

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

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

Applications for compliance with the 2023 Florida Building Code, Energy Conservation via the Residential Simulated Performance Alternative shall include:

- This checklist*
- Form R405-2023 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)*

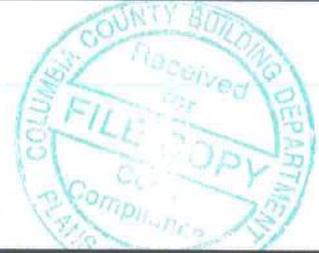
Required prior to CO:

- Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- A completed 2023 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 2023 Duct Leakage Test Report - Performance Method (usually one page)*

Project Information

For: Dixon
131 NW Zack Jones Gln, Lake City, FL 32055

Notes:



Design Information

Weather: Gainesville, FL, US

Winter Design Conditions

Outside db 33 °F
Inside db 70 °F
Design TD 37 °F

Ventilation Method MJ8

Heating Summary

Structure 19512 Btuh
Ducts (R-6.0) 4539 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 24051 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1560	1560
Volume (ft ³)	15600	15600
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	99	52

Heating Equipment Summary

Make Generic
Trade
Model SEER 15.0, HSPF 8.5
AHRI ref

Efficiency 8.5 HSPF2
Heating input
Heating output 28418 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 952 cfm
Air flow factor 0.040 cfm/Btuh
Static pressure 0.53 in H2O
Space thermostat
Capacity balance point = 26 °F

Backup:
Input = 8 kW, Output = 26592 Btuh, 100 AFUE

Summer Design Conditions

Outside db 92 °F
Inside db 75 °F
Design TD 17 °F
Daily range M
Relative humidity 50 %
Moisture difference 43 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 15301 Btuh
Ducts (R-6.0) 6259 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load 21560 Btuh

Latent Cooling Equipment Load Sizing

Structure 2130 Btuh
Ducts 1271 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 3401 Btuh

Equipment Total Load (Sen+Lat) 24961 Btuh
Req. total capacity at 0.80 SHR 2.2 ton

Cooling Equipment Summary

Make Generic
Trade
Cond SEER 15.0, HSPF 8.5
Coil
AHRI ref
Efficiency 12.8 EER2, 15 SEER2
Sensible cooling 22848 Btuh
Latent cooling 5712 Btuh
Total cooling 28560 Btuh
Actual air flow 952 cfm
Air flow factor 0.044 cfm/Btuh
Static pressure 0.53 in H2O
Load sensible heat ratio 0.86

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Information

For: Dixon
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Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	21560 Btuh	Entering coil DB:	77.9°F
Outdoor design WB:	75.8°F	Latent gain:	3401 Btuh	Entering coil WB:	63.9°F
Indoor design DB:	75.0°F	Total gain:	24961 Btuh		
Indoor RH:	50%	Estimated airflow:	952 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP	Model:	SEER 15.0, HSPF 8.5
Manufacturer:	Generic		
Actual airflow:	952 cfm		
Sensible capacity:	22848 Btuh		106% of load
Latent capacity:	5712 Btuh		168% of load
Total capacity:	28560 Btuh		114% of load SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	33.3°F	Heat loss:	24051 Btuh	Entering coil DB:	68.6°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP	Model:	SEER 15.0, HSPF 8.5	Capacity balance:	26 °F
Manufacturer:	Generic			Economic balance:	-99 °F
Actual airflow:	952 cfm				
Output capacity:	28418 Btuh		118% of load		
Supplemental heat required:	0 Btuh				

Backup equipment type:	Elec strip	Model:	
Manufacturer:			
Actual airflow:	952 cfm		
Output capacity:	7.8 kW	111% of load	Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.



Duct System Summary

Entire House

Job: J-11289 - C-2825
 Date: Nov 05, 2024
 By: LaNiika Stewart

Project Information

For: Dixon
 131 NW Zack Jones Gln, Lake City, FL 32055

	Heating	Cooling
External static pressure	0.53 in H2O	0.53 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.53 in H2O	0.53 in H2O
Supply / return available pressure	0.423 / 0.107 in H2O	0.423 / 0.107 in H2O
Lowest friction rate	0.339 in/100ft	0.339 in/100ft
Actual air flow	952 cfm	952 cfm
Total effective length (TEL)		156 ft

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bath 2	c 149	4	7	0.339	4.0	0x0	VIFx	24.9	100.0	st1
Bed 2	h 1906	75	68	0.339	5.0	0x0	VIFx	24.9	100.0	st2
Great Room	h 3109	123	122	0.339	7.0	0x0	VIFx	24.9	100.0	st1
Great Room-A	h 3109	123	122	0.339	7.0	0x0	VIFx	24.9	100.0	st1
Kitchen/Dining	c 3434	115	152	0.339	7.0	0x0	VIFx	24.9	100.0	st1
Kitchen/Dining-A	c 3434	115	152	0.339	7.0	0x0	VIFx	24.9	100.0	st1
P Bath	h 1548	61	57	0.339	5.0	0x0	VIFx	24.9	100.0	st2
P WIC	h 2460	97	48	0.339	6.0	0x0	VIFx	24.9	100.0	st2
Primary Bed	h 4525	179	158	0.339	8.0	0x0	VIFx	24.9	100.0	st2
Utility	c 1484	59	66	0.339	5.0	0x0	VIFx	24.9	100.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	413	332	0.339	526	12.0	0 x 0	VinIFlx	
st1	Peak AVF	539	620	0.339	580	14.0	0 x 0	VinIFlx	

Return Branch Detail Table

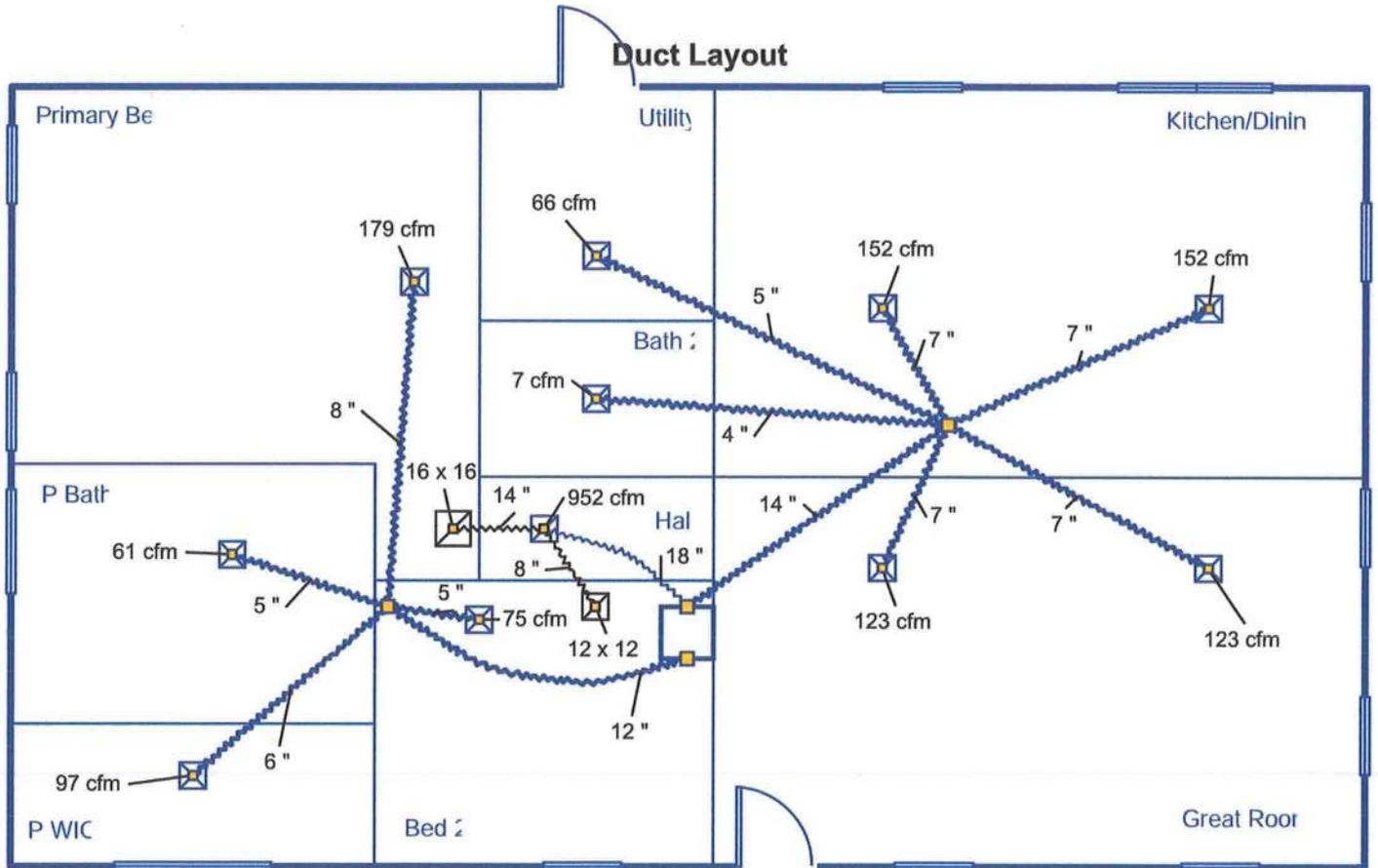
Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x0	952	952	31.5	0.339	539	18.0	0x 0		VIFx	rst2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst2	Peak AVF	952	952	0.339	539	18.0	0 x 0	VinIFlx	



Duct Layout



Job #: J-11289 - C-2825
Performed by LaNiika Stewart for:
Dixon
131 NW Zack Jones Gln
Lake City, FL 32055

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