

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Rodney Wade- Roach
 Street: Rodney Wade- Roach
 City, State, Zip: Ft. White , FL ,
 Owner: Rodney Wade- Roach
 Design Location: FL, Gainesville

Builder Name: Spann's Heating and Air INC.
 Permit Office:
 Permit Number:
 Jurisdiction:
 County: columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	2
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1070
Conditioned floor area below grade (ft²)	0
7. Windows(66.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.40 66.00 ft²
SHGC:	SHGC=0.20
b. U-Factor:	N/A ft²
SHGC:	
c. U-Factor:	N/A ft²
SHGC:	
Area Weighted Average Overhang Depth:	1.000 ft.
Area Weighted Average SHGC:	0.200
8. Skylights	Area
c. U-Factor:(AVG)	N/A ft²
SHGC(AVG):	N/A
9. Floor Types (1069.5 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1069.50 ft²
b. N/A	R= ft²
c. N/A	R= ft²

10. Wall Type(1144.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1144.00 ft²
b. N/A	R= ft²
c. N/A	R= ft²
d. N/A	R= ft²
11. Ceiling Types (1070.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1070.00 ft²
b. N/A	R= ft²
c. N/A	R= ft²
12. Ducts	R ft²
a. Sup: Attic, Ret: Attic, AH: Bedroom 2	6 85
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	24.0 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	24.0 HSPF:8.20
15. Hot water systems	
a. Electric	Cap: 40 gallons EF: 0.960
b. Conservation features	None
16. Credits	None

Glass/Floor Area: 0.062

Total Proposed Modified Loads: 29.22

Total Baseline Loads: 30.46

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Trent JDATE: 6-10-2021

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: M JDATE: 6/10/21

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.



BUILDING OFFICIAL: _____

DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).
- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.010 Qn for whole house.

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 96

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

Rodney Wade- Roach, Ft. White, FL,

1. New construction or existing	New (From Plans)		10. Wall Type and Insulation	Insulation	Area
2. Single family or multiple family	Detached		a. Frame - Wood, Exterior	R=13.0	1144.00 ft ²
3. Number of units, if multiple family	1		b. N/A	R=	ft ²
4. Number of Bedrooms	2		c. N/A	R=	ft ²
5. Is this a worst case?	No		d. N/A	R=	ft ²
6. Conditioned floor area (ft ²)	1070		11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	Area	a. Under Attic (Vented)	R=38.0	1070.00 ft ²
a. U-Factor:	Dbl, U=0.40	66.00 ft ²	b. N/A	R=	ft ²
SHGC:	SHGC=0.20		c. N/A	R=	ft ²
b. U-Factor:	N/A	ft ²	12. Ducts, location & insulation level	R	ft ²
SHGC:			a. Sup: Attic, Ret: Attic, AH: Bedroom 2	6	85
c. U-Factor:	N/A	ft ²	13. Cooling systems	kBtu/hr	Efficiency
SHGC:			a. Central Unit	24.0	SEER:14.00
d. U-Factor:	N/A	ft ²	14. Heating systems	kBtu/hr	Efficiency
SHGC:			a. Electric Heat Pump	24.0	HSPF:8.20
Area Weighted Average Overhang Depth:		1.000 ft.	15. Hot water systems		
Area Weighted Average SHGC:		0.200	a. Electric	Cap: 40 gallons	EF: 0.96
8. Skylights	Description	Area	b. Conservation features		
a. U-Factor(AVG):	N/A	ft ²	None		
SHGC(AVG):	N/A		Credits (Performance method)		None
9. Floor Types	Insulation	Area			
a. Slab-On-Grade Edge Insulation	R=0.0	1069.50 ft ²			
b. N/A	R=	ft ²			
c. N/A	R=	ft ²			

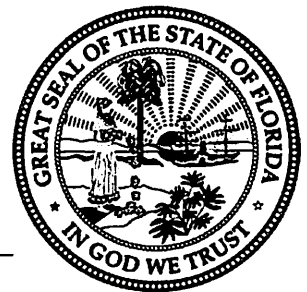
I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____

Date: _____

Address of New Home: _____

City/FL Zip: _____



*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.

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Rodney Wade- Roach	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1070	Lot #	
Owner Name:	Rodney Wade- Roach	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Spann's Heating and Air INC.	Rotate Angle:	0	Street:	Rodney Wade- Roach
Permit Office:		Cross Ventilation:	No	County:	columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Ft. White , FL ,
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp		Int Design Temp		Heating	Design	Daily Temp
			97.5 %	2.5 %	Winter	Summer	Degree Days	Moisture	Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Entire House	1070	10009

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Closet	45	360	No	0		1	No	Yes	Yes
2	Master Bath	81	648	No	0		1	No	Yes	Yes
3	Master Bedroom	187	1496	No	2	1	1	No	Yes	Yes
4	Great Room	220	2420	No	2		1	No	Yes	Yes
5	Kitchen	263	2893	No	2		1	No	Yes	Yes
6	Bedroom 2	214	1712	No	2	1	1	No	Yes	Yes
7	Bath 2	60	480	No	0		1	No	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Closet	14 ft	0	45 ft²	----	0	1	0
_____	2	Slab-On-Grade Edge Insulatio	Master Bath	9 ft	0	81 ft²	----	0	1	0
_____	3	Slab-On-Grade Edge Insulatio	Master Bedroom	28 ft	0	187 ft²	----	0	1	0
_____	4	Slab-On-Grade Edge Insulatio	Great Room	12.5 ft	0	220 ft²	----	0	1	0
_____	5	Slab-On-Grade Edge Insulatio	Kitchen	19.5 ft	0	263 ft²	----	0	1	0
_____	6	Slab-On-Grade Edge Insulatio	Bedroom 2	32 ft	0	213.5 ft²	----	0	1	0
_____	7	Slab-On-Grade Edge Insulatio	Bath 2	16 ft	0	60 ft²	----	0	1	0

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	Gable or Shed	Composition shingles	1128 ft²	178 ft²	Dark	N	0.6	No	0.9	No	0	18.43

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
✓	1	Full attic	Vented	300	1070 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	Closet	38	Blown	45 ft²	0.1	Wood
✓	2	Under Attic (Vented)	Master Bath	38	Blown	81 ft²	0.1	Wood
✓	3	Under Attic (Vented)	Master Bedroom	38	Blown	187 ft²	0.1	Wood
✓	4	Under Attic (Vented)	Great Room	38	Blown	220 ft²	0.1	Wood
✓	5	Under Attic (Vented)	Kitchen	38	Blown	263 ft²	0.1	Wood
✓	6	Under Attic (Vented)	Bedroom 2	38	Blown	214 ft²	0.1	Wood
✓	7	Under Attic (Vented)	Bath 2	38	Blown	60 ft²	0.1	Wood

WALLS

✓	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor	Below Grade%
✓	1	N	Exterior	Frame - Wood	Closet	13	9	0	8	0	72.0 ft²	0	0.25	0.8	0
✓	2	W	Exterior	Frame - Wood	Closet	13	5	0	8	0	40.0 ft²	0	0.25	0.8	0
✓	3	W	Exterior	Frame - Wood	Master Bath	13	9	0	8	0	72.0 ft²	0	0.25	0.8	0
✓	4	S	Exterior	Frame - Wood	Master Bedro	13	11	0	8	0	88.0 ft²	0	0.25	0.8	0
✓	5	W	Exterior	Frame - Wood	Master Bedro	13	17	0	8	0	136.0 ft²	0	0.25	0.8	0
✓	6	S	Exterior	Frame - Wood	Great Room	13	12	6	11	0	137.5 ft²	0	0.25	0.8	0
✓	7	N	Exterior	Frame - Wood	Kitchen	13	19	6	11	0	214.5 ft²	0	0.25	0.8	0
✓	8	E	Exterior	Frame - Wood	Bedroom 2	13	21	0	8	0	168.0 ft²	0	0.25	0.8	0
✓	9	S	Exterior	Frame - Wood	Bedroom 2	13	11	0	8	0	88.0 ft²	0	0.25	0.8	0
✓	10	N	Exterior	Frame - Wood	Bath 2	13	6	0	8	0	48.0 ft²	0	0.25	0.8	0
✓	11	E	Exterior	Frame - Wood	Bath 2	13	10	0	8	0	80.0 ft²	0	0.25	0.8	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
✓	1	S	Insulated	Great Room	None	.4	3		7		21 ft²
✓	2	N	Insulated	Kitchen	None	.4	3		7		21 ft²

INPUT SUMMARY CHECKLIST REPORT

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
✓	1	W	3	Vinyl	Double (Clear)	Yes	0.4	0.2	N	6.0 ft²	1 ft 0 in	1 ft 0 in	None	None
✓	2	S	4	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
✓	3	S	6	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
✓	4	N	7	Vinyl	Double (Clear)	Yes	0.4	0.2	N	9.0 ft²	1 ft 0 in	1 ft 0 in	None	None
✓	5	S	9	Vinyl	Double (Clear)	Yes	0.4	0.2	N	15.0 ft²	1 ft 0 in	1 ft 0 in	None	None
✓	6	E	11	Vinyl	Double (Clear)	Yes	0.4	0.2	N	6.0 ft²	1 ft 0 in	1 ft 0 in	None	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000416	1167.7	64.06	120.27	.146	7

HEATING SYSTEM

✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
✓	1	Electric Heat Pump/	Split	Singl	HSPF:8.2	24 kBtu/hr	1	sys#1

COOLING SYSTEM

✓	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit/	Split	Singl	SEER: 14	24 kBtu/hr	720 cfm	0.7	1	sys#1

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Bedroom 2	0.96	40 gal	50 gal	120 deg	None

SOLAR HOT WATER SYSTEM

✓	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
✓	None	None			ft²		

DUCTS

✓	#	Supply Location	R-Value	Area	Return Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Coil
✓	1	Attic	6	85 ft²	Attic	85 ft²	Proposed Qn	Bedroom 2	— cfm	10.7 cfm	0.01	0.50	1	1

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: N

Ceiling Fans:

Cooling	☒	Jan	☒	Feb	☒	Mar	☐	Apr	☐	May	☒	Jun	☒	Jul	☒	Aug	☒	Sep	☐	Oct	☐	Nov	☒	Dec
Heating	☒	Jan	☒	Feb	☒	Mar	☒	Apr	☒	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☒	Nov	☒	Dec
Venting	☐	Jan	☐	Feb	☐	Mar	☐	Apr	☐	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☐	Nov	☐	Dec

Thermostat Schedule: HERS 2006 Reference

Hours

Schedule Type		1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.)	0 ft ²	0 ft	0.3	Closet
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Master Bath
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Master Bedroom
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Great Room
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Kitchen
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Bedroom 2
Default(8 lbs/sq.ft.)	ft ²	ft	0.3	Bath 2



Load Short Form Entire House Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: Rodney Wade- Roach

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	70	75	Construction quality	Average
Design TD (°F)	37	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	65	85		
Moisture difference (gr/lb)	49	0		

HEATING EQUIPMENT

Make Comfortmaker
Trade 14 SEER N SERIES R410A HP
Model N4H424GKG10
AHRI ref 9675364
Efficiency 8.2 HSPF
Heating input
Heating output 21800 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 733 cfm
Air flow factor 0.043 cfm/Btuh
Static pressure 0.70 in H2O
Space thermostat
Capacity balance point = 28 °F

Backup: n/a n/a

Input = 5 kW, Output = 16308 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Comfortmaker
Trade 14 SEER N SERIES R410A HP
Cond N4H424GKG10
Coil FXM4X2400AL
AHRI ref 9675364
Efficiency 11.5 EER, 14 SEER
Sensible cooling 15400 Btuh
Latent cooling 6600 Btuh
Total cooling 22000 Btuh
Actual air flow 733 cfm
Air flow factor 0.058 cfm/Btuh
Static pressure 0.70 in H2O
Load sensible heat ratio 0.83

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Closet	45	1480	541	63	31
Master Bath	81	1094	1032	47	60
Master Bedroom	187	3278	2415	140	140
Great Room	220	2483	2306	106	134
Kitchen	263	3317	2610	142	151
Bedroom 2	214	3717	2596	159	151
Bath 2	60	1784	1142	76	66

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



Right-Suite® Universal 2019 19.0.15 RSU08917

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Entire House	d	1070	17153	12642	733	733
Other equip loads			0	0		
Equip. @ 0.97 RSM				12250		
Latent cooling				2529		
TOTALS		1070	17153	14780	733	733

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



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...ocuments\Wrightsoft HVAC\Rodney Wade- Roach.rup Calc = MJ8 Front Door faces: W



Project Summary

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: Rodney Wade- Roach

Notes:

Design Information

Weather: Gainesville Rgnl, FL, US

Winter Design Conditions

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

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	85 %
Moisture difference	0 gr/lb

Heating Summary

Structure	14102 Btuh
Ducts	3051 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	17153 Btuh

Sensible Cooling Equipment Load Sizing

Structure	8762 Btuh
Ducts	3880 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	12250 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1600 Btuh
Ducts	929 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	2529 Btuh

	Heating	Cooling
Area (ft ²)	1070	1070
Volume (ft ³)	10005	10005
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	75	38

Equipment Total Load (Sen+Lat)	14780 Btuh
Req. total capacity at 0.70 SHR	1.5 ton

Heating Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Model	N4H424GKG10
AHRI ref	9675364
Efficiency	8.2 HSPF
Heating input	
Heating output	21800 Btuh @ 47°F
Temperature rise	27 °F
Actual air flow	733 cfm
Air flow factor	0.043 cfm/Btuh
Static pressure	0.70 in H2O
Space thermostat	
Capacity balance point = 28 °F	
Backup: n/a n/a	
Input = 5 kW, Output = 16308 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Comfortmaker
Trade	14 SEER N SERIES R410A HP
Cond	N4H424GKG10
Coil	FXM4X2400AL
AHRI ref	9675364
Efficiency	11.5 EER, 14 SEER
Sensible cooling	15400 Btuh
Latent cooling	6600 Btuh
Total cooling	22000 Btuh
Actual air flow	733 cfm
Air flow factor	0.058 cfm/Btuh
Static pressure	0.70 in H2O
Load sensible heat ratio	0.83

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



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Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach

Date: Jun 10, 2021

By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

1	Room name					Entire House				Closet				
2	Exposed wall					131.0 ft				14.0 ft				
3	Room height					9.4 ft				8.0 ft				
4	Room dimensions					d				9.0 x 5.0 ft				
5	Room area					1069.5 ft²				45.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.33	2.22	335	305	1014	675	72	72	240	160
11	G	1D-c2ov	0.400	n	14.64	10.92	9	0	132	98	0	0	0	0
	D	11J0	0.600	n	21.96	17.61	21	21	461	370	0	0	0	0
	W	12C-0sw	0.091	e	3.33	2.22	248	242	806	536	0	0	0	0
	G	1D-c2ov	0.400	e	14.64	25.95	6	0	88	156	0	0	0	0
	W	12C-0sw	0.091	s	3.33	2.22	314	248	824	548	0	0	0	0
	G	1D-c2ov	0.400	s	14.64	11.08	45	79	659	499	0	0	0	0
	D	11J0	0.600	s	21.96	17.61	21	21	461	370	0	0	0	0
	W	12C-0sw	0.091	w	3.33	2.22	248	242	806	536	40	40	133	89
	G	1D-c2ov	0.400	w	14.64	25.95	6	0	88	156	0	0	0	0
	C	16B-38ad	0.026	-	0.95	1.37	1070	1070	1018	1470	45	45	43	62
	F	22A-tpl	0.989	-	36.20	0.00	1070	131	4742	0	45	14	507	0
6	c) AED excursion									0				-5
	Envelope loss/gain								11099	5413			923	305
12	a) Infiltration								3003	709			294	69
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230		8			1840	0				0
			Appliances/other						800					0
	Subtotal (lines 6 to 13)								14102	8762			1217	375
14	Less external load								0	0			0	0
	Less transfer								0	0			0	0
15	Redistribution								0	0			0	0
	Subtotal								14102	8762			1217	375
	Duct loads						22%	44%	3051	3880	22%	44%	263	166
	Total room load								17153	12642			1480	541
	Air required (cfm)								733	733			63	31

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

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach

Date: Jun 10, 2021

By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

1	Room name					Master Bath 9.0 ft					Master Bedroom 28.0 ft				
2	Exposed wall					8.0 ft 9.0 ft heat/cool					8.0 ft 11.0 x 17.0 ft heat/cool				
3	Room height					81.0 ft²					187.0 ft²				
4	Room dimensions														
5	Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	0	0	0	0	
11	G	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.400	e	14.64	25.95	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	0	0	0	0	88	73	243	162	
	G	1D-c2ov	0.400	s	14.64	11.08	0	0	0	0	15	13	220	166	
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.33	2.22	72	66	220	146	136	136	453	301	
	G	1D-c2ov	0.400	w	14.64	25.95	6	0	88	156	0	0	0	0	
	C	16B-38ad	0.026	-	0.95	1.37	81	81	77	111	187	187	178	257	
	F	22A-tpl	0.989	-	36.20	0.00	81	9	326	0	187	28	1014	0	
6	c) AED excursion									57				-11	
	Envelope loss/gain								711	471			2107	875	
12	a) Infiltration								189	45			588	139	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	2			460	
										200				200	
	Subtotal (lines 6 to 13)								900	715			2695	1674	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
15	Redistribution								0	0			0	0	
	Subtotal								900	715			2695	1674	
	Duct loads						22%	44%	195	317	22%	44%	583	741	
	Total room load								1094	1032			3278	2415	
	Air required (cfm)								47	60			140	140	

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

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach

Date: Jun 10, 2021

By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

1	Room name					Great Room					Kitchen				
2	Exposed wall					12.5 ft					19.5 ft				
3	Room height					11.0 ft					11.0 ft				
4	Room dimensions					1.0 x 220.0 ft					1.0 x 263.0 ft				
5	Room area					220.0 ft²					263.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	215	185	614	409	
11	G	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0	9	0	132	98	
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	21	21	461	370	
	W	12C-0sw	0.091	e	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.400	e	14.64	25.95	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.33	2.22	138	102	338	225	0	0	0	0	
	G	1D-c2ov	0.400	s	14.64	11.08	15	13	220	166	0	0	0	0	
	D	11J0	0.600	s	21.96	17.61	21	21	461	370	0	0	0	0	
	W	12C-0sw	0.091	w	3.33	2.22	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.400	w	14.64	25.95	0	0	0	0	0	0	0	0	
	C	16B-38ad	0.026	-	0.95	1.37	220	220	209	302	263	263	250	361	
	F	22A-tpl	0.989	-	36.20	0.00	220	13	452	0	263	20	706	0	
6	c) AED excursion									-10				-22	
	Envelope loss/gain								1681	1053			2164	1216	
12	a) Infiltration								361	85			563	133	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230						2			460	2			460	0
	Appliances/other									0				0	
	Subtotal (lines 6 to 13)								2042	1598			2727	1809	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
15	Subtotal								2042	1598			2727	1809	
	Duct loads						22%	44%	442	708	22%	44%	590	801	
	Total room load								2483	2306			3317	2610	
	Air required (cfm)								106	134			142	151	

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

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach

Date: Jun 10, 2021

By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

1	Room name					Bedroom 2					Bath 2				
2	Exposed wall					32.0 ft					16.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					1.0 x 213.5 ft					6.0 x 10.0 ft				
5	Room area					213.5 ft²					60.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.33	2.22	0	0	0	0	48	48	160	106	
11	D	1D-c2ov	0.400	n	14.64	10.92	0	0	0	0	0	0	0	0	
		11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	e	3.33	2.22	168	168	560	372	80	74	246	164	
		1D-c2ov	0.400	e	14.64	25.95	0	0	0	0	6	0	88	156	
	W	12C-0sw	0.091	s	3.33	2.22	88	73	243	162	0	0	0	0	
		1D-c2ov	0.400	s	14.64	11.08	15	13	220	166	0	0	0	0	
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	w	3.33	2.22	0	0	0	0	0	0	0	0	
	W	1D-c2ov	0.400	w	14.64	25.95	0	0	0	0	0	0	0	0	
		16B-38ad	0.026	-	0.95	1.37	214	214	203	293	60	60	57	82	
	F	22A-tpl	0.989	-	36.20	0.00	214	32	1158	0	60	16	579	0	
6	c) AED excursion									-13				3	
	Envelope loss/gain								2384	981			1130	512	
12	a) Infiltration								672	159			336	79	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						2			460	0			0	
										200				200	
	Subtotal (lines 6 to 13)								3056	1799			1466	791	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								3056	1799			1466	791	
15	Duct loads						22%	44%	661	797		22%	44%	317	350
	Total room load								3717	2596			1784	1142	
	Air required (cfm)								159	151			76	66	

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



Manual S Compliance Report

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach
Date: Jun 10, 2021
By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: Rodney Wade- Roach

Cooling Equipment

Design Conditions

Outdoor design DB: 91.9°F	Sensible gain: 12642 Btuh	Entering coil DB: 76.8°F
Outdoor design WB: 76.2°F	Latent gain: 2529 Btuh	Entering coil WB: 72.1°F
Indoor design DB: 75.0°F	Total gain: 15171 Btuh	
Indoor RH: 85%	Estimated airflow: 733 cfm	

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP	
Manufacturer: Comfortmaker	Model: N4H424GKG10+FXM4X2400AL
Actual airflow: 733 cfm	
Sensible capacity: 15400 Btuh	122% of load
Latent capacity: 6600 Btuh	261% of load
Total capacity: 22000 Btuh	145% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB: 33.4°F	Heat loss: 17153 Btuh	Entering coil DB: 69.1°F
Indoor design DB: 70.0°F		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP	
Manufacturer: Comfortmaker	Model: N4H424GKG10+FXM4X2400AL
Actual airflow: 733 cfm	
Output capacity: 21800 Btuh	127% of load
Supplemental heat required: 0 Btuh	
Capacity balance: 28 °F	
Economic balance: -99 °F	

Backup equipment type: Elec strip	
Manufacturer: n/a	Model: n/a+n/a
Actual airflow: 733 cfm	
Output capacity: 4.8 kW	95% of load Temp. rise: 18 °F

Meets all requirements of ACCA Manual S.



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Page 1



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form
RPER 1
15 Mar 09

Header Information

Contractor: Spann's Heating and Air INC.
Mechanical license: Jack Spann

Building plan #:

Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS

Manual J1 Form (and supporting worksheets):
or MJ1AE Form* (and supporting worksheets):
OEM performance data (heating, cooling, blower):
Manual D Friction Rate Worksheet:
Duct distribution sketch:

ATTACHED

Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐
Yes	☐	No	☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 33 °F
Indoor temperature: 70 °F
Total heat loss: 17153 Btuh

Summer Design Conditions

Outdoor temperature: 92 °F
Indoor temperature: 75 °F
Grains difference: 0 gr/lb @85% RH
Sensible heat gain: 13047 Btuh
Latent heat gain: 2610 Btuh
Total heat gain: 15657 Btuh

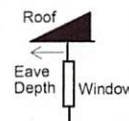
Building Construction Information

Building

Orientation: Front Door faces West
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms: 0
Conditioned floor area: 1070 ft²
Number of occupants: 8

Windows

Eave overhang depth: 1.0 ft
Internal shade: none
Blinds, drapes, etc.
Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Split ASHP
Furnace, Heat pump, Boiler, etc.
Model: Comfortmaker
N4H424GKG10+FXM4X2400AL
Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions
Aux. heating output capacity: 16308 Btuh

Cooling Equipment Data

Equipment type: Split ASHP
Air Conditioner, Heat pump, etc.
Model: Comfortmaker
N4H424GKG10+FXM4X2400AL
Total cooling capacity: 0 Btuh
Sensible cooling capacity: 0 Btuh
Latent cooling capacity: 0 Btuh

Blower Data

Heating cfm: 733
Cooling cfm: 733
Static pressure: 0.70 in H2O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 733 cfm	Longest supply duct: 332 ft	Duct Materials Used
Equipment design ESP: 0.70 in H2O	Longest return duct: 0 ft	Trunk duct: Sheet metal
Total device pressure losses: 0 in H2O	Total effective length (TEL): 332 ft	Branch duct: Round flex vinyl, Sheet metal
Available static pressure (ASP): 0.70 in H2O	Friction rate: 0.211 in/100ft	

Friction Rate = ASP ÷ (TEL × 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____

Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



Duct System Summary

Entire House

Spann's Heating and Air INC.

Job: Rodney Wade- Roach

Date: Jun 10, 2021

By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: Rodney Wade- Roach

	Heating	Cooling
External static pressure	0.70 in H ₂ O	0.70 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.70 in H ₂ O	0.70 in H ₂ O
Supply / return available pressure	0.350 / 0.350 in H ₂ O	0.350 / 0.350 in H ₂ O
Lowest friction rate	0.211 in/100ft	0.211 in/100ft
Actual air flow	733 cfm	733 cfm
Total effective length (TEL)	332 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	h 1784	76	66	0.526	5.0	0x0	VIFx	8.2	125.0	st1
Bedroom 2	h 3717	159	151	0.541	7.0	0x0	VIFx	4.3	125.0	
Closet	h 1480	63	31	0.211	5.0	0x0	VIFx	31.5	300.0	
Great Room	c 2306	106	134	0.284	7.0	0x0	VIFx	11.5	235.0	
Kitchen	c 2610	142	151	0.283	7.0	0x0	VIFx	12.5	235.0	
Master Bath	c 1032	47	60	0.216	6.0	0x0	VIFx	23.7	300.0	
Master Bedroom	c 3278	140	140	0.217	7.0	0x0	VIFx	22.5	300.0	

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	498	516	0.211	0	7.9	8 x 0	ShtMetl	

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	733	733	0	0	0	0	0x 0		ShMt	

Bold/italic values have been manually overridden



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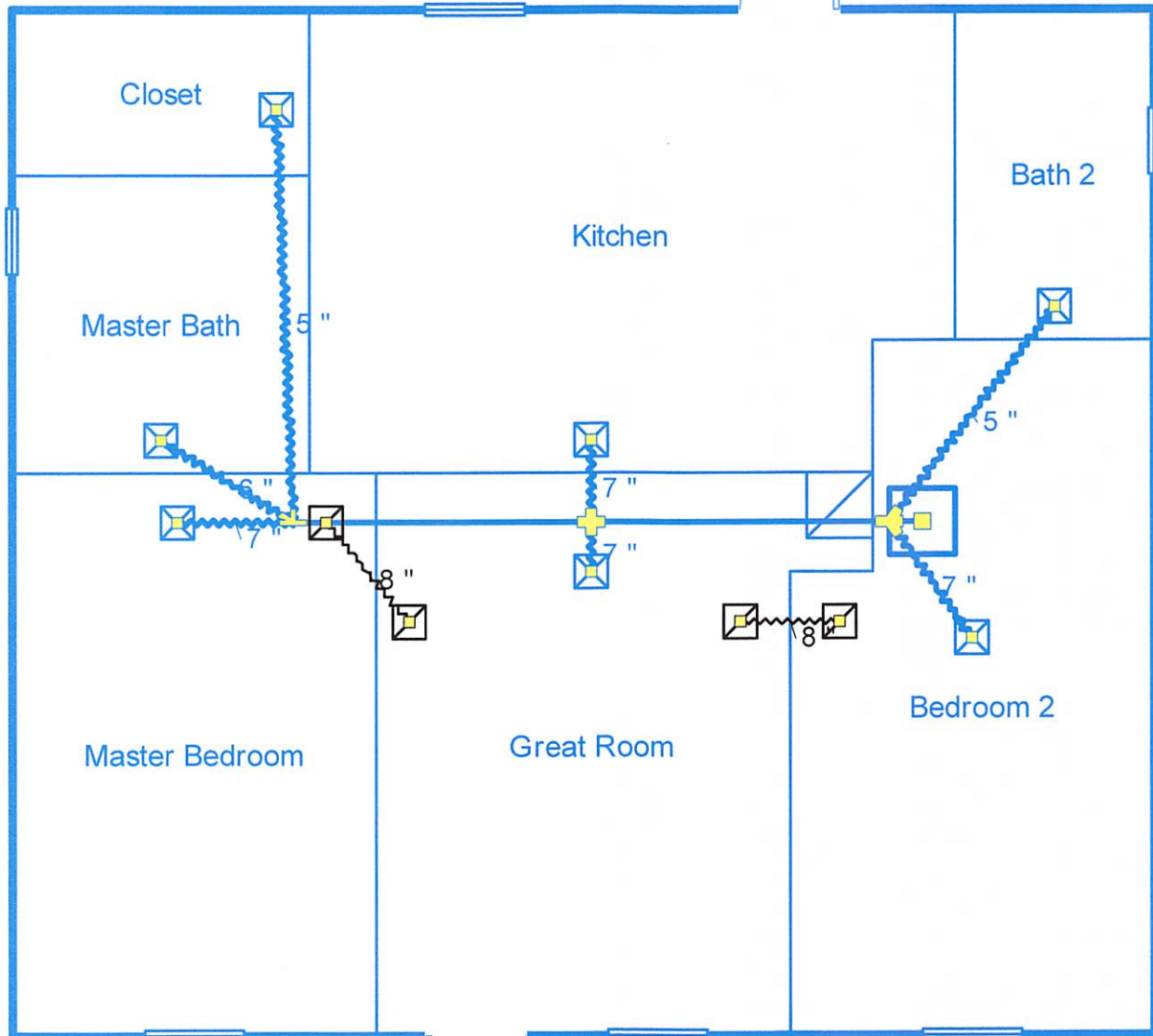
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Page 1



Level 2



A/C Register locations to be determined. Registers may be moved due to trusses, dead wood, lights, fire alarms, and etc..

Job #: Rodney Wade- Roach
Performed for:
Rodney Wade- Roach

Spann's Heating and Air INC.

16051 NW 30th Ave
Trenton, FL 32693
Phone: 3524636440
spann21@bellsouth.net

Scale: 1 : 65

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