

Florida Building Envelope

Compliance Values Quick-Reference — Climate Zones 1–3

2024 IGCC Informative Appendix E, Tables E101.1–E101.3 · Supersedes ASHRAE 90.1 Tables 5.5-1 through 5.5-3 · I-P units only · Covers the climate zones assigned to Florida



COURTESY REFERENCE

This quick-reference reproduces the opaque-assembly and fenestration compliance values published in the 2024 IGCC's Informative Appendix E for Climate Zones 1 through 3 — the zones that cover all of Florida. These tables supersede ASHRAE 90.1 Table 5.5-1/5.5-2/5.5-3. Per the source document itself: this appendix is informative, not part of the enforceable standard, and has not been processed under ANSI/ASHRAE consensus procedures. Use it as a fast field lookup, then confirm the current adopted values in the Florida Building Code, Energy Conservation before relying on it for a live permit submittal.

HOW TO READ THESE TABLES

"Assembly Max" is the whole-assembly U/C/F-factor — the enforceable requirement, which already accounts for framing, fasteners, and thermal bridging. "Ins. Min. R-Value" is a common prescriptive assembly that meets it — hitting the R-value doesn't guarantee compliance if the actual assembly differs; the assembly factor governs. NR means no insulation requirement for that path. Occupancy classification (Nonresidential / Residential / Semiheated) follows ASHRAE 90.1 definitions, not the building's common name — verify classification before pulling a value.

FLORIDA CLIMATE ZONES

Florida spans IECC/ASHRAE Climate Zone 1A (South Florida — Miami-Dade, Broward, Monroe, and parts of neighboring counties) and Climate Zone 2A (most of the rest of the state); a narrow part of the western Panhandle falls in Zone 3A. Zone boundaries follow county lines in the Florida Building Code Energy Conservation — confirm your project's specific assigned zone against the official FBC-EC climate zone map before pulling values from this reference.

Climate Zone 1 (1A/1B)

Climate Zone 1 (1A/1B) — Opaque Building Elements (Table E101.1)

Element	Nonresidential	Residential	Semiheated
Roofs — Insulation entirely above deck	U-0.048 / R-20 c.i.	U-0.039 / R-25 c.i.	U-0.218 / R-3.8 c.i.
Roofs — Metal building ^a	U-0.041 / R-10+R-19 FC	U-0.041 / R-10+R-19 FC	U-0.115 / R-10
Roofs — Attic and other roofs	U-0.027 / R-38	U-0.027 / R-38	U-0.081 / R-13
Walls, above grade — Mass	U-0.580 / NR	U-0.151 / R-5.7 c.i.	U-0.580 / NR
Walls, above grade — Metal building	U-0.094 / R-0+R-9.8 c.i.	U-0.094 / R-0+R-9.8 c.i.	U-0.352 / NR
Walls, above grade — Steel framed	U-0.124 / R-13	U-0.124 / R-13	U-0.352 / NR
Walls, above grade — Wood framed and other	U-0.089 / R-13	U-0.089 / R-13	U-0.292 / NR
Wall, below grade — Below-grade wall	C-1.140 / NR	C-1.140 / NR	C-1.140 / NR

Element	Nonresidential	Residential	Semiheated
Floors — Mass	U-0.322 / NR	U-0.322 / NR	U-0.322 / NR
Floors — Steel joist	U-0.350 / NR	U-0.350 / NR	U-0.350 / NR
Floors — Wood framed and other	U-0.282 / NR	U-0.282 / NR	U-0.282 / NR
Slab-on-grade floors — Unheated	F-0.730 / NR	F-0.730 / NR	F-0.730 / NR
Slab-on-grade floors — Heated	F-1.020 / R-7.5 for 12 in.	F-1.020 / R-7.5 for 12 in.	F-1.020 / R-7.5 for 12 in.
Opaque doors — Swinging	U-0.370	U-0.370	U-0.700
Opaque doors — Nonswinging	U-0.310	U-0.310	U-1.450

Climate Zone 1 (1A/1B) — Fenestration (Table E101.1)

Fenestration	Nonresidential	Residential	Semiheated
Vertical glazing, 0% to 40% of wall — Fixed	U-0.48 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-0.48 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-1.14 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Operable	U-0.59 · SHGC E&W-0.20/N&S-0.21 · VT/SHGC 1.10	U-0.59 · SHGC E&W-0.20/N&S-0.21 · VT/SHGC 1.10	U-1.14 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Entrance door	U-0.79 · SHGC E&W-0.20/N&S-0.21	U-0.79 · SHGC E&W-0.20/N&S-0.21	U-1.05
Skylight, 0% to 3% of roof — All types	U-0.67 · SHGC 0.29 · VT/SHGC NR	U-0.67 · SHGC 0.29 · VT/SHGC NR	U-1.71 · SHGC NR · VT/SHGC NR

Climate Zone 2 (2A/2B)

Climate Zone 2 (2A/2B) — Opaque Building Elements (Table E101.2)

Element	Nonresidential	Residential	Semiheated
Roofs — Insulation entirely above deck	U-0.039 / R-25 c.i.	U-0.039 / R-25 c.i.	U-0.173 / R-5 c.i.
Roofs — Metal building ^a	U-0.041 / R-10+R-19 FC	U-0.041 / R-10+R-19 FC	U-0.096 / R-16
Roofs — Attic and other roofs	U-0.027 / R-38	U-0.027 / R-38	U-0.053 / R-19
Walls, above grade — Mass	U-0.151 / R-5.7 c.i.	U-0.123 / R-7.6 c.i.	U-0.580 / NR
Walls, above grade — Metal building	U-0.094 / R-0+R-9.8 c.i.	U-0.094 / R-0+R-9.8 c.i.	U-0.162 / R-13
Walls, above grade — Steel framed	U-0.084 / R-13+R-3.8 c.i.	U-0.064 / R-13+R-7.5 c.i.	U-0.124 / R-13
Walls, above grade — Wood framed and other	U-0.089 / R-13	U-0.089 / R-13	U-0.089 / R-13
Wall, below grade — Below-grade wall	C-1.140 / NR	C-1.140 / NR	C-1.140 / NR
Floors — Mass	U-0.107 / R-6.3 c.i.	U-0.087 / R-8.3 c.i.	U-0.322 / NR
Floors — Steel joist	U-0.038 / R-30	U-0.038 / R-30	U-0.069 / R-13
Floors — Wood framed and other	U-0.033 / R-30	U-0.033 / R-30	U-0.066 / R-13
Slab-on-grade floors — Unheated	F-0.730 / NR	F-0.730 / NR	F-0.730 / NR
Slab-on-grade floors — Heated	F-0.900 / R-10 for 24 in.	F-0.860 / R-15 for 24 in.	F-1.020 / R-7.5 for 12 in.

Element	Nonresidential	Residential	Semiheated
Opaque doors — Swinging	U-0.370	U-0.370	U-0.700
Opaque doors — Nonswinging	U-0.310	U-0.310	U-1.450

Climate Zone 2 (2A/2B) — Fenestration (Table E101.2)

Fenestration	Nonresidential	Residential	Semiheated
Vertical glazing, 0% to 40% of wall — Fixed	U-0.43 · SHGC E&W-0.24/N&S-0.25 · VT/SHGC 1.10	U-0.43 · SHGC E&W-0.24/N&S-0.25 · VT/SHGC 1.10	U-0.48 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Operable	U-0.57 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-0.57 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-0.62 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Entrance door	U-0.73 · SHGC E&W-0.22/N&S-0.23	U-0.73 · SHGC E&W-0.22/N&S-0.23	U-0.73
Skylight, 0% to 3% of roof — All types	U-0.62 · SHGC 0.29 · VT/SHGC NR	U-0.62 · SHGC 0.29 · VT/SHGC NR	U-0.86 · SHGC NR · VT/SHGC NR

Climate Zone 3 (3A/3B/3C)

Climate Zone 3 (3A/3B/3C) — Opaque Building Elements (Table E101.3)

Element	Nonresidential	Residential	Semiheated
Roofs — Insulation entirely above deck	U-0.039 / R-25 c.i.	U-0.039 / R-25 c.i.	U-0.119 / R-7.6 c.i.
Roofs — Metal building ^a	U-0.041 / R-10+R-19 FC	U-0.041 / R-10+R-19 FC	U-0.096 / R-16
Roofs — Attic and other roofs	U-0.027 / R-38	U-0.027 / R-38	U-0.053 / R-19
Walls, above grade — Mass	U-0.123 / R-7.6 c.i.	U-0.104 / R-9.5 c.i.	U-0.580 / NR
Walls, above grade — Metal building	U-0.094 / R-0+R-9.8 c.i.	U-0.072 / R-0+R-13 c.i.	U-0.162 / R-13
Walls, above grade — Steel framed	U-0.077 / R-13+R-5 c.i.	U-0.064 / R-13+R-7.5 c.i.	U-0.124 / R-13
Walls, above grade — Wood framed and other	U-0.089 / R-13	U-0.064 / R-13+R-3.8 c.i.	U-0.089 / R-13
Wall, below grade — Below-grade wall	C-1.140 / NR	C-1.140 / NR	C-1.140 / NR
Floors — Mass	U-0.074 / R-10 c.i.	U-0.074 / R-10 c.i.	U-0.137 / R-4.2 c.i.
Floors — Steel joist	U-0.038 / R-30	U-0.038 / R-30	U-0.052 / R-19
Floors — Wood framed and other	U-0.033 / R-30	U-0.033 / R-30	U-0.051 / R-19
Slab-on-grade floors — Unheated	F-0.730 / NR	F-0.540 / R-10 for 24 in.	F-0.730 / NR
Slab-on-grade floors — Heated	F-0.860 / R-15 for 24 in.	F-0.860 / R-15 for 24 in.	F-1.020 / R-7.5 for 12 in.
Opaque doors — Swinging	U-0.370	U-0.370	U-0.370
Opaque doors — Nonswinging	U-0.310	U-0.310	U-0.360

Climate Zone 3 (3A/3B/3C) — Fenestration (Table E101.3)

Fenestration	Nonresidential	Residential	Semiheated
Vertical glazing, 0% to 40% of wall — Fixed	U-0.40 · SHGC E&W-0.24/N&S-0.25 · VT/SHGC 1.10	U-0.40 · SHGC E&W-0.24/N&S-0.25 · VT/SHGC 1.10	U-0.48 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Operable	U-0.51 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-0.51 · SHGC E&W-0.22/N&S-0.23 · VT/SHGC 1.10	U-0.62 · SHGC NR · VT/SHGC NR
Vertical glazing, 0% to 40% of wall — Entrance door	U-0.65 · SHGC E&W-0.22/N&S-0.23	U-0.65 · SHGC E&W-0.22/N&S-0.23	U-0.73
Skylight, 0% to 3% of roof — All types	U-0.52 · SHGC 0.29 · VT/SHGC NR	U-0.52 · SHGC 0.29 · VT/SHGC NR	U-0.86 · SHGC NR · VT/SHGC NR

TABLE NOTES

c.i. = continuous insulation; NR = no insulation requirement; FC = filled cavity; E&W = east- and west-oriented walls/glazing; N&S = north- and south-oriented walls/glazing. Insulation R-value criteria meet the assembly U/C/F-factor criteria in most cases; some assemblies with slightly less insulation may still comply if they meet the assembly factor directly. Metal building roofs using the R-value compliance path require a thermal spacer block (ANSI/ASHRAE/IES Standard 90.1, Section 3.2).

HOW TO USE THESE VALUES

Pulling a value from these tables is the starting point, not the finish line. Confirm the project's exact climate zone and occupancy classification, verify the current FBC-EC adopted edition matches these values, and check whether the prescriptive path or a UA/performance trade-off actually produces the more buildable assembly for the project.

Source: 2024 International Green Construction Code (IGCC), Informative Appendix E, Tables E101.1–E101.3 (supersede ASHRAE 90.1 Tables 5.5-1 through 5.5-3). Reproduced as a courtesy reference — this appendix is explicitly informative, not enforceable code text. Always confirm the current published version and the Florida Building Code, Energy Conservation adopted edition before use on an active submittal.



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Not sure which assembly meets your project's climate zone? Request a Proposal for an envelope compliance review.