

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

Florida Department of Business and Professional Regulation Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2022 Florida Building Code, Energy Conservation via the Residential Simulated Performance Alternative shall include:

- ☒ This checklist
- ☒ Form R405-2022 report
- ☐ Input summary checklist that can be used for field verification (usually four pages/may be greater)
- ☐ Energy Performance Level (EPL) Display Card (one page)
- ☐ HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7
- ☒ Mandatory Requirements (five pages)

Required prior to CO:

- ☒ Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)
- ☐ A completed 2022 Envelope Leakage Test Report (usually one page); exception in R402.4 allows dwelling units of R-2 Occupancies and multiple attached single family dwellings to comply with Section C402.5
- ☐ If Form R405 duct leakage type indicates anything other than "default leakage", then a completed 2020 Duct Leakage Test Report - Performance Method (usually one page)

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	New residence @ 11041 SW 77th Ave	Address type:	Street Address
Building Type:	User	Bedrooms:	9
Owner:		Conditioned Area:	12617
Builder Home ID:		Total Stories:	2
Builder Name:		Worst Case:	No
Permit Office:		Rotate Angle:	0
Jurisdiction:	231000	Cross Ventilation:	No
Family Type:	Detached	Whole House Fan:	No
New/Existing:	New (From Plans)	Terrain:	Suburban
Year Construct:		Shielding:	Suburban
Comment:			

CLIMATE

✓ Design Location	Tmy Site	Design Temp 97.5% 2.5%	Int Design Temp Winter Summer	Heating Degree Days	Design Moisture	Daily temp Range
___ FL, Miami	FL_MIAMI_INTL_AP	51 90	70 75	149.5	56	Low

BLOCKS

✓ Number	Name	Area	Volume
___ 1	Block1	2300	32200 cu ft
___ 2	Block2	2396	33544 cu ft
___ 3	Block3	2483	34762 cu ft
___ 4	Block4	524	7336 cu ft
___ 5	Block5	4914	56511 cu ft

SPACES

✓ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___ 1	AC1	2300	32200	Yes	9	1	Yes	Yes	Yes
___ 2	AC2	2396	33544	No	9	0	Yes	Yes	Yes
___ 3	AC3	2483	34762	No	6	2	Yes	Yes	Yes
___ 4	AC4	524	7336	No	2	1	Yes	Yes	Yes
___ 5	AC5	2471	28417	No	4	1	Yes	Yes	Yes
___ 6	AC6	2443	28095	No	4	4	Yes	Yes	Yes

FLOORS

(Total Exposed Area = 7984 sq.ft.)

✓ #	Floor Type	Space	Exposed Perim	Perimeter R-Value	Area	U-Factor	Joist R-Value	Tile	Wood	Carpet
___ 1	Slab-On-Grade Edge Ins	AC1	250	0	2300 ft	0.710	---	1.00	0.00	0.00
___ 2	Slab-On-Grade Edge Ins	AC2	301	0	2396 ft	0.710	---	1.00	0.00	0.00
___ 3	Slab-On-Grade Edge Ins	AC3	217	0	2483 ft	0.710	---	1.00	0.00	0.00
___ 4	Slab-On-Grade Edge Ins	AC4	97	0	524 ft	0.710	---	1.00	0.00	0.00
___ 5	Floor over Garage	AC5	---	---	281 ft	0.079	11	1.00	0.00	0.00
___ 6	Floor Over Other Space	AC5	---	---	689 ft	0.073		1.00	0.00	0.00
___ 7	Floor Over Other Space	AC5	---	---	1502 ft	0.073		1.00	0.00	0.00
___ 8	Floor Over Other Space	AC6	---	---	366 ft	0.073		1.00	0.00	0.00
___ 9	Floor Over Other Space	AC6	---	---	2077 ft	0.073		1.00	0.00	0.00

INPUT SUMMARY CHECKLIST REPORT

ROOF													
✓ #	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)	
___ 1	Flat	Concrete	8004 ft²	332 ft²	Dark	N	0.96	No	0.9	No	0	4.76	

ATTIC						
✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___ 1	Full attic	Vented	300	7976 ft²	N	N

CEILING (Total Exposed Area = 7975 sq.ft.)								
✓ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___ 1	Flat ceiling under attic(Vented)	AC1	19.0	Batt	1614.0ft²	0.072	0.11	Wood
___ 2	Flat ceiling under attic(Vented)	AC2	19.0	Batt	520.0ft²	0.072	0.11	Wood
___ 3	Flat ceiling under attic(Vented)	AC3	19.0	Batt	403.0ft²	0.072	0.11	Wood
___ 4	Flat ceiling under attic(Vented)	AC4	19.0	Batt	524.0ft²	0.072	0.11	Wood
___ 5	Flat ceiling under attic(Vented)	AC5	19.0	Batt	2471.0ft²	0.072	0.11	Wood
___ 6	Flat ceiling under attic(Vented)	AC6	19.0	Batt	2443.0ft²	0.072	0.11	Wood

WALLS (Total Exposed Area = 12899 sq.ft.)															
✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
___ 1	W	Exterior	Conc. Blk - Ext Ins	AC2	4.1	39.0	10	14.0	0	557.7	0.131	0	0	0.30	0 %
___ 2	N	Exterior	Conc. Blk - Ext Ins	AC2	4.1	13.0	8	14.0	0	191.3	0.131	0	0	0.30	0 %
___ 3	S	Exterior	Conc. Blk - Ext Ins	AC2	4.1	13.0	8	14.0	0	191.3	0.131	0	0	0.30	0 %
___ 4	N	Exterior	Conc. Blk - Ext Ins	AC2	4.1	14.0	3	14.0	0	199.5	0.131	0	0	0.30	0 %
___ 5	W	Garage	Conc. Blk - Ext Ins	AC2	4.1	22.0	0	14.0	0	308.0	0.131	0	0	0.01	0 %
___ 6	N	Garage	Conc. Blk - Ext Ins	AC2	4.1	9.0	7	14.0	0	134.2	0.131	0	0	0.01	0 %
___ 7	S	Garage	Conc. Blk - Ext Ins	AC2	4.1	5.0	0	14.0	0	70.0	0.131	0	0	0.01	0 %
___ 8	NW	Garage	Conc. Blk - Ext Ins	AC2	4.1	4.0	11	14.0	0	68.8	0.131	0	0	0.01	0 %
___ 9	S	Exterior	Conc. Blk - Ext Ins	AC2	4.1	7.0	10	14.0	0	109.7	0.131	0	0	0.30	0 %
___ 10	W	Exterior	Conc. Blk - Ext Ins	AC1	4.1	11.0	10	14.0	0	165.7	0.131	0	0	0.30	0 %
___ 11	S	Exterior	Conc. Blk - Ext Ins	AC1	4.1	41.0	6	14.0	0	581.0	0.131	0	0	0.30	0 %
___ 12	E	Exterior	Conc. Blk - Ext Ins	AC1	4.1	12.0	0	14.0	0	168.0	0.131	0	0	0.30	0 %
___ 13	S	Exterior	Conc. Blk - Ext Ins	AC1	4.1	45.0	2	14.0	0	632.3	0.131	0	0	0.30	0 %
___ 14	E	Exterior	Conc. Blk - Ext Ins	AC1	4.1	26.0	1	14.0	0	365.2	0.131	0	0	0.30	0 %
___ 15	N	Exterior	Conc. Blk - Ext Ins	AC1	4.1	26.0	3	14.0	0	367.5	0.131	0	0	0.30	0 %
___ 16	E	Exterior	Conc. Blk - Ext Ins	AC2	4.1	39.0	10	14.0	0	557.7	0.131	0	0	0.30	0 %
___ 17	E	Exterior	Conc. Blk - Ext Ins	AC3	4.1	6.0	7	14.0	0	92.2	0.131	0	0	0.30	0 %
___ 18	S	Exterior	Conc. Blk - Ext Ins	AC3	4.1	16.0	8	14.0	0	233.3	0.131	0	0	0.30	0 %
___ 19	E	Exterior	Conc. Blk - Ext Ins	AC3	4.1	30.0	9	14.0	0	430.5	0.131	0	0	0.30	0 %
___ 20	N	Exterior	Conc. Blk - Ext Ins	AC3	4.1	72.0	6	14.0	0	1015.0	0.131	0	0	0.30	0 %
___ 21	W	Exterior	Conc. Blk - Ext Ins	AC3	4.1	21.0	6	14.0	0	301.0	0.131	0	0	0.30	0 %
___ 22	SW	Exterior	Conc. Blk - Ext Ins	AC3	4.1	8.0	10	14.0	0	123.7	0.131	0	0	0.30	0 %
___ 23	W	Exterior	Conc. Blk - Ext Ins	AC3	4.1	12.0	6	14.0	0	175.0	0.131	0	0	0.30	0 %
___ 24	W	Exterior	Conc. Blk - Ext Ins	AC4	4.1	14.0	11	14.0	0	208.8	0.131	0	0	0.30	0 %
___ 25	S	Exterior	Conc. Blk - Ext Ins	AC4	4.1	29.0	0	14.0	0	406.0	0.131	0	0	0.30	0 %
___ 26	E	Exterior	Conc. Blk - Ext Ins	AC4	4.1	14.0	11	14.0	0	208.8	0.131	0	0	0.30	0 %
___ 27	N	Exterior	Conc. Blk - Ext Ins	AC4	4.1	7.0	8	14.0	0	107.3	0.131	0	0	0.30	0 %
___ 28	E	Exterior	Conc. Blk - Ext Ins	AC4	4.1	4.0	7	14.0	0	64.2	0.131	0	0	0.30	0 %
___ 29	N	Exterior	Conc. Blk - Ext Ins	AC4	4.1	13.0	8	14.0	0	191.3	0.131	0	0	0.30	0 %
___ 30	W	Exterior	Conc. Blk - Ext Ins	AC4	4.1	4.0	7	14.0	0	64.2	0.131	0	0	0.30	0 %
___ 31	N	Exterior	Conc. Blk - Ext Ins	AC4	4.1	7.0	8	14.0	0	107.3	0.131	0	0	0.30	0 %
___ 32	W	Exterior	Conc. Blk - Ext Ins	AC5	4.1	18.0	0	11.5	0	207.0	0.131	0	0	0.30	0 %
___ 33	N	Exterior	Conc. Blk - Ext Ins	AC5	4.1	13.0	11	11.5	0	160.0	0.131	0	0	0.30	0 %

INPUT SUMMARY CHECKLIST REPORT

WALLS(Continued)

___ 34 W	Exterior	Conc. Blk - Ext Ins	AC5	4.1	12.0	10	11.5	0	147.6	0.131	0	0	0.30	0 %
___ 35 S	Exterior	Conc. Blk - Ext Ins	AC5	4.1	13.0	11	11.5	0	160.0	0.131	0	0	0.30	0 %
___ 36 N	Exterior	Conc. Blk - Ext Ins	AC5	4.1	23.0	10	11.5	0	274.1	0.131	0	0	0.30	0 %
___ 37 NW	Exterior	Conc. Blk - Ext Ins	AC5	4.1	29.0	4	11.5	0	337.3	0.131	0	0	0.30	0 %
___ 38 S	Exterior	Conc. Blk - Ext Ins	AC5	4.1	50.0	0	11.5	0	575.0	0.131	0	0	0.30	0 %
___ 39 SE	Exterior	Conc. Blk - Ext Ins	AC5	4.1	62.0	10	11.5	0	722.6	0.131	0	0	0.30	0 %
___ 40 SE	Exterior	Conc. Blk - Ext Ins	AC6	4.1	16.0	11	11.5	0	194.5	0.131	0	0	0.30	0 %
___ 41 S	Exterior	Conc. Blk - Ext Ins	AC6	4.1	18.0	6	11.5	0	212.8	0.131	0	0	0.30	0 %
___ 42 E	Exterior	Conc. Blk - Ext Ins	AC6	4.1	29.0	0	11.5	0	333.5	0.131	0	0	0.30	0 %
___ 43 N	Exterior	Conc. Blk - Ext Ins	AC6	4.1	56.0	2	11.5	0	645.9	0.131	0	0	0.30	0 %
___ 44 NW	Exterior	Conc. Blk - Ext Ins	AC6	4.1	20.0	11	11.5	0	240.5	0.131	0	0	0.30	0 %
___ 45 W	Exterior	Conc. Blk - Ext Ins	AC6	4.1	25.0	4	11.5	0	291.3	0.131	0	0	0.30	0 %

DOORS

(Total Exposed Area = 611 sq.ft.)

✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
___ 1	W(Front)		Insulated	AC2	Metal	0.46	7.00	6	12.00	1	90.6ft ²
___ 2	W		Wood	AC2	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 3	S		Insulated	AC2	Metal	0.46	3.00	0	8.00	0	24.0ft ²
___ 4	S		Wood	AC1	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 5	W		Wood	AC1	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 6	E		Wood	AC1	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 7	S		Wood	AC1	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 8	E		Insulated	AC1	Metal	0.46	6.00	1	8.00	4	50.7ft ²
___ 9	E		Insulated	AC2	Metal	0.46	6.00	1	8.00	4	50.7ft ²
___ 10	E		Insulated	AC2	Metal	0.46	6.00	1	8.00	4	50.7ft ²
___ 11	E		Wood	AC3	Wood	0.46	3.00	0	8.00	0	24.0ft ²
___ 12	E		Insulated	AC3	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 13	SE		Insulated	AC5	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 14	SE		Insulated	AC5	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 15	SE		Insulated	AC6	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 16	E		Insulated	AC6	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 17	N		Insulated	AC6	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 18	N		Insulated	AC6	Metal	0.46	3.00	0	8.00	4	25.0ft ²
___ 19	W		Insulated	AC6	Metal	0.46	3.00	0	8.00	4	25.0ft ²

WINDOWS

(Total Exposed Area = 3747 sq.ft.)

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Storm	Total Area (ft ²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen
___ 1	W	1	Metal	Low-E Single	Y	0.66	0.32	Y	N	94.3	1	7.75	12.17	12.0	11.0	None	None
___ 2	W	1	Metal	Low-E Single	Y	0.66	0.32	Y	N	139.9	1	11.50	12.17	12.0	11.0	None	None
___ 3	E	14	Metal	Low-E Single	Y	0.66	0.32	Y	N	45.5	1	3.50	13.00	45.4	0.3	None	None
___ 4	E	14	Metal	Low-E Single	Y	0.66	0.32	Y	N	136.5	3	3.50	13.00	45.4	0.3	None	None
___ 5	N	15	Metal	Low-E Single	Y	0.66	0.32	Y	N	131.1	1	10.08	13.00	0.1	0.3	None	None
___ 6	E	16	Metal	Low-E Single	Y	0.66	0.32	Y	N	44.4	1	3.75	11.83	6.6	0.3	None	None
___ 7	E	16	Metal	Low-E Single	Y	0.66	0.32	Y	N	88.8	2	3.75	11.83	6.6	0.3	None	None
___ 8	E	16	Metal	Low-E Single	Y	0.66	0.32	Y	N	177.5	4	3.75	11.83	6.6	0.3	None	None
___ 9	E	17	Metal	Low-E Single	Y	0.66	0.32	Y	N	74.9	2	3.17	11.83	6.6	0.3	None	None
___ 10	S	18	Metal	Low-E Single	Y	0.66	0.32	Y	N	113.4	1	9.58	11.83	4.2	0.3	None	None
___ 11	E	19	Metal	Low-E Single	Y	0.66	0.32	Y	N	78.9	2	3.33	11.83	4.5	0.3	None	None
___ 12	E	19	Metal	Low-E Single	Y	0.66	0.32	Y	N	116.4	1	9.83	11.83	4.5	0.3	None	None
___ 13	N	20	Metal	Low-E Single	Y	0.66	0.32	Y	N	173.6	1	14.67	11.83	2.8	0.3	None	None
___ 14	N	20	Metal	Low-E Single	Y	0.66	0.32	Y	N	236.7	2	10.00	11.83	2.8	0.3	None	None
___ 15	W	23	Metal	Low-E Single	Y	0.66	0.32	Y	N	53.4	1	4.33	12.33	7.8	0.1	None	None
___ 16	W	23	Metal	Low-E Single	Y	0.66	0.32	Y	N	49.7	1	4.08	12.17	7.8	0.1	None	None
___ 17	W	24	Metal	Low-E Single	Y	0.66	0.32	Y	N	121.9	1	11.08	11.00	3.7	1.0	None	None

INPUT SUMMARY CHECKLIST REPORT

WINDOWS(Continued)

___ 18S	25	Metal	Low-E Single	Y	0.66	0.32	Y	N	316.3	1	28.75	11.00	3.7	1.0	None	None
___ 19E	26	Metal	Low-E Single	Y	0.66	0.32	Y	N	121.9	1	11.08	11.00	3.7	1.0	None	None
___ 20N	27	Metal	Low-E Single	Y	0.66	0.32	Y	N	82.5	1	7.50	11.00	4.6	1.0	None	None
___ 21N	31	Metal	Low-E Single	Y	0.66	0.32	Y	N	82.5	1	7.50	11.00	4.6	1.0	None	None
___ 22W	32	Metal	Low-E Single	Y	0.66	0.32	Y	N	186.0	1	18.00	10.33	16.8	0.1	None	None
___ 23SE	39	Metal	Low-E Single	Y	0.66	0.32	Y	N	62.0	1	6.00	10.33	3.0	0.1	None	None
___ 24SE	39	Metal	Low-E Single	Y	0.66	0.32	Y	N	77.5	1	7.50	10.33	3.0	0.1	None	None
___ 25SE	39	Metal	Low-E Single	Y	0.66	0.32	Y	N	291.1	1	28.17	10.33	3.0	0.1	None	None
___ 26SE	40	Metal	Low-E Single	Y	0.66	0.32	Y	N	124.9	1	12.08	10.33	3.0	0.1	None	None
___ 27E	42	Metal	Low-E Single	Y	0.66	0.32	Y	N	67.2	1	6.50	10.33	3.3	0.1	None	None
___ 28N	43	Metal	Low-E Single	Y	0.66	0.32	Y	N	98.2	1	9.50	10.33	3.3	0.1	None	None
___ 29N	43	Metal	Low-E Single	Y	0.66	0.32	Y	N	74.1	1	7.17	10.33	3.3	0.1	None	None
___ 30W	45	Metal	Low-E Single	Y	0.66	0.32	Y	N	47.4	1	4.58	10.33	6.6	0.1	None	None
___ 31W	45	Metal	Low-E Single	Y	0.66	0.32	Y	N	131.8	1	12.75	10.33	8.9	0.1	None	None
___ 32S	11	Metal	Low-E Single	Y	0.66	0.32	Y	N	97.3	1	8.00	12.17	0.1	0.1	None	None
___ 33H	Skylt	Metal	Low-E Single	Y	0.66	0.32	Y	N	9.9	1	4.75	2.08	0.0	0.0	None	None

INFILTRATION

✓ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00058	19175	1051.97	1974.96	0.2373	7.0	All	164353 cu ft

GARAGE

✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___ 1	816 ft²	816 ft²	109 ft	13 ft	1

MASS

✓ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC1
___ 2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC2
___ 3	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC3
___ 4	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC4
___ 5	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC5
___ 6	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	AC6

HEATING SYSTEM

✓ #	System Type	Subtype	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal HeatPump--- Entry Power Volt Current				Ducts	Block
___ 1	Electric Strip Heat	None		COP: 1.00	34.1		0.00	0.00	0.00	sys#1	1
___ 2	Electric Strip Heat	None		COP: 1.00	34.1		0.00	0.00	0.00	sys#2	2
___ 3	Electric Strip Heat	None		COP: 1.00	34.1		0.00	0.00	0.00	sys#3	3
___ 4	Electric Strip Heat	None		COP: 1.00	27.3		0.00	0.00	0.00	sys#4	4
___ 5A	Electric Strip Heat	None		COP: 1.00	34.1		0.00	0.00	0.00	sys#5	5
___ 5B	Electric Strip Heat	None		COP: 1.00	34.1		0.00	0.00	0.00	sys#5	5
___ 5C	Electric Strip Heat	None		COP: 1.00	0.0		0.00	0.00	0.00	sys#5	5
___ 5D	Electric Strip Heat	None		COP: 1.00	0.0		0.00	0.00	0.00	sys#5	5
___ 5E	Electric Strip Heat	None		COP: 1.00	0.0		0.00	0.00	0.00	sys#5	5

INPUT SUMMARY CHECKLIST REPORT

COOLING SYSTEM

✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	None/Single		SEER2:20.0	57.0	2000	0.75	sys#1	1
___ 2	Central Unit	None/Single		SEER2:20.0	57.0	2000	0.75	sys#2	2
___ 3	Central Unit	None/Single		SEER2:20.0	57.0	2000	0.75	sys#3	3
___ 4	Central Unit	None/Single		SEER2:17.5	35.6	1200	0.75	sys#4	4
___ 5A	Central Unit	None/Single		SEER:20.0	57.0	2000	0.75	sys#5	5
___ 5B	Central Unit	None/Single		SEER:20.0	57.0	2000	0.75	sys#5	5

HOT WATER SYSTEM

✓ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___ 1	Natural Gas	None	Exterior	0.95 (0.97)	60.00 gal	50 gal	120 deg	Standard	None	50
	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
___ 1	No		NA	NA	NA	No	NA	NA	NA	None

DUCTS

✓ Duct #	Location	Supply R-Value	Area	Location	Return R-Value	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat Cool
___ 1	Attic	6.0	600 ft²	Attic	6.0	200 ft²	Default Leakage	AC1	(Default)	(Default)			1 1
___ 2	Attic	6.0	100 ft²	Attic	6.0	25 ft²	Default Leakage	AC2	(Default)	(Default)			2 2
___ 3	Attic	6.0	150 ft²	Attic	6.0	150 ft²	Default Leakage	AC3	(Default)	(Default)			3 3
___ 4	Attic	6.0	100 ft²	Attic	6.0	25 ft²	Default Leakage	AC4	(Default)	(Default)			4 4
___ 5	Attic	6.0	650 ft²	Attic	6.0	200 ft²	Default Leakage	AC5	(Default)	(Default)			5 5

TEMPERATURES

Programable Thermostat: Y				Ceiling Fans: N									
Cooling	[X] Jan	[X] Feb	[X] Mar	[X] Apr	[X] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[X] Oct	[X] Nov	[X] Dec	
Heating	[X] Jan	[X] Feb	[X] Mar	[X] Apr	[X] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[X] Oct	[X] Nov	[X] Dec	
Venting	[X] Jan	[X] Feb	[X] Mar	[X] Apr	[X] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[X] Oct	[X] Nov	[X] Dec	
✓ Thermostat Schedule: HERS 2006 Reference	Hours												
Schedule Type	1	2	3	4	5	6	7	8	9	10	11	12	
___ Cooling (WD)	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 (WEH)	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 (WEH)	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

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 93

The lower the EnergyPerformance Index, the more efficient the home.

11041 SW 77th Ave,Miami,FL,33156

1. New construction or existing	New (From Plans)	10. Wall Types(12899.0 sqft.)	Insulation	Area
2. Single family or multiple family	Detached	a. Concrete Block - Ext Insul, Exterior	R=4.1	12318.00 ft ²
3. Number of units, if multiple family	1	b. Concrete Block - Ext Insul, Adjacent	R=4.1	581.00 ft ²
4. Number of Bedrooms	9	c. N/A		
5. Is this a worst case?	No	d. N/A		
6. Conditioned floor area above grade (ft ²)	12617	11. Ceiling Types(7975.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft ²)	0	a. Flat ceiling under att (Vented)	R=19.0	7975.00 ft ²
7. Windows**	Description	b. N/A		
a. U-Factor:	Sgl, U=0.66	c. N/A		
SHGC:	SHGC=0.32	12. Roof(Concrete, Vented)	Deck R=0.0	8004 ft ²
b. U-Factor:	N/A	13. Ducts, location & insulation level	R	ft ²
SHGC:		a. Sup: Attic, Ret: Attic, AH: AC1	6	600
c. U-Factor:	N/A	b. Sup: Attic, Ret: Attic, AH: AC2	6	100
SHGC:		c. 3 additional duct system(s)	(see details)	
Area Weighted Average Overhang Depth:	7.172 ft	14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.320	a. Central Unit	57.0	SEER2:20.00
8. Skylights	Description	b. Central Unit	57.0	SEER2:20.00
U-Factor:(AVG)	U=0.66	3 additional cooling systems	(see details)	
SHGC(AVG):	SHGC=0.32	15. Heating Systems	kBtu/hr	Efficiency
9. Floor Types	Insulation	a. Electric Strip Heat	34.1	COP:1.00
a. Slab-On-Grade Edge Insulation	R= 0.0	b. Electric Strip Heat	34.1	COP:1.00
b. Floor Over Other Space	R= 11.0	3 additional heating systems	(see details)	
c. other (see details)	R=	16. Hot Water Systems		
		a. Natural Gas	Cap: 60 gallons	EF: 0.950
		b. Conservation features		
		17. Credits	None	Pstat

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: 11041 SW 77th Ave

City/FL Zip: Miami,FL,33156



*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 Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Florida Building Code, Energy Conservation, 7th Edition (2020)

Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS: 11041 SW 77th Ave
Miami, FL 33156

Permit Number:

MANDATORY REQUIREMENTS - See individual code sections for full details.

SECTION R401 GENERAL

- ☒ **R401.3 Energy Performance Level (EPL) display card - (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of 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 nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

SECTION R402 BUILDING THERMAL ENVELOPE

- ☒ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.
- Exception:** Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.
- ☒ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.
- ☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.
- ☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.
- Exception:** Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.
- During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
 2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
 3. Interior doors, if installed at the time of the test, shall be open.
 4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
 5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
 6. Supply and return registers, if installed at the time of the test, shall be fully open.
- ☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.
- ☒ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m²), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m²), when tested according to NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.
- Exception:** Site-built windows, skylights and doors.
- ☐ **R402.4.4 Rooms containing fuel - burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.
- Exceptions:**
1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
 2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

MANDATORY REQUIREMENTS (Continued)

- ☐ **R402.4.5 Recessed lighting.** 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 IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

☒ **R403.1 Controls**

- ☒ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system

- ☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

- ☒ **R403.3.2 Sealing (Mandatory).** All ducts, air handlers, filter boxes and building cavities that 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 C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

- ☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

- ☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:
1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
 2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions;

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code. Duct leakage testing is required for Section R405 compliance where credit is taken for leakage, and a duct air leakage Q_n to the outside of less than 0.080 (where Q_n = duct leakage to the outside in cfm per 100 square feet of conditioned floor area tested at 25 Pascals) is indicated in the compliance report for the proposed design.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official

- ☒ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums

- ☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

- ☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

- ☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory).** If heated water circulation systems are installed, they shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

- ☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

- ☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS (Continued)

- ☒ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.
- ☐ **R403.5.6 Water heater efficiencies (Mandatory).**
- ☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).
- ☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.
- ☒ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.
- ☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:
1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
 2. Be installed at an orientation within 45 degrees of true south.
- ☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.
- ☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.
- Exception:** Where an air handler that is integral to tested and listed HVAC equipment is used to provide whole-house mechanical ventilation, the air handler shall be powered by an electronically commutated motor.
- ☐ **R403.6.2 Ventilation Air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:
1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
 2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
 3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.
- ☒ **R403.7 Heating and cooling equipment.**
- R403.7.1 Equipment sizing (Mandatory).** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

MANDATORY REQUIREMENTS (Continued)

TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY ^a (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
HRV or ERV	Any	1.2 cfm/watt	Any
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min.

a. When tested in accordance with HVI Standard 916

- ☒ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section R403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.
- The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

- ☒ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.
- ☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.
- ☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.
- ☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:
1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
 2. A variable capacity system sized for optimum performance during base load periods is utilized.
- ☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the Florida Building Code, Energy Conservation—Commercial Provisions in lieu of Section R403.
- ☐ **R403.9 Snow melt and ice system controls (Mandatory).** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).
- ☐ **403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.
- ☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater.
- Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

MANDATORY REQUIREMENTS (Continued)

- ☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems
3. Where pumps are powered exclusively from on-site renewable generation.

- ☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required

- ☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

- ☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.

- ☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14

- ☐ **R403.13 Dehumidifiers (Mandatory).** If installed, a dehumidifier shall conform to the following requirements:

1. The minimum rated efficiency of the dehumidifier shall be greater than 1.7 liters/ kWh if the total dehumidifier capacity for the house is less than 75 pints/day and greater than 2.38 liters/kWh if the total dehumidifier capacity for the house is greater than or equal to 75 pints/day.
2. The dehumidifier shall be controlled by a sensor that is installed in a location where it is exposed to mixed house air.
3. Any dehumidifier unit located in unconditioned space that treats air from conditioned space shall be insulated to a minimum of R-2.
4. Condensate disposal shall be in accordance with Section M1411.3.1 of the Florida Building Code, Residential.

- ☐ **R403.13.1 Ducted dehumidifiers.** Ducted dehumidifiers shall, in addition to conforming to the requirements of Section R403.13, conform to the following requirements:

1. If a ducted dehumidifier is configured with return and supply ducts both connected into the supply side of the cooling system, a backdraft damper shall be installed in the supply air duct between the dehumidifier inlet and outlet duct.
2. If a ducted dehumidifier is configured with only its supply duct connected into the supply side of the central heating and cooling system, a backdraft damper shall be installed in the dehumidifier supply duct between the dehumidifier and central supply duct.
3. A ducted dehumidifier shall not be ducted to or from a central ducted cooling system on the return duct side upstream from the central cooling evaporator coil.
4. Ductwork associated with a dehumidifier located in unconditioned space shall be insulated to a minimum of R-6.

SECTION R404 ELECTRICAL POWER AND LIGHTING SYSTEMS

- ☒ **R404.1 Lighting equipment (Mandatory).** Not less than 90 percent of the lamps in permanently installed luminaires shall have an efficacy of at least 45 lumens-per-watt or shall utilize lamps with an efficacy of not less than 65 lumens-per-watt.

R404.1.1 Lighting equipment (Mandatory). uel gas lighting systems shall not have continuously burning pilot lights.

2020 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1

AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA^a

Project Name:	New residence @ 11041 SW 77th Ave	Builder Name:		CHECK
Street:	11041 SW 77th Ave	Permit Office:		
City, State, Zip:	Miami, FL, 33156	Permit Number:		
Owner:		Jurisdiction:	231000	
Design Location:	FL, Miami	County:	Miami-Dade(Florida Climate Zone 1)	
COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA		
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.		N/A
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.		N/A
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.		N/A
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.			N/A
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.		N/A
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.		N/A
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.		N/A
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.			N/A
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.		N/A
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.			N/A
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.		✓
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.		✓
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.		✓
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.			✓
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the sub-floor, wall covering or ceiling penetrated by the boot.			✓
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.			N/A

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance

2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction: 231000	Permit #:
Job Information	
Builder:	Community: Lot: NA
Address: 11041 SW 77th Ave	
City: Miami	State: FL Zip: 33156
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
☐ PRESCRIPTIVE METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.	
☒ PERFORMANCE or ERI METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2020 (Performance) or R406-2020 (ERI), section labeled as infiltration, sub-section ACH50. ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): 7.000	
$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{164353}{\text{ACH}(50)} =$ PASS ☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department. Method for calculating building volume: ☐ Retrieved from architectural plans ☒ Code software calculated ☐ Field measured and calculated	
R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), <i>Florida Statutes</i>, or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>. During testing: 1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures. 2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures. 3. Interior doors, if installed at the time of the test, shall be open. 4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed. 5. Heating and cooling systems, if installed at the time of the test, shall be turned off. 6. Supply and return registers, if installed at the time of the test, shall be fully open.	
Testing Company	
Company Name: _____ Phone: _____ I hereby verify that the above Air Leakage results are in accordance with the 2020 7th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.	
Signature of Tester: _____ Date of Test: _____	
Printed Name of Tester: _____	
License/Certification #: _____ Issuing Authority: _____	

System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

8/7/2023

Reference City: Miami, FL (Defaults)
Humidity difference: 56gr.

Temperature Difference: 17.0F(TMY3 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Room #1: AC1

Window	Type*					Overhang		Window Area(sqft)			HTM		Load		
	Panes	SHGC	U	InSh	IS Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded			
3	1 NFRC	0.32, 0.66	No	No	E	45.4f	0.3ft	45.5	45.5	0.0	18	42	826	Btuh	
4	1 NFRC	0.32, 0.66	No	No	E	45.4f	0.3ft	136.5	136.5	0.0	18	42	2479	Btuh	
5	1 NFRC	0.32, 0.66	No	No	N	0.1ft	0.3ft	131.1	0.0	131.1	18	18	2380	Btuh	
32	1 NFRC	0.32, 0.66	No	No	S	0.1ft	0.1ft	97.3	0.0	97.3	18	19	1864	Btuh	
Window Total								410 (sqft)					7549 Btuh		
Walls	Type	U-Value					R-Value		Area(sqft)		HTM		Load		
						Cav/Sheath									
10	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		141.7		2.8		396	Btuh
11	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		459.7		2.8		1285	Btuh
12	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		144.0		2.8		402	Btuh
13	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		608.3		2.8		1700	Btuh
14	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		132.5		2.8		370	Btuh
15	Concrete Blk,Hollow - Ext					0.13		4.1/0.0		236.4		2.8		661	Btuh
Wall Total								1723 (sqft)					4814 Btuh		
Doors	Type								Area (sqft)		HTM		Load		
4	Wood - Exterior									24.0		9.6		230	Btuh
5	Wood - Exterior									24.0		9.6		230	Btuh
6	Wood - Exterior									24.0		9.6		230	Btuh
7	Wood - Exterior									24.0		9.6		230	Btuh
8	Insulated - Exterior									50.7		10.6		535	Btuh
Door Total								147 (sqft)					1457 Btuh		
Ceilings	Type/Color/Surface	U-Value					R-Value		Area(sqft)		HTM		Load		
	Vented Attic/DarkConcrete					0.049		19.0/0.0		1614.0		1.76		2848	Btuh
Ceiling Total								1614 (sqft)					2848 Btuh		
Floors	Type						R-Value		Size		HTM		Load		
	Slab On Grade					0.0		2300 (ft-perimeter)		0.0		0		Btuh	
Floor Total								2300.0 (sqft)					0 Btuh		
	Zone Envelope Subtotal:												16669 Btuh		
Infiltration	Type	Wholehouse ACH					Volume(cuft)		Wall Ratio		CFM=		Load		
	Natural	0.51					32200		0.20		281.4		5261		Btuh
Internal gain	Occupants					Btuh/occupant		Appliance		Load					
	9					X 230		+		5000		7070		Btuh	
	Sensible Envelope Load:												29000 Btuh		
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)										(DGM of 0.223)		6473		Btuh
	Sensible Zone Load												35474 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

Component Loads for Room #2: AC2

Window	Type*						Overhang		Window Area(sqft)			HTM		Load			
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded				
1	1 NFRC	0.32, 0.66	No	No	W		12.0f	11.0f	94.3	0.0	94.3	18	42	4000	Btuh		
2	1 NFRC	0.32, 0.66	No	No	W		12.0f	11.0f	139.9	0.0	139.9	18	42	5936	Btuh		
6	1 NFRC	0.32, 0.66	No	No	E		6.6ft	0.3ft	44.4	19.2	25.1	18	42	1416	Btuh		
7	1 NFRC	0.32, 0.66	No	No	E		6.6ft	0.3ft	88.8	38.5	50.3	18	42	2831	Btuh		
8	1 NFRC	0.32, 0.66	No	No	E		6.6ft	0.3ft	177.5	77.0	100.5	18	42	5663	Btuh		
	Window Total								545 (sqft)					19845 Btuh			
Walls	Type	U-Value						R-Value		Area(sqft)		HTM		Load			
								Cav/Sheath									
1	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		232.8		2.8		651 Btuh			
2	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		191.3		2.8		535 Btuh			
3	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		191.3		2.8		535 Btuh			
4	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		199.5		2.8		558 Btuh			
5	Concrete Blk,Hollow - Adj	0.13						4.1/0.0		284.0		2.2		634 Btuh			
6	Concrete Blk,Hollow - Adj	0.13						4.1/0.0		134.2		2.2		299 Btuh			
7	Concrete Blk,Hollow - Adj	0.13						4.1/0.0		70.0		2.2		156 Btuh			
8	Concrete Blk,Hollow - Adj	0.13						4.1/0.0		68.8		2.2		154 Btuh			
9	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		85.7		2.8		239 Btuh			
16	Concrete Blk,Hollow - Ext	0.13						4.1/0.0		145.7		2.8		407 Btuh			
	Wall Total								1603 (sqft)					4167 Btuh			
Doors	Type	U-Value						R-Value		Area (sqft)		HTM		Load			
1	Insulated - Exterior									90.6		10.6		957 Btuh			
2	Wood - Garage									24.0		9.6		230 Btuh			
3	Insulated - Exterior									24.0		10.6		253 Btuh			
9	Insulated - Exterior									50.7		10.6		535 Btuh			
10	Insulated - Exterior									50.7		10.6		535 Btuh			
	Door Total								240 (sqft)					2512 Btuh			
Ceilings	Type/Color/Surface	U-Value						R-Value		Area(sqft)		HTM		Load			
2	Vented Attic/DarkConcrete	0.049						19.0/0.0		520.0		1.76		918 Btuh			
	Ceiling Total								520 (sqft)					918 Btuh			
Floors	Type	U-Value						R-Value		Size		HTM		Load			
2	Slab On Grade							0.0		2396 (ft-perimeter)		0.0		0 Btuh			
	Floor Total								2396.0 (sqft)					0 Btuh			
	Zone Envelope Subtotal:													27441 Btuh			
Infiltration	Type	Wholehouse ACH						Volume(cuft)		Wall Ratio		CFM=		Load			
	Natural	0.51						33544		0.19		261.9		4897 Btuh			
Internal gain		Occupants						Btuh/occupant		Appliance		Load					
		9						X 230		+		3400		5470 Btuh			
	Sensible Envelope Load:													37809 Btuh			
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)													(DGM of 0.029)		1078 Btuh	
	Sensible Zone Load													38887 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

Component Loads for Room #3: AC3

Window	Type*						Overhang		Window Area(sqft)			HTM		Load		
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded			
9	1 NFRC	0.32, 0.66	No	No	E		6.6ft	0.3ft	74.9	32.5	42.4	18	42	2391	Btuh	
10	1 NFRC	0.32, 0.66	No	No	S		4.2ft	0.3ft	113.4	113.4	0.0	18	19	2059	Btuh	
11	1 NFRC	0.32, 0.66	No	No	E		4.5ft	0.3ft	78.9	22.7	56.2	18	42	2796	Btuh	
12	1 NFRC	0.32, 0.66	No	No	E		4.5ft	0.3ft	116.4	33.4	82.9	18	42	4125	Btuh	
13	1 NFRC	0.32, 0.66	No	No	N		2.8ft	0.3ft	173.6	0.0	173.6	18	18	3152	Btuh	
14	1 NFRC	0.32, 0.66	No	No	N		2.8ft	0.3ft	236.7	0.0	236.7	18	18	4298	Btuh	
15	1 NFRC	0.32, 0.66	No	No	W		7.8ft	0.1ft	53.4	27.5	25.9	18	42	1600	Btuh	
16	1 NFRC	0.32, 0.66	No	No	W		7.8ft	0.1ft	49.7	25.9	23.8	18	42	1479	Btuh	
Window Total									897 (sqft)					21899 Btuh		
Walls	Type	U-Value						R-Value		Area(sqft)		HTM		Load		
							Cav/Sheath									
17	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		17.2		2.8		48 Btuh	
18	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		119.9		2.8		335 Btuh	
19	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		186.3		2.8		521 Btuh	
20	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		604.8		2.8		1690 Btuh	
21	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		301.0		2.8		841 Btuh	
22	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		123.7		2.8		346 Btuh	
23	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		71.9		2.8		201 Btuh	
Wall Total									1425 (sqft)					3982 Btuh		
Doors	Type									Area (sqft)		HTM		Load		
11	Wood - Exterior										24.0		9.6		230 Btuh	
12	Insulated - Exterior										25.0		10.6		264 Btuh	
Door Total									49 (sqft)					494 Btuh		
Ceilings	Type/Color/Surface	U-Value						R-Value		Area(sqft)		HTM		Load		
3	Vented Attic/DarkConcrete						0.049		19.0/0.0		403.0		1.76		711 Btuh	
Ceiling Total									403 (sqft)					711 Btuh		
Floors	Type							R-Value		Size		HTM		Load		
3	Slab On Grade						0.0				2483 (ft-perimeter)		0.0		0 Btuh	
Floor Total									2483.0 (sqft)					0 Btuh		
	Zone Envelope Subtotal:													27086 Btuh		
Infiltration	Type	Wholehouse ACH						Volume(cuft)		Wall Ratio		CFM=		Load		
	Natural						0.51		34762		0.17		232.8		4352 Btuh	
Internal gain	Occupants						Btuh/occupant		Appliance		Load					
	6						X 230		+		3400		4780 Btuh			
	Sensible Envelope Load:													36218 Btuh		
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.074)													2674 Btuh		
	Sensible Zone Load													38892 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

Component Loads for Room #4: AC4

Window	Type*						Overhang		Window Area(sqft)			HTM		Load				
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded					
17	1 NFRC	0.32, 0.66	No	No	No	W	3.7ft	1.0ft	121.9	22.6	99.3	18	42	4623	Btuh			
18	1 NFRC	0.32, 0.66	No	No	No	S	3.7ft	1.0ft	316.3	316.3	0.0	18	19	5743	Btuh			
19	1 NFRC	0.32, 0.66	No	No	No	E	3.7ft	1.0ft	121.9	22.6	99.3	18	42	4623	Btuh			
20	1 NFRC	0.32, 0.66	No	No	No	N	4.6ft	1.0ft	82.5	0.0	82.5	18	18	1498	Btuh			
21	1 NFRC	0.32, 0.66	No	No	No	N	4.6ft	1.0ft	82.5	0.0	82.5	18	18	1498	Btuh			
	Window Total								725 (sqft)					17984		Btuh		
Walls	Type						U-Value		R-Value		Area(sqft)		HTM		Load			
									Cav/Sheath									
24	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		86.9		2.8		243		Btuh	
25	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		89.8		2.8		251		Btuh	
26	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		86.9		2.8		243		Btuh	
27	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		24.8		2.8		69		Btuh	
28	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		64.2		2.8		179		Btuh	
29	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		191.3		2.8		535		Btuh	
30	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		64.2		2.8		179		Btuh	
31	Concrete Blk,Hollow - Ext						0.13		4.1/0.0		24.8		2.8		69		Btuh	
	Wall Total										633 (sqft)				1769		Btuh	
Ceilings	Type/Color/Surface						U-Value		R-Value		Area(sqft)		HTM		Load			
4	Vented Attic/DarkConcrete						0.049		19.0/0.0		524.0		1.76		925		Btuh	
	Ceiling Total										524 (sqft)				925		Btuh	
Floors	Type						R-Value		Size		HTM		Load					
4	Slab On Grade						0.0		524 (ft-perimeter)		0.0		0		Btuh			
	Floor Total										524.0 (sqft)				0		Btuh	
	Zone Envelope Subtotal:													20678		Btuh		
Infiltration	Type						Wholehouse ACH		Volume(cuft)		Wall Ratio		CFM=		Load			
	Natural						0.51		7336		0.07		103.4		1933		Btuh	
Internal gain							Occupants		Btuh/occupant		Appliance		Load					
							2		X 230		+		3400		3860		Btuh	
	Sensible Envelope Load:													26471		Btuh		
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)													(DGM of 0.038)		995		Btuh
	Sensible Zone Load													27465		Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

Component Loads for Room #5: AC5

Window	Type*					Overhang		Window Area(sqft)			HTM		Load		
	Panes	SHGC	U	InSh	IS Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded			
22	1 NFRC	0.32, 0.66	No	No	W	16.8f	0.1ft	186.0	186.0	0.0	18	42	3378	Btuh	
23	1 NFRC	0.32, 0.66	No	No	SE	3.0ft	0.1ft	62.0	32.8	29.2	18	33	1573	Btuh	
24	1 NFRC	0.32, 0.66	No	No	SE	3.0ft	0.1ft	77.5	40.9	36.6	18	33	1966	Btuh	
25	1 NFRC	0.32, 0.66	No	No	SE	3.0ft	0.1ft	291.1	153.8	137.3	18	33	7384	Btuh	
33	1 NFRC	0.32, 0.95	Skylight		H	(0deg.)		9.9	0.0	9.9	18	102	1006	Btuh	
	Window Total							626 (sqft)					15306 Btuh		
Walls	Type						U-Value	R-Value	Area(sqft)		HTM		Load		
								Cav/Sheath							
	32	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	21.0		2.8		59 Btuh		
	33	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	160.0		2.8		447 Btuh		
	34	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	147.6		2.8		412 Btuh		
	35	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	160.0		2.8		447 Btuh		
	36	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	274.1		2.8		766 Btuh		
	37	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	337.3		2.8		943 Btuh		
	38	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	575.0		2.8		1607 Btuh		
	39	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	242.0		2.8		676 Btuh		
	Wall Total							1917 (sqft)				5358 Btuh			
Doors	Type								Area (sqft)		HTM		Load		
13	Insulated - Exterior							25.0		10.6		264 Btuh			
14	Insulated - Exterior							25.0		10.6		264 Btuh			
	Door Total							50 (sqft)				528 Btuh			
Ceilings	Type/Color/Surface						U-Value	R-Value	Area(sqft)		HTM		Load		
5	Vented Attic/DarkConcrete					0.049		19.0/0.0		2471.0		1.76		4361 Btuh	
	Ceiling Total							2471 (sqft)				4361 Btuh			
Floors	Type						R-Value		Size		HTM		Load		
5	Raised Wood - Adj					11.0		281 (sqft)		1.2		338 Btuh			
6	Interior					11.0		689 (sqft)		0.0		0 Btuh			
7	Interior					11.0		1502 (sqft)		0.0		0 Btuh			
	Floor Total							2472.0 (sqft)				338 Btuh			
	Zone Envelope Subtotal:												25891 Btuh		
Infiltration	Type	Wholehouse ACH					Volume(cuft)		Wall Ratio		CFM=		Load		
	Natural	0.51					28417		0.22		313.2		5856 Btuh		
Internal gain						Occupants		Btuh/occupant		Appliance		Load			
						4		X 230		+		4500		5420 Btuh	
	Sensible Envelope Load:												37167 Btuh		
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)										(DGM of 0.100)		3733 Btuh		
	Sensible Zone Load												40900 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAAMI_INTL_AP

8/7/2023

Component Loads for Room #6: AC6

Window	Type*						Overhang		Window Area(sqft)			HTM		Load			
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded				
26	1 NFRC	0.32, 0.66	No	No	SE		3.0ft	0.1ft	124.9	66.0	58.9	18	33	3167	Btuh		
27	1 NFRC	0.32, 0.66	No	No	E		3.3ft	0.1ft	67.2	17.4	49.7	18	42	2426	Btuh		
28	1 NFRC	0.32, 0.66	No	No	N		3.3ft	0.1ft	98.2	0.0	98.2	18	18	1783	Btuh		
29	1 NFRC	0.32, 0.66	No	No	N		3.3ft	0.1ft	74.1	0.0	74.1	18	18	1345	Btuh		
30	1 NFRC	0.32, 0.66	No	No	W		6.6ft	0.1ft	47.4	24.7	22.7	18	42	1411	Btuh		
31	1 NFRC	0.32, 0.66	No	No	W		8.9ft	0.1ft	131.8	93.3	38.5	18	42	3325	Btuh		
	Window Total								543 (sqft)					13457 Btuh			
Walls	Type						U-Value	R-Value	Area(sqft)			HTM		Load			
								Cav/Sheath									
	40	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	44.7			2.8		125	Btuh		
	41	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	212.8			2.8		595	Btuh		
	42	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	241.3			2.8		675	Btuh		
	43	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	423.7			2.8		1184	Btuh		
	44	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	240.5			2.8		672	Btuh		
	45	Concrete Blk,Hollow - Ext					0.13	4.1/0.0	87.2			2.8		244	Btuh		
	Wall Total								1250 (sqft)					3494 Btuh			
Doors	Type								Area (sqft)			HTM		Load			
15	Insulated - Exterior							25.0			10.6		264	Btuh			
16	Insulated - Exterior							25.0			10.6		264	Btuh			
17	Insulated - Exterior							25.0			10.6		264	Btuh			
18	Insulated - Exterior							25.0			10.6		264	Btuh			
19	Insulated - Exterior							25.0			10.6		264	Btuh			
	Door Total								125 (sqft)					1320 Btuh			
Ceilings	Type/Color/Surface						U-Value	R-Value	Area(sqft)			HTM		Load			
6	Vented Attic/DarkConcrete							0.049	19.0/0.0	2443.0			1.76		4311	Btuh	
	Ceiling Total								2443 (sqft)					4311 Btuh			
Floors	Type							R-Value	Size			HTM		Load			
8	Interior								11.0	366 (sqft)			0.0		0	Btuh	
9	Interior								11.0	2077 (sqft)			0.0		0	Btuh	
	Floor Total								2443.0 (sqft)					0 Btuh			
	Zone Envelope Subtotal:													22583 Btuh			
Infiltration	Type	Wholehouse ACH					Volume(cuft)			Wall Ratio		CFM=		Load			
	Natural						0.51			28095		0.15		204.3			
Internal gain							Occupants			Btuh/occupant			Appliance		Load		
							4			X 230			+		4500		
	Sensible Envelope Load:													31821 Btuh			
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)													(DGM of 0.100)		3196 Btuh	
	Sensible Zone Load													35017 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

The following window Excursion will be assigned to the system loads.

Windows	July excursion for System 1	0 Btuh
	July excursion for System 2	1693 Btuh
	July excursion for System 3	0 Btuh
	July excursion for System 4	0 Btuh
	July excursion for System 5	0 Btuh
	Excursion Subtotal:	1693 Btuh
Duct load		48 Btuh
	Sensible Excursion Load	1741 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

SYSTEM GROUPS (BLOCK LOADS)

Cooling Loads For System(s): 1 Block #1:Block1 Serving Zones: 1	Sensible Envelope Load	29000 Btuh
	Window Excursion	0 Btuh
	Sensible Duct Load (duct gain multiplier of 0.223)	6473 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Zone Sensible gain	35474 Btuh
	Latent infiltration/ventilation gain	10714 Btuh
	Latent duct gain	2169 Btuh
	Latent occupant gain	1800 Btuh
	Latent other gain	2000 Btuh
	Total block load	52157 Btuh

Cooling Loads For System(s): 2 Block #2:Block2 Serving Zones: 2	Sensible Envelope Load	37809 Btuh
	Window Excursion	1693 Btuh
	Sensible Duct Load (duct gain multiplier of 0.029) (Includes 48 Btuh due to window excursion)	1126 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Zone Sensible gain	40628 Btuh
	Latent infiltration/ventilation gain	9973 Btuh
	Latent duct gain	495 Btuh
	Latent occupant gain	1800 Btuh
	Latent other gain	1750 Btuh
	Total block load	54645 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

SYSTEM GROUPS (BLOCK LOADS)

Cooling Loads For System(s): 3 Block #3:Block3 Serving Zones: 3	Sensible Envelope Load	36218 Btuh
	Window Excursion	0 Btuh
	Sensible Duct Load (duct gain multiplier of 0.074)	2674 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Zone Sensible gain	38892 Btuh
	Latent infiltration/ventilation gain	8862 Btuh
	Latent duct gain	1529 Btuh
	Latent occupant gain	1200 Btuh
	Latent other gain	1750 Btuh
	Total block load	52233 Btuh

Cooling Loads For System(s): 4 Block #4:Block4 Serving Zones: 4	Sensible Envelope Load	26471 Btuh
	Window Excursion	0 Btuh
	Sensible Duct Load (duct gain multiplier of 0.038)	995 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Zone Sensible gain	27465 Btuh
	Latent infiltration/ventilation gain	3937 Btuh
	Latent duct gain	306 Btuh
	Latent occupant gain	400 Btuh
	Latent other gain	1750 Btuh
	Total block load	33858 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

SYSTEM GROUPS (BLOCK LOADS)

Cooling Loads For System(s): 5 Block #5:Block5 Serving Zones: 5, 6	Sensible Envelope Load	68989 Btuh
	Window Excursion	0 Btuh
	Sensible Duct Load (duct gain multiplier of 0.100)	6929 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Zone Sensible gain	75917 Btuh
	Latent infiltration/ventilation gain	19701 Btuh
	Latent duct gain	2404 Btuh
	Latent occupant gain	1600 Btuh
	Latent other gain	4000 Btuh
	Total block load	103622 Btuh

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	200179 Btuh
	Sensible Duct Load	18197 Btuh
	Total Sensible Zone Loads	218377 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	218377 Btuh
	Latent infiltration gain (for 56 gr. humidity difference)	53186 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	6904 Btuh
	Latent occupant gain (34.0 people @ 200 Btuh per person)	6800 Btuh
	Latent other gain	11250 Btuh
	Latent total gain	78140 Btuh
	TOTAL GAIN	296516 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

Climate:FL_MIAMI_INTL_AP

8/7/2023

EQUIPMENT

1. Central Unit	#	57000 Btuh
2. Central Unit	#	57000 Btuh
3. Central Unit	#	57000 Btuh
4. Central Unit	#	35600 Btuh
5. Central Unit	Multiple #Multiple	114000 Btuh

*Key: Window types (Panels - Number and type of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value)

(U - Window U-Factor)

(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))

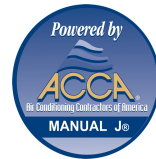
- For Blinds: Assume medium color, half closed

For Draperies: Assume medium weave, half closed

For Roller shades: Assume translucent, half closed

(IS - Insect screen: none(N), Full(F) or Half($\frac{1}{2}$))

(Ornt - compass orientation)



Version 8

Residential System Sizing Calculation

Summary

11041 SW 77th Ave
Miami, FL 33156

Project Title:
New residence @ 11041 SW 77th Ave

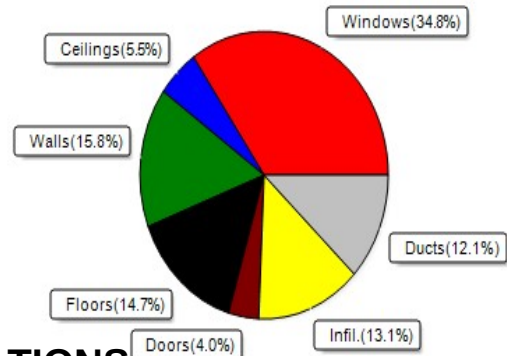
8/7/2023

Location for weather data: Miami, FL - Defaults: Latitude(25.82) Altitude(7 ft.) Temp Range(L)					
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(56gr.)					
Winter design temperature(TMY3 99%)	49	F	Summer design temperature(TMY3 99%)	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	21	F	Summer temperature difference	17	F
Total heating load calculation	149248	Btuh	Total cooling load calculation	296516	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Strip Heat)	132.6	197900	Sensible (SHR = 0.75)	110.1	240450
			Latent	102.6	80150
			Total	108.1	320600

WINTER CALCULATIONS

Winter Heating Load (for 12617 sqft)

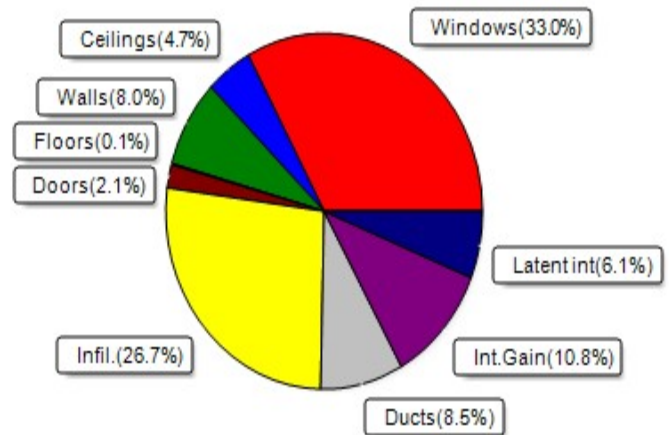
Load component	Load
Window total	3747 sqft 51996 Btuh
Wall total	8551 sqft 23563 Btuh
Door total	611 sqft 5899 Btuh
Ceiling total	7975 sqft 8210 Btuh
Floor total	See detail report 21879 Btuh
Infiltration	849 cfm 19611 Btuh
Duct loss	18091 Btuh
Subtotal	149248 Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm 0 Btuh
TOTAL HEAT LOSS	149248 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 12617 sqft)

Load component	Load
Window total	3747 sqft 97733 Btuh
Wall total	8551 sqft 23585 Btuh
Door total	611 sqft 6311 Btuh
Ceiling total	7975 sqft 14074 Btuh
Floor total	338 Btuh
Infiltration	1397 cfm 26118 Btuh
Internal gain	32020 Btuh
Duct gain	18197 Btuh
Sens. Ventilation	Ex:0 cfm; Sup:0 cfm 0 Btuh
Blower Load	0 Btuh
Total sensible gain	218377 Btuh
Latent gain(ducts)	6904 Btuh
Latent gain(infiltration)	53186 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	18050 Btuh
Total latent gain	78140 Btuh
TOTAL HEAT GAIN	296516 Btuh



8th Edition

EnergyGauge® / USRCZB v7.5.01

EnergyGauge® System Sizing

PREPARED BY: **Eduardo**

DATE: _____

A Barreto

Digitally signed by Eduardo A Barreto
DN: c=US, o=Florida, dnQualifier=A01410C0000018998AF54FC000D0EC6, cn=Eduardo A Barreto
Date: 2023.08.30 22:52:44 -04'00'