<input type="checkbox"/> 4. Suction line refrigerant piping shall be a minimum of R-3.	R403.4

BORA Mechanical Checklist (Continued)

Performance Pathway Only

Rough Inspection		R104.2.4
<input type="checkbox"/>	5. All ducts shall be mechanically attached. The reinforced core on flex ducts shall be mechanically attached to the duct fitting by a draw-band.	R403.3.2 C403.2.9.3.6
<input type="checkbox"/>	6. All ducts shall be sealed. The reinforced lining on the flex duct shall be sealed, and the duct collar flange shall be sealed to the duct board using tape, mastic, or gasket. Note: A draw band is not a seal and is only a mechanical attachment. (M-4)	R403.3.2 C403.2.9.3.2
<input type="checkbox"/>	7. The flexible duct's outer jacket (Vapor Barrier) shall be sealed to prevent condensation.	R403.3.2
<input type="checkbox"/>	8. Sufficient space shall be given to install the required ceiling and wall insulation	R402.4.1.1
<input type="checkbox"/>	9. Combustion air ducts shall be installed for wood-burning fireplaces.	R402.4.2
Final Inspection		R104.2.5
<input type="checkbox"/>	1. The envelope leakage test report shall be provided to the code official. The report shall be reviewed for ventilation compliance by the mechanical department and approved before a final mechanical inspection is approved.	R402.4.1.2
<input type="checkbox"/>	2. HVAC registers penetrating the thermal envelope shall be sealed to the drywall. Penetrations shall be caulked, gasketed, or otherwise sealed in a manner compatible with the construction materials and location.	R402.4.1.1
<input type="checkbox"/>	3. Sufficient space (about 4 inches) shall be provided adjacent to all mechanical components of the air distribution system to ensure room for inspection, seal, and maintenance.	R403.3.2 C403.2.9.3.3
<input type="checkbox"/>	4. The efficiency rating of each system shall be verified by providing certification through an approved certification program, such as (AHRI), matching the corresponding model numbers shown on the plans. (M-5)	R405.4.3 (2) R303.1.2
<input type="checkbox"/>	5. Mechanical closets and enclosed support platforms shall be sealed to prevent leakage.	R403.3.2
<input type="checkbox"/>	6. Piping insulation exposed to weather shall be protected from damage.	R403.4.1
<input type="checkbox"/>	7. Tight-fitting flue dampers or tight-fitting doors shall be installed for wood-burning fireplaces.	R402.4.2
<input type="checkbox"/>	8. A duct leakage test report shall be submitted when an air leakage rate other than the default leakage rate at .08 (8%) is selected on the compliance report	R405.2.3 R403.3.3

BORA Envelope Leakage Test Report Checklist

All Disciplines

Report Review	Code Section
<input type="checkbox"/> 1. The envelope leakage test shall be completed before the final inspection.	R402.4.1.2
<input type="checkbox"/> 2. The envelope leakage test report form from the approved software, submitted with the application for a permit, shall be used to show compliance with the code. (TR-1)	R101.5.1
<input type="checkbox"/> 3. The envelope leakage test report shall have the address and permit number on the report and be completed and signed by a qualified tester.	R101.5.1 R402.4.1.2
<input type="checkbox"/> 4. The method of compliance shall be indicated on the form and match the method selected when the building permit was issued. (TR-2)	R405.2.2 R401.2
<input type="checkbox"/> 5. The air change design rate shall be indicated in the box provided on the test report when using the performance method. (TR-3)	R405.2.2 R405.4.2
<input type="checkbox"/> 6. Leakage rates that exceed seven (7) air changes per hour shall indicate Fail.	R402.4.1.2
<input type="checkbox"/> 7. Leakage rates exceeding the design rate from the compliance report shall not "Pass" even though it is under (7) air changes per hour.	R405.2.2 R402.4.1.2
<input type="checkbox"/> 8. Buildings with (ACH) rates less than three (3) shall add whole-house mechanical ventilation to the building and be indicated on the test report. (TR-4)	R402.4.1.2 RBC-R303.4
<input type="checkbox"/> 9. A revised mechanical plan showing compliance with the residential building code shall be provided when whole-house ventilation is required.	R103.4

BORA Electrical Checklist
Performance Pathway Only

Plan Review		Code Section
Scope and Administrative		Chapter 1
<input type="checkbox"/>	1. The administrative checklist on page #5 has been completed.	
<input type="checkbox"/>	2. The energy compliance Report shall match the plans and shall comply with the following:	R405.4.2
<input type="checkbox"/>	Comfort heating and service water heating appliances using electricity shall be shown. (Item 15 & 16)	R405.4.2
<input type="checkbox"/>	When the energy compliance report indicates a ceiling fan energy credit. The required Energy Star fans and blade sizes shall be shown. (Item 17) (E-1)	R405.7.6 Table R405.7.6
<input type="checkbox"/>	3. The following information shall be submitted and shown on the plans	R103.2
<input type="checkbox"/>	When the energy compliance report indicates a ceiling fan energy credit, the required fans and blade sizes shall be shown.	R405.7.6
<input type="checkbox"/>	The electrical floor plans shall identify all recessed luminaires installed in the building thermal envelope and show sealing details.	R402.4.5 R103.2 (9)
<input type="checkbox"/>	Recessed lighting shall be IC-rated and labeled as having an air leakage rate of no more than 2.0 cfm when tested in accordance with ASTM E283.	R402.4.5
<input type="checkbox"/>	The Luminaire Schedule shall identify the high-efficacy lamps. All permanently installed luminaires, excluding those in kitchen appliances, shall have an efficacy of at least forty-five (45) lumens-per-watt or shall utilize lamps with an efficacy of not less than sixty-five (65) lumens-per-watt.	R404.1
Rough Inspection		
<input type="checkbox"/>	1. Air-sealed electrical and communication boxes that penetrate the air barrier of the building shall be sealed to the air barrier element being penetrated. Air-sealed boxes shall be buried in or surrounded by insulation. When factory air-sealed boxes are used, they shall be marked "NEMA OS 4" and installed in accordance with the manufacturer's instructions.	R402.4.6 Table R402.4.1.1
<input type="checkbox"/>	2. Thermal envelope penetrations by electrical conduits and cables in the wall top plate shall be sealed.	R402.4.1.1 Table R402.4.1.1
Final Inspection		C402.5
<input type="checkbox"/>	1. Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.	R402.4.5
<input type="checkbox"/>	2. Ceiling fans shall be installed per the electrical drawings.	R405.7.6

BORA Plumbing Checklist
Performance Pathway Only

Plan Review		Code Section
Scope and Administrative		Chapter 1
<input type="checkbox"/>	1. The administrative checklist on page #5 has been completed.	
<input type="checkbox"/>	2. The energy compliance report shall match the plans and shall comply with the following:	R405.4.2
<input type="checkbox"/>	Size and efficiency of the service water heating appliance. (Item 16)	R103.2 (5)
<input type="checkbox"/>	3. The following information shall be submitted and shown on the plans.	R103.2
<input type="checkbox"/>	Provide efficiency documentation for water heaters. A copy of the AHRI certificate or manufacturer's data showing the efficiency is required. Water-heating equipment installed in residential units shall meet the minimum efficiencies in Table C404.2. (P-1) .	R405.4.3 (2) R403.5.6.2
<input type="checkbox"/>	Provide efficiency documentation for pool heaters. Gas and oil-fired pool and spa heaters shall have a tested minimum thermal efficiency of 82 percent. Heat pump pool heaters shall have a minimum COP of 4.	R103.2 (5) R403.10.4 R403.10.5
<input type="checkbox"/>	If a heated water circulation system is installed, it shall be provided with circulation pump controls that will both:	R403.5.1
<input type="checkbox"/>	Start the pump on-demand. (Button, motion detector, or timeclock)	
<input type="checkbox"/>	Stop the pump when the desired temperature is reached.	
<input type="checkbox"/>	Residential pools shall meet the requirements of APSP-15 (Standard for Energy Efficiency for Residential Inground Swimming Pools and Spas).	R403.12
Rough Inspection		
<input type="checkbox"/>	1. The administrative checklist on page #5 has been completed.	
<input type="checkbox"/>	2. If a heated water circulation system is installed, it shall have an accessible circulation pump. The automatic controls, temperature sensors, and manual controls shall be readily accessible for operation.	R403.5.1
Final Inspection		
<input type="checkbox"/>	1. Water-heating equipment model numbers and equipment efficiencies shall be verified and match the plumbing plans. (P-1)	R403.5.6.2
<input type="checkbox"/>	2. Electric, gas, and oil-type pool and spa heating equipment efficiencies shall be verified and match the plans.	R403.10
<input type="checkbox"/>	3. Gas and oil-type water heaters for permanent pools and spas shall be equipped with a vapor retardant cover on or at the water surface. A liquid cover or other means proven to reduce heat loss may be used and shall be on the job for the final inspection. Note: Heat pumps and solar-type heaters are excluded from this requirement.	R403.10.3

APPENDIX A

Residential Energy Code Compliance Review Form

PERMIT # _____

ADDRESS _____

*A review of the plans and specifications covered by this compliance report indicates compliance with the
_____ Florida Energy Conservation Code.*

<u>DISCIPLINE</u>	<u>NAME</u>	<u>SIGNATURE</u>	<u>DATE</u>
STRUCTURAL			
MECHANICAL			
PLUMBING			
ELECTRICAL			

APPENDIX B

Residential Fenestration Product Rating Submittal Form

In accordance with the Florida Energy Conservation Code R303.1.3, this form can be used as a tool for the submittal process to document the proposed energy product rating for windows, doors, and skylights.

Recommended for Review:

- Copy of the approved input report from the Energy Calculations showing each fenestration design rating (U-value, SHGC, and VT) for all fenestration in the building.
- Include a list of each window's NFRC Certified Product Directory number showing the U-Value, SHGC, and VT on the attached form. These numbers may be found on the NFRC website:
<https://search.nfrc.org/search/searchDefault.aspx>

Window Number	*NFRC Directory Number	Description	U-Value	SHGC	VT
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

Window Number	*NFRC Directory Number	Description	U-Value	SHGC	VT
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
31					
33					
34					
35					
36					
37					
38					

Notes:

- Products not listed in the NFRC directory shall be tested by an accredited, independent laboratory in accordance with FBCEC R303.1.3. Products not tested and lacking certification and labeling shall be assigned a default rating from the energy tables.
- Products submitted that do not match the approved Energy Calculations shall require a revised energy compliance report or window submittal per FBCEC R103.4.
- *Products not tested and labeled use the default tables in R303.1.3.

Appendix C

TABLE R303.1.3(1)
DEFAULT GLAZED FENESTRATION U-FACTORS

FRAME TYPE	SINGLE PANE	DOUBLE PANE	SKYLIGHT	
			SINGLE	DOUBLE
Metal	1.20	0.80	2.00	1.30
Metal with Thermal Break	1.10	0.65	1.90	1.10
Nonmetal or Metal Clad	0.95	0.55	1.75	1.05
Glazed Block	0.60			

TABLE R303.1.3.(2)
DEFAULT OPAQUE DOOR U-FACTORS

DOOR TYPE	U-FACTOR
Uninsulated Metal	1.20
Insulated Metal	0.60
Wood (Other	0.50
Insulated, nonmetal edge, max 45% glazing. Any glazing double pane	0.35


TABLE R303.1.3 (3)
DEFAULT WINDOW, GLASS DOOR, AND
SKYLIGHT SHGC AND VT

	SINGLE GLAZED		DOUBLE GLAZED		GLAZED BLOCK
	CLEAR	TINTED	CLEAR	TINTED	
SHGC	0.8	0.7	0.7	0.6	0.6
VT	0.6	0.3	0.6	0.3	0.6

Appendix D

Structural Notes

S-1. Windows must be tested for energy efficiency if the compliance report does not use default values in Table R303.1.3. U-factors shall be determined in accordance with standard NFRC 100. The VT and the SHGC (Solar Heat Gain Coefficient) shall be determined in accordance with standard NFRC 200. Testing must be done by an accredited independent laboratory and then labeled and certified by the manufacturer. NFRC standards require both computer simulation and physical test results to be validated by an independent agency (IA). Energy values validated by an independent agency (IA) shall match the product's label per Florida Building Code Energy Conservation R303.1.3.

		World's Best Window Co. Series "2000" Casement Vinyl Clad Wood Frame Double Glazing • Argon Fill • Low E XYZ-X-1-00001-00001	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S. / I-P)		Solar Heat Gain Coefficient	
0.35		0.32	
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance		Air Leakage (U.S. / I-P)	
0.51		≤ 0.3	
Condensation Resistance			
51		—	
<small>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. www.nfrc.org</small>			

S-2 The plans shall specify what type and R-value of insulation will be installed. It is not acceptable to have comments on the plan details that indicate: "See energy calculations". Baffles are required for blown-in insulation to keep the vents from becoming blocked upon installation and drift.

Mechanical Notes

M-1 The conditioned floor area is found on the architectural plans. The ceiling areas shall match the conditioned floor area on single-story homes with a flat ceiling height throughout the home. On a two-story home, the second-floor conditioned floor area shall match this ceiling area plus any area that is only one story. "Knee walls" occur when ceiling heights change from a vaulted ceiling to a lower ceiling height. Knee walls adjacent to the attic area shall be listed separately as ceiling area on the compliance report. Knee walls shall not be shown as exterior wall areas. (See Figure A)

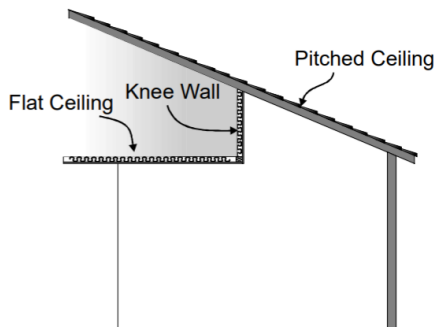


Figure A

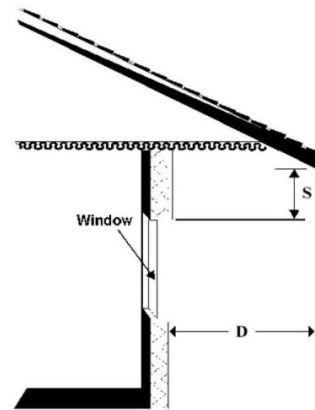


Figure B

Appendix D (Continued)

Mechanical Notes

M-2 Overhang measurements shall match what is listed on the compliance report. Overhangs are measured in terms of “Depth” and “Separation”. The “Depth” is the horizontal measure protruding from the building. The “Separation” is the vertical distance from the overhang to the top of the window. (See Figure B)

M-3 Energy credits shall be verified. The credits are indicated by abbreviations on the compliance report or statement notes at the bottom.

Examples: **PSTAT**- Programmable Thermostat, **RB**- Radiant Barrier, **CV**- Cross Ventilation, **WHF**- Whole House Fan, **CF**- Ceiling Fans, **HRU**- Heat Recovery Unit, **HP**- Heat Pump.

Tested “Cool Roof” roof absorption and emittance test values and a “Duct Leakage Test Report” lower than 8% default leakage are possible credits shown in the notes.

M-4 The mechanical attachment and sealing of the flexible ductwork’s collar and inner core are hidden from the inspector by the insulation and vapor barrier during assembly. The tabs shall be bent over, and a draw-band shall be installed for a proper mechanical attachment. The collar flange and the inner core shall also be sealed airtight. The draw-band is not a code-approved seal for flexible ducts. Flexible duct joints shall be spot-checked for compliance with this section by having the contractor open the duct joint for visual inspection.

M-5 Certificates may be obtained by going to the AHRI Certification Directory to verify that the equipment is designed to be operated together.

Envelope Leakage Test Report Notes

TR-1 The FBC-approved software will generate an approved “Envelope Leakage Test Report” form and fill in the necessary information, such as the volume and the required air change rate specified by the designer.

TR-2 The designer of record chooses which method of energy code compliance, whether performance or prescriptive. The testing agent shall not use prescriptive standards when the designer selects the performance method of compliance.

TR-3 The design air changes per hour rate chosen by the designer of record is indicated in the box on the test report form when using the performance R405-2023 compliance software. The specified design rate is also found at the bottom of the front page of the compliance report.

TR-4 It is the code official’s responsibility to ensure this box is checked when the air change rate is less than three (3) air changes per hour. This selection shall trigger the mechanical designer of record to determine which ventilation method they use to increase ventilation. A revised mechanical plan shall be submitted and approved before a final is approved.

Plumbing Notes

P-1 The efficiency of the domestic water-heating equipment shown on the compliance report shall be shown in UEF. The efficiency rating can be obtained from the manufacturer’s data, or an AHRI certificate shall be provided.

Appendix D (Continued)

Electrical Notes

E-1 When a ceiling fan credit is taken, the Energy Star ceiling fans shall be indicated on the electrical drawings. Future fans shall not be indicated when this credit is taken. The fans shall be installed per the plans at the electrical final inspection according to Table R405.7.6. Ceiling fans shall be installed in each of the bedrooms and a minimum of one living area to receive credit.

**TABLE R405.7.6
FAN SIZING TABLE**

LONGEST WALL LENGTH (feet)	MINIMUM FAN SIZE (inches)
= 12	36
>12-16	48
>16-17.5	52
>17.5-25	56
>25	Two (2) fans (Minimum of 48 inches each)