


# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

## Florida Department of Community Affairs Residential Performance Method A

Project Name: Lilly Family Residence Street: City, State, Zip: , FL , Owner: Lilly Design Location: FL, Jacksonville	Builder Name: Richmond American Permit Office: Permit Number: Jurisdiction:
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Glass/Floor Area: 0.169	Total As-Built Modified Loads: 54.74	<b>PASS</b>
	Total Baseline Loads: 67.99	

<p>I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.</p> <p>PREPARED BY: _____                  DATE: _____</p> <p>I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.</p> <p>OWNER/AGENT: _____                  DATE: _____</p>	<p>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.</p> <div style="text-align: right;">  </div> <p>BUILDING OFFICIAL: _____                  DATE: _____</p>
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### PROJECT

Title: Lilly Family Residence	Bedrooms: 4	Address Type: Street Address
Building Type: FLAsBuilt	Conditioned Area: 3290	Lot #
Owner: Lilly	Total Stories: 2	SubDivision:
# of Units: 1	Worst Case: Yes	PlatBook:
Builder Name: Richmond American	Rotate Angle: 0	Street:
Permit Office:	Cross Ventilation:	County: Duval
Jurisdiction:	Whole House Fan:	City, State, Zip: ,
Family Type: Single-family		FI,
New/Existing: New (From Plans)		
Comment:		

### CLIMATE

✓	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	Summer	Heating Degree Days	Design Moisture	Daily Temp Range
✓	FL, Jacksonville	FL_JACKSONVILLE_INT	2	32	93	75	70	1281	49	Medium

### FLOORS

✓	#	Floor Type	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
✓	1	Slab-On-Grade Edge Insulatio	220 ft	0	1814 ft²		0	0.25	0.75
	2	Raised Floor			204 ft²	19	0	0.25	0.75

### ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	Tested	Deck Insul.	Pitch
✓	1	Hip	Composition shingles	2337 ft²	0 ft²	Medium	0.96	No	0	30.3 deg

### ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
✓	1	Full attic	Vented	300	2018 ft²	N	N

### CEILING

✓	#	Ceiling Type	R-Value	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	38	1272 ft²	0.11	Wood
	2	Under Attic (Vented)	38	746 ft²	0.11	Wood
	3	Knee Wall (Vented)	19	134 ft²	0.11	Wood

### WALLS

✓	#	Ornt	Adjacent To	Wall Type	Cavity R-Value	Area	Sheathing R-Value	Framing Fraction	Solar Absor.
✓	1	N	Exterior	Frame - Wood	13	170 ft²		0.23	0.75
	2	W	Exterior	Frame - Wood	13	220 ft²		0.23	0.75
	3	NW	Exterior	Frame - Wood	13	50 ft²		0.23	0.75
	4	W	Exterior	Frame - Wood	13	30 ft²		0.23	0.75
	5	NW	Exterior	Frame - Wood	13	42.5 ft²		0.23	0.75

### WALLS

✓	#	Ornt	Adjacent To	Wall Type	Cavity R-Value	Area	Sheathing R-Value	Framing Fraction	Solar Absor.
_____	6	N	Exterior	Frame - Wood	13	80 ft²		0.23	0.75
_____	7	NE	Exterior	Frame - Wood	13	42.5 ft²		0.23	0.75
_____	8	E	Exterior	Frame - Wood	13	742.5 ft²		0.23	0.75
_____	9	S	Garage	Frame - Wood	13	111.67 ft²		0.23	0.01
_____	10	W	Garage	Frame - Wood	13	19.17 ft²		0.23	0.01
_____	11	S	Garage	Frame - Wood	13	40 ft²		0.23	0.01
_____	12	SW	Garage	Frame - Wood	13	53.33 ft²		0.23	0.01
_____	13	SE	Garage	Frame - Wood	13	30 ft²		0.23	0.01
_____	14	SW	Exterior	Frame - Wood	13	70 ft²		0.23	0.75
_____	15	S	Exterior	Frame - Wood	13	80 ft²		0.23	0.75
_____	16	W	Exterior	Frame - Wood	13	380 ft²		0.23	0.75
_____	17	N	Exterior	Frame - Wood	13	315 ft²		0.23	0.75
_____	18	E	Exterior	Frame - Wood	13	432 ft²		0.23	0.75
_____	19	S	Garage	Frame - Wood	13	162 ft²		0.23	0.01
_____	20	S	Exterior	Frame - Wood	13	179.92 ft²		0.23	0.75
_____	21	W	Exterior	Frame - Wood	13	432 ft²		0.23	0.75

### DOORS

✓	#	Ornt	Door Type	Storms	U-Value	Area
_____	1	SW	Wood	None	0.460000	21.33333
_____	2	SW	Insulated	None	0.460000	42.66666

### WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

✓	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang		Int Shade	Screening
										Depth	Separation		
_____	1	N	Metal	Low-E Single	Yes	0.59	0.32	N	120 ft²	14 ft 0 in	2 ft 0 in	HERS 2006	None
_____	2	W	Metal	Low-E Single	Yes	0.59	0.32	N	48 ft²	17 ft 0 in	2 ft 0 in	HERS 2006	None
_____	3	NW	Metal	Low-E Single	Yes	0.59	0.32	N	24 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	4	N	Metal	Low-E Single	Yes	0.59	0.32	N	36 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	5	E	Metal	Low-E Single	Yes	0.59	0.32	N	9 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	6	E	Metal	Low-E Single	Yes	0.59	0.32	N	11 ft²	1 ft 0 in	10 ft 0 in	HERS 2006	None
_____	7	E	Metal	Low-E Single	Yes	0.59	0.32	N	22 ft²	1 ft 0 in	10 ft 0 in	HERS 2006	None
_____	8	E	Metal	Low-E Single	Yes	0.59	0.32	N	6 ft²	1 ft 0 in	14 ft 10 in	HERS 2006	None
_____	9	E	Metal	Low-E Single	Yes	0.59	0.32	N	36 ft²	1 ft 0 in	9 ft 0 in	HERS 2006	None
_____	10	S	Metal	Low-E Single	Yes	0.59	0.32	N	15 ft²	8 ft 0 in	11 ft 0 in	HERS 2006	None
_____	11	S	Metal	Low-E Single	Yes	0.59	0.32	N	4.5 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	12	W	Metal	Low-E Single	Yes	0.59	0.32	N	36 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	13	N	Metal	Low-E Single	Yes	0.59	0.32	N	60 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	14	E	Metal	Low-E Single	Yes	0.59	0.32	N	15 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	15	E	Metal	Low-E Single	Yes	0.59	0.32	N	8 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None

### WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

✓	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang		Int Shade	Screening
										Depth	Separation		
_____	16	E	Metal	Low-E Single	Yes	0.59	0.32	N	20 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	17	S	Metal	Low-E Single	Yes	0.59	0.32	N	18 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	18	S	Metal	Low-E Single	Yes	0.59	0.32	N	4.5 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	19	W	Metal	Low-E Single	Yes	0.59	0.32	N	36 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	20	W	Metal	Low-E Single	Yes	0.59	0.32	N	20 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	21	W	Metal	Low-E Single	Yes	0.59	0.32	N	8 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None

### INFILTRATION & VENTING

✓	Method	SLA	CFM 50	ACH 50	ELA	EqLA	---- Forced Ventilation ----		Run Time Fraction	Fan Watts
							Supply CFM	Exhaust CFM		
_____	Default	0.00036	3107	5.96	170.6	320.8	0 cfm	0 cfm	0	0

### GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	717.1 ft²	0 ft²	23 ft	10 ft	(invalid)

### COOLING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Ducts
_____	1	Central Unit	None	SEER: 15	36 kBtu/hr	1080 cfm	0.75	sys#1
_____	2	Central Unit	None	SEER: 15	24 kBtu/hr	720 cfm	0.75	sys#0

### HEATING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Ducts
_____	1	Electric Heat Pump	None	HSPF: 8	36 kBtu/hr	sys#1
_____	2	Electric Heat Pump	None	HSPF: 8	24 kBtu/hr	sys#0

### HOT WATER SYSTEM

✓	#	System Type	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	0.9	50 gal	70 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 ----			---- Return ----		Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF
		Location	R-Value	Area	Location	Area						
	1	Attic	6	658 ft²	Attic	164.5 ft	Default Leakage	Interior	(Default)	(Default) %		

### TEMPERATURES

Programable Thermostat: N						Ceiling Fans:							
Cooling	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec	
Heating	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec	
Venting	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec	
Thermostat Schedule: HERS 2006 Reference													
Schedule Type	Hours												
	1	2	3	4	5	6	7	8	9	10	11	12	
Cooling (WD)	AM 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78
Cooling (WEH)	AM 78	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 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68
Heating (WEH)	AM 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68	68 68

# Code Compliance Checklist

## Residential Whole Building Performance Method A - Details

ADDRESS:	PERMIT #:
, Fl,	

### INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	N1106.AB.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	N1106.AB.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	N1106.AB.1.2.2	Penetrations/openings > 1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	N1106.AB.1.2.3	Between walls & ceilings; penetrations of ceiling plane to top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	N1106.AB.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	N1106.AB.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	N1106.AB.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

### OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	N1112.AB.3	Comply with efficiency requirements in Table N112.ABC.3. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	N1112.AB.2.3	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.	
Shower heads	N1112.AB.2.4	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	N1110.AB	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated and installed in accordance with the criteria of Section N1110.AB. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	N1107.AB.2	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	N1104.AB.1 N1102.B.1.1	Ceilings-Min. R-19. Common walls-frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

# ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX\* = 81

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

, , Fl,

1. New construction or existing	New (From Plans)	9. Wall Types	Insulation	Area
2. Single family or multiple family	Single-family	a. Frame - Wood, Exterior	R=13.0	3266.40 ft <sup>2</sup>
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	416.17 ft <sup>2</sup>
4. Number of Bedrooms	4	c. N/A	R=	ft <sup>2</sup>
5. Is this a worst case?	Yes	d. N/A	R=	ft <sup>2</sup>
6. Conditioned floor area (ft <sup>2</sup> )	3290	10. Ceiling Types	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=38.0	2018.00 ft <sup>2</sup>
a. U-Factor:	Sgl, U=0.59	b. Knee Wall (Vented)	R=19.0	134.00 ft <sup>2</sup>
SHGC:	SHGC=0.32	c. N/A	R=	ft <sup>2</sup>
b. U-Factor:	N/A	11. Ducts		
SHGC:		a. Sup: Attic Ret: Attic AH: Interior Sup. R= 6, 658 ft <sup>2</sup>		
c. U-Factor:	N/A	12. Cooling systems (combined)		
SHGC:		a. Central Unit	Cap: 60.0 kBtu/hr	SEER: 15
d. U-Factor:	N/A	13. Heating systems (combined)		
SHGC:		a. Electric Heat Pump	Cap: 60.0 kBtu/hr	HSPF: 8
e. U-Factor:	N/A	14. Hot water systems		
SHGC:		a. Electric	Cap: 50 gallons	EF: 0.9
8. Floor Types	Insulation	Area		
a. Slab-On-Grade Edge Insulation	R=0.0	1814.00 ft <sup>2</sup>		
b. Raised Floor	R=19.0	204.00 ft <sup>2</sup>		
c. N/A	R=	ft <sup>2</sup>		
		b. Conservation features		
		None		
		15. Credits		None

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: The home's estimated Energy Performance Index is only available through the EnergyGauge USA - FlaRes2008 computer program. This is not a Building Energy Rating. If your Index is below 100, your home may qualify for incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at (321) 638-1492 or see the Energy Gauge web site at energygauge.com for information and a list of certified Raters. For information about Florida's Energy Efficiency Code for Building Construction, contact the Department of Community Affairs at (850) 487-1824.

\*\*Label required by Section 13-104.4.5 of the Florida Building Code, Building, or Section B2.1.1 of Appendix G of the Florida Building Code, Residential, if not DEFAULT.

# Project Summary

## Entire House

A/C Designs of St. Augustine Inc.

Job: Lilly Family Residence  
 Date: Sep 22, 2009  
 By:

### Project Information

For: Lilly  
 FI

Notes: Custom Home

### Design Information

Weather: Jacksonville, Cecil Field NAS, FL, US

#### Winter Design Conditions

Outside db 34 °F  
 Inside db 70 °F  
 Design TD 36 °F

#### Summer Design Conditions

Outside db 95 °F  
 Inside db 75 °F  
 Design TD 20 °F  
 Daily range M  
 Relative humidity 50 %  
 Moisture difference 40 gr/lb

#### Heating Summary

Structure 44901 Btuh  
 Ducts 4860 Btuh  
 Central vent (112 cfm) 0 Btuh  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 49761 Btuh

#### Sensible Cooling Equipment Load Sizing

Structure 34472 Btuh  
 Ducts 5433 Btuh  
 Central vent (112 cfm) 0 Btuh  
 Blower 0 Btuh  
 Use manufacturer's data n  
 Rate/swing multiplier 1.00  
 Equipment sensible load 39905 Btuh

#### Infiltration

Method Simplified  
 Construction quality Average  
 Fireplaces 0

	Heating	Cooling
Area (ft <sup>2</sup> )	3290	3290
Volume (ft <sup>3</sup> )	31628	31628
Air changes/hour	0.28	0.15
Equiv. AVF (cfm)	148	79

#### Latent Cooling Equipment Load Sizing

Structure 2556 Btuh  
 Ducts 935 Btuh  
 Central vent (112 cfm) 0 Btuh  
 Equipment latent load 3492 Btuh  
 Equipment total load 43397 Btuh  
 Req. total capacity at 0.70 SHR 4.8 ton

#### Heating Equipment Summary

Make n/a  
 Trade n/a  
 Model n/a  
 Efficiency n/a  
 Heating input  
 Heating output 0 Btuh  
 Temperature rise 0 °F  
 Actual air flow 0 cfm  
 Air flow factor 0.000 cfm/Btuh  
 Static pressure 0.00 in H2O  
 Space thermostat n/a

#### Cooling Equipment Summary

Make n/a  
 Trade n/a  
 Cond n/a  
 Coil n/a  
 Efficiency n/a  
 Sensible cooling 0 Btuh  
 Latent cooling 0 Btuh  
 Total cooling 0 Btuh  
 Actual air flow 0 cfm  
 Air flow factor 0.000 cfm/Btuh  
 Static pressure 0.00 in H2O  
 Load sensible heat ratio 0.00

Printout certified by ACCA to meet all requirements of Manual J 8th Ed.





**Project Summary**  
**Master Bdrm Zone**  
 A/C Designs of St. Augustine Inc.

Job: Lilly Family Residence  
 Date: Sep 22, 2009  
 By:

**Project Information**

For: Lilly  
 FI

Notes: Custom Home

**Design Information**

Weather: Jacksonville, Cecil Field NAS, FL, US

**Winter Design Conditions**

Outside db 34 °F  
 Inside db 70 °F  
 Design TD 36 °F

**Summer Design Conditions**

Outside db 95 °F  
 Inside db 75 °F  
 Design TD 20 °F  
 Daily range M  
 Relative humidity 50 %  
 Moisture difference 40 gr/lb

**Heating Summary**

Structure 11382 Btuh  
 Ducts 1108 Btuh  
 Central vent (29 cfm) 1139 Btuh  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 13629 Btuh

**Sensible Cooling Equipment Load Sizing**

Structure 10504 Btuh  
 Ducts 1166 Btuh  
 Central vent (29 cfm) 633 Btuh  
 Blower 0 Btuh  
 Use manufacturer's data n  
 Rate/swing multiplier 1.00  
 Equipment sensible load 12303 Btuh

**Infiltration**

Method Simplified  
 Construction quality Average  
 Fireplaces 0

	Heating	Cooling
Area (ft²)	747	747
Volume (ft³)	7470	7470
Air changes/hour	0.32	0.17
Equiv. AVF (cfm)	40	21

**Latent Cooling Equipment Load Sizing**

Structure 979 Btuh  
 Ducts 193 Btuh  
 Central vent (29 cfm) 785 Btuh  
 Equipment latent load 1957 Btuh  
 Equipment total load 14260 Btuh  
 Req. total capacity at 0.75 SHR 1.4 ton

**Heating Equipment Summary**

Make Goodman Mfg.  
 Trade GOODMAN, JANITROL, AMANA DISTINCTIONS,  
 Model SSZ140181A\*

Efficiency 8.5 HSPF  
 Heating input  
 Heating output 18000 Btuh @ 47°F  
 Temperature rise 26 °F  
 Actual air flow 633 cfm  
 Air flow factor 0.051 cfm/Btuh  
 Static pressure 0.00 in H2O  
 Space thermostat

**Cooling Equipment Summary**

Make Goodman Mfg.  
 Trade GOODMAN, JANITROL, AMANA DISTINCTIONS,  
 Model SSZ140181A\*  
 Cond SSZ140181A\*  
 Coil AEPF183016C\*\*\*TXV

Efficiency 15 SEER  
 Sensible cooling 14250 Btuh  
 Latent cooling 4750 Btuh  
 Total cooling 19000 Btuh  
 Actual air flow 633 cfm  
 Air flow factor 0.054 cfm/Btuh  
 Static pressure 0.00 in H2O  
 Load sensible heat ratio 0.86

Printout certified by ACCA to meet all requirements of Manual J 8th Ed.



# Project Summary Down & Upstairs A/C Designs of St. Augustine Inc.

Job: Lilly Family Residence  
Date: Sep 22, 2009  
By:

## Project Information

For: Lilly  
FI

Notes: Custom Home

## Design Information

Weather: Jacksonville, Cecil Field NAS, FL, US

### Winter Design Conditions

Outside db 34 °F  
Inside db 70 °F  
Design TD 36 °F

### Summer Design Conditions

Outside db 95 °F  
Inside db 75 °F  
Design TD 20 °F  
Daily range M  
Relative humidity 50 %  
Moisture difference 40 gr/lb

### Heating Summary

Structure 33519 Btuh  
Ducts 3752 Btuh  
Central vent (83 cfm) 3290 Btuh  
Humidification 0 Btuh  
Piping 0 Btuh  
Equipment load 40561 Btuh

### Sensible Cooling Equipment Load Sizing

Structure 24428 Btuh  
Ducts 4339 Btuh  
Central vent (83 cfm) 1828 Btuh  
Blower 0 Btuh  
Use manufacturer's data n  
Rate/swing multiplier 1.00  
Equipment sensible load 30595 Btuh

### Infiltration

Method	Simplified	
Construction quality	Average	
Fireplaces	0	
	<b>Heating</b>	<b>Cooling</b>
Area (ft²)	2543	2543
Volume (ft³)	24158	24158
Air changes/hour	0.27	0.14
Equiv. AVF (cfm)	108	58

### Latent Cooling Equipment Load Sizing

Structure 1577 Btuh  
Ducts 742 Btuh  
Central vent (83 cfm) 2266 Btuh  
Equipment latent load 4585 Btuh  
Equipment total load 35180 Btuh  
Req. total capacity at 0.75 SHR 3.4 ton

### Heating Equipment Summary

Make Goodman Mfg.  
Trade GOODMAN, JANITROL, AMANA DISTINCTIONS,  
Model SSZ140361A\*  
Efficiency 9 HSPF  
Heating input  
Heating output 34600 Btuh @ 47°F  
Temperature rise 26 °F  
Actual air flow 1200 cfm  
Air flow factor 0.032 cfm/Btuh  
Static pressure 0.00 in H2O  
Space thermostat

### Cooling Equipment Summary

Make Goodman Mfg.  
Trade GOODMAN, JANITROL, AMANA DISTINCTIONS,  
Model SSZ140361A\*  
Coil AEPF313716A+++TXV  
Efficiency 15 SEER  
Sensible cooling 27000 Btuh  
Latent cooling 9000 Btuh  
Total cooling 36000 Btuh  
Actual air flow 1200 cfm  
Air flow factor 0.042 cfm/Btuh  
Static pressure 0.00 in H2O  
Load sensible heat ratio 0.87

Printout certified by ACCA to meet all requirements of Manual J 8th Ed.

# Right-J Worksheet Entire House

A/C Designs of St. Augustine Inc.

**Job:** Lilly Family Residence  
**Date:** Sep 22, 2009  
**By:**

1 Room name				Entire House 220.0 ft				Master Bdrm Zone 76.0 ft						
2 Exposed wall				9.6 ft				10.0 ft						
3 Ceiling height				3290.0 ft²				747.0 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	3.28	2.41	170	50	164	121	0	0	0	0
	└─G	61B	0.740	n	26.64	21.65	120	0	3197	2598	0	0	0	0
	W	12C-0sw	0.091	n	3.28	2.41	80	56	183	135	80	56	183	135
	└─G	61A	0.740	n	26.64	21.65	24	0	639	520	24	0	639	520
11	W	12C-0sw	0.091	n	3.28	2.41	315	255	835	615	0	0	0	0
	└─G	61A	0.740	n	26.64	21.65	60	0	1598	1299	0	0	0	0
	W	12C-0sw	0.091	ne	3.28	2.41	43	43	139	102	43	43	139	102
	└─G	61A	0.740	e	26.64	21.65	743	659	2157	1588	412	370	1212	892
	└─G	61A	0.740	e	26.64	46.46	9	0	240	418	9	0	240	418
	└─G	61A	0.740	e	26.64	46.46	11	0	293	511	11	0	293	511
	└─G	61A	0.740	e	26.64	46.46	22	0	586	1022	22	0	586	1022
	└─G	61A	0.740	e	26.64	46.46	6	0	160	279	0	0	0	0
	└─G	61A	0.740	e	26.64	46.46	36	0	959	1672	0	0	0	0
	W	12C-0sw	0.091	e	3.28	2.41	432	389	1274	938	0	0	0	0
	└─G	61A	0.740	e	26.64	46.46	15	0	400	697	0	0	0	0
	└─G	61A	0.740	e	26.64	46.46	8	0	213	372	0	0	0	0
	└─G	61A	0.740	e	26.64	46.46	20	0	533	929	0	0	0	0
	W	12C-0sw	0.091	s	3.28	2.41	80	61	198	146	0	0	0	0
	└─G	61A	0.740	s	26.64	21.65	15	15	400	325	0	0	0	0
	└─G	61A	0.740	s	26.64	21.65	5	5	120	97	0	0	0	0
	W	12C-0sw	0.091	s	3.28	2.41	180	157	516	380	0	0	0	0
	└─G	61A	0.740	s	26.64	22.30	18	13	480	401	0	0	0	0
	└─G	61A	0.740	s	26.64	21.65	5	5	120	97	0	0	0	0
	W	12C-0sw	0.091	sw	3.28	2.41	70	27	90	66	0	0	0	0
	└─D	11J0	0.600	sw	21.60	18.90	43	43	921	806	0	0	0	0
	W	12C-0sw	0.091	w	3.28	2.41	220	172	563	415	220	172	563	415
	└─G	61C	0.740	w	26.64	21.65	48	48	1279	1039	48	48	1279	1039
	W	12C-0sw	0.091	w	3.28	2.41	30	30	98	72	30	30	98	72
	W	12C-0sw	0.091	w	3.28	2.41	380	344	1127	830	0	0	0	0
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672	0	0	0	0
	W	12C-0sw	0.091	w	3.28	2.41	432	368	1206	887	0	0	0	0
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672	0	0	0	0
	└─G	61A	0.740	w	26.64	46.46	20	0	533	929	0	0	0	0
	└─G	61A	0.740	w	26.64	46.46	8	0	213	372	0	0	0	0
	W	12C-0sw	0.091	nw	3.28	2.41	50	26	85	63	50	26	85	63
	└─G	61A	0.740	nw	26.64	36.90	24	0	639	886	24	0	639	886
	W	12C-0sw	0.091	nw	3.28	2.41	43	43	139	102	43	43	139	102
	P	12C-0sw	0.091	-	3.28	1.51	112	112	366	169	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	19	19	63	29	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	40	40	131	60	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	53	32	105	48	0	0	0	0
	└─D	11D0	0.390	n	14.04	12.28	21	21	299	262	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	30	30	98	45	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	162	162	531	245	0	0	0	0
	C	16B-38ad	0.026	-	0.94	1.43	2018	2018	1889	2886	0	0	0	0
	C	16B-19ad	0.049	-	1.76	2.69	134	134	236	361	0	0	0	0
	F	22A-tph	1.358	-	48.89	0.00	3290	220	10755	0	747	76	3715	0
	F	20P-19t	0.050	-	1.80	0.75	204	0	367	153	0	0	0	0
6	c) AED excursion												459	
	Envelope loss/gain								39056		29333		9813 6637	
12	a) Infiltration								5845		1740		1569 467	
	b) Room ventilation								0		0		0 0	
13	Internal gains:		Occupants @ 500		2				1000		2		1000	
			Appliances @ 1200		2				2400		2		2400	
	Subtotal (lines 6 to 13)								44901		34472		11382 10504	
	Less external load								0		0		0 0	
	Less transfer								0		0		0 0	
	Redistribution								0		0		0 0	
	Subtotal								44901		34472		11382 10504	
14	Duct loads						11%		16%		10%		11% 1108 1166	
	Total room load								49761		39905		12490 11670	
	Air required (cfm)								1833		1833		633 633	



# Right-J Worksheet Entire House

A/C Designs of St. Augustine Inc.

**Job:** Lilly Family Residence  
**Date:** Sep 22, 2009  
**By:**

						Down & Upstairs 144.0 ft									
						9.5 ft									
						2543.0 ft²									
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.28	2.41	170	50	164	121					
	└─G	61B	0.740	n	26.64	21.65	120	0	3197	2598					
	W	12C-0sw	0.091	n	3.28	2.41	0	0	0	0					
	└─G	61A	0.740	n	26.64	21.65	0	0	0	0					
11	W	12C-0sw	0.091	n	3.28	2.41	315	255	835	615					
	└─G	61A	0.740	n	26.64	21.65	60	0	1598	1299					
	W	12C-0sw	0.091	ne	3.28	2.41	0	0	0	0					
	W	12C-0sw	0.091	e	3.28	2.41	331	289	945	696					
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0					
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0					
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0					
	└─G	61A	0.740	e	26.64	46.46	6	0	160	279					
	└─G	61A	0.740	e	26.64	46.46	36	0	959	1672					
	W	12C-0sw	0.091	e	3.28	2.41	432	389	1274	938					
	└─G	61A	0.740	e	26.64	46.46	15	0	400	697					
	└─G	61A	0.740	e	26.64	46.46	8	0	213	372					
	└─G	61A	0.740	e	26.64	46.46	20	0	533	929					
	W	12C-0sw	0.091	s	3.28	2.41	80	61	198	146					
	└─G	61A	0.740	s	26.64	21.65	15	15	400	325					
	└─G	61A	0.740	s	26.64	21.65	5	5	120	97					
	W	12C-0sw	0.091	s	3.28	2.41	180	157	516	380					
	└─G	61A	0.740	s	26.64	22.30	18	13	480	401					
	└─G	61A	0.740	s	26.64	21.65	5	5	120	97					
	W	12C-0sw	0.091	sw	3.28	2.41	70	27	90	66					
	└─D	11J0	0.600	sw	21.60	18.90	43	43	921	806					
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0					
	└─G	61C	0.740	w	26.64	21.65	0	0	0	0					
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0					
	W	12C-0sw	0.091	w	3.28	2.41	380	344	1127	830					
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672					
	W	12C-0sw	0.091	w	3.28	2.41	432	368	1206	887					
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672					
	└─G	61A	0.740	w	26.64	46.46	20	0	533	929					
	└─G	61A	0.740	w	26.64	46.46	8	0	213	372					
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0					
	└─G	61A	0.740	nw	26.64	36.90	0	0	0	0					
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0					
	P	12C-0sw	0.091	-	3.28	1.51	112	112	366	169					
	P	12C-0sw	0.091	-	3.28	1.51	19	19	63	29					
	P	12C-0sw	0.091	-	3.28	1.51	40	40	131	60					
	P	12C-0sw	0.091	-	3.28	1.51	53	32	105	48					
	└─D	11D0	0.390	n	14.04	12.28	21	21	299	262					
	P	12C-0sw	0.091	-	3.28	1.51	30	30	98	45					
	P	12C-0sw	0.091	-	3.28	1.51	162	162	531	245					
	C	16B-38ad	0.026	-	0.94	1.43	2018	2018	1889	2886					
	C	16B-19ad	0.049	-	1.76	2.69	134	134	236	361					
	F	22A-tph	1.358	-	48.89	0.00	2543	144	7040	0					
	F	20P-19t	0.050	-	1.80	0.75	204	0	367	153					
6	c) AED excursion														
	Envelope loss/gain														
											29244	23155			
12	a) Infiltration										4276	1272			
	b) Room ventilation										0	0			
13	Internal gains:		Occupants @	500		0				0					
			Appliances @	1200		0				0					
	Subtotal (lines 6 to 13)										33519	24428			
	Less external load										0	0			
	Less transfer										0	0			
	Redistribution										0	0			
	Subtotal										33519	24428			
14	Duct loads										11%	18%	3752	4339	
	Total room load										37271	28767			
	Air required (cfm)										1200	1200			

# Right-J Worksheet Master Bdrm Zone

A/C Designs of St. Augustine Inc.

Job: Lilly Family Residence

Date: Sep 22, 2009

By:

1		Room name		Master Bdrm Zone					Master Bedroom					
2		Exposed wall		76.0 ft					76.0 ft					
3		Ceiling height		10.0 ft					10.0 ft heat/cool					
4		Room dimensions		747.0 ft <sup>2</sup>					747.0 x 1.0 ft					
5		Room area		747.0 ft <sup>2</sup>					747.0 ft <sup>2</sup>					
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> ·°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area (ft <sup>2</sup> ) 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	3.28	2.41	0	0	0	0	0	0	0	0
	G	61B	0.740	n	26.64	21.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	3.28	2.41	80	56	183	135	80	56	183	135
	G	61A	0.740	n	26.64	21.65	24	0	639	520	24	0	639	520
11	W	12C-0sw	0.091	n	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	n	26.64	21.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	ne	3.28	2.41	43	43	139	102	43	43	139	102
	W	12C-0sw	0.091	e	3.28	2.41	412	370	1212	892	412	370	1212	892
	G	61A	0.740	e	26.64	46.46	9	0	240	418	9	0	240	418
	G	61A	0.740	e	26.64	46.46	11	0	293	511	11	0	293	511
	G	61A	0.740	e	26.64	46.46	22	0	586	1022	22	0	586	1022
	G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0
	G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0
	G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0
	G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	s	26.64	24.09	0	0	0	0	0	0	0	0
	G	61A	0.740	s	26.64	24.09	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	s	26.64	24.09	0	0	0	0	0	0	0	0
	G	61A	0.740	s	26.64	24.09	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	sw	3.28	2.41	0	0	0	0	0	0	0	0
	D	11J0	0.600	sw	21.60	18.90	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.28	2.41	220	172	563	415	220	172	563	415
	G	61C	0.740	w	26.64	46.46	48	48	1279	1039	48	48	1279	1039
	W	12C-0sw	0.091	w	3.28	2.41	30	30	98	72	30	30	98	72
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	w	26.64	46.46	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0	0	0	0	0
	G	61A	0.740	w	26.64	46.46	0	0	0	0	0	0	0	0
	G	61A	0.740	w	26.64	46.46	0	0	0	0	0	0	0	0
	G	61A	0.740	w	26.64	46.46	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.28	2.41	50	26	85	63	50	26	85	63
	G	61A	0.740	nw	26.64	36.90	24	0	639	886	24	0	639	886
	W	12C-0sw	0.091	nw	3.28	2.41	43	43	139	102	43	43	139	102
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	14.04	12.28	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.94	1.43	0	0	0	0	0	0	0	0
	C	16B-19ad	0.049	-	1.76	2.69	0	0	0	0	0	0	0	0
	F	22A-tph	1.358	-	48.89	0.00	747	76	3715	0	747	76	3715	0
	F	20P-19t	0.050	-	1.80	0.75	0	0	0	0	0	0	0	0
6	c) AED excursion									459			459	
	Envelope loss/gain								9813	6637			9813	6637
12	a) Infiltration								1569	467			1569	467
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	500	2				1000	2			1000	2
			Appliances @	1200	2				2400	2			2400	2
	Subtotal (lines 6 to 13)								11382	10504			11382	10504
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
	Subtotal								11382	10504			11382	10504
14	Duct loads						10%	11%	1108	1166			1108	1166
	Total room load								12490	11670			12490	11670
	Air required (cfm)								633	633			633	633



# Right-J Worksheet Down & Upstairs

A/C Designs of St. Augustine Inc.

**Job:** Lilly Family Residence  
**Date:** Sep 22, 2009  
**By:**

1 Room name				Down & Upstairs 144.0 ft				Living 144.0 ft 10.0 ft heat/cool 1271.0 x 1.0 ft 1271.0 ft²								
2 Exposed wall				9.5 ft												
3 Ceiling height				2543.0 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	3.28	2.41	170	50	164	121	170	50	164	121		
	└─G	61B	0.740	n	26.64	21.65	120	0	3197	2598	120	0	3197	2598		
	W	12C-0sw	0.091	n	3.28	2.41	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	n	26.64	21.65	0	0	0	0	0	0	0	0		
11	W	12C-0sw	0.091	n	3.28	2.41	315	255	835	615	0	0	0	0		
	└─G	61A	0.740	n	26.64	21.65	60	0	1598	1299	0	0	0	0		
	W	12C-0sw	0.091	ne	3.28	2.41	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	e	26.64	21.65	331	289	945	696	331	289	945	696		
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	6	0	160	279	6	0	160	279		
	└─G	61A	0.740	e	26.64	46.46	36	0	959	1672	36	0	959	1672		
	W	12C-0sw	0.091	e	3.28	2.41	432	389	1274	938	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	15	0	400	697	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	8	0	213	372	0	0	0	0		
	└─G	61A	0.740	e	26.64	46.46	20	0	533	929	0	0	0	0		
	W	12C-0sw	0.091	s	3.28	2.41	80	61	198	146	80	61	198	146		
	└─G	61A	0.740	s	26.64	24.09	15	15	400	325	15	15	400	325		
	└─G	61A	0.740	s	26.64	24.09	5	5	120	97	5	5	120	97		
	W	12C-0sw	0.091	s	3.28	2.41	180	157	516	380	0	0	0	0		
	└─G	61A	0.740	s	26.64	24.09	18	13	480	401	0	0	0	0		
	└─G	61A	0.740	s	26.64	24.09	5	5	120	97	0	0	0	0		
	W	12C-0sw	0.091	sw	3.28	2.41	70	27	90	66	70	27	90	66		
	└─D	11J0	0.600	sw	21.60	18.90	43	43	921	806	43	43	921	806		
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0	0	0	0	0		
	└─G	61C	0.740	w	26.64	46.46	0	0	0	0	0	0	0	0		
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0	0	0	0	0		
	W	12C-0sw	0.091	w	3.28	2.41	380	344	1127	830	380	344	1127	830		
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672	36	0	959	1672		
	W	12C-0sw	0.091	w	3.28	2.41	432	368	1206	887	0	0	0	0		
	└─G	61A	0.740	w	26.64	46.46	36	0	959	1672	0	0	0	0		
	└─G	61A	0.740	w	26.64	46.46	20	0	533	929	0	0	0	0		
	└─G	61A	0.740	w	26.64	46.46	8	0	213	372	0	0	0	0		
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0	0	0	0	0		
	└─G	61A	0.740	nw	26.64	36.90	0	0	0	0	0	0	0	0		
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0	0	0	0	0		
	P	12C-0sw	0.091	-	3.28	1.51	112	112	366	169	112	112	366	169		
	P	12C-0sw	0.091	-	3.28	1.51	19	19	63	29	19	19	63	29		
	P	12C-0sw	0.091	-	3.28	1.51	40	40	131	60	40	40	131	60		
	P	12C-0sw	0.091	-	3.28	1.51	53	32	105	48	53	32	105	48		
	└─D	11D0	0.390	n	14.04	12.28	21	21	299	262	21	21	299	262		
	P	12C-0sw	0.091	-	3.28	1.51	30	30	98	45	30	30	98	45		
	P	12C-0sw	0.091	-	3.28	1.51	162	162	531	245	0	0	0	0		
	C	16B-38ad	0.026	-	0.94	1.43	2018	2018	1889	2886	746	746	698	1067		
	C	16B-19ad	0.049	-	1.76	2.69	134	134	236	361	134	134	236	361		
	F	22A-tph	1.358	-	48.89	0.00	2543	144	7040	0	1271	144	7040	0		
	F	20P-19t	0.050	-	1.80	0.75	204	0	367	153	204	0	367	153		
6	c) AED excursion												0	0		
	Envelope loss/gain												29244	23155	18643	11503
12	a) Infiltration												4276	1272	1844	549
	b) Room ventilation												0	0	0	0
13	Internal gains:		Occupants @	500	0	0	0	0	0	0	0	0	0	0		
			Appliances @	1200	0	0	0	0	0	0	0	0	0	0		
	Subtotal (lines 6 to 13)												33519	24428	20487	12051
	Less external load												0	0	0	0
	Less transfer												0	0	0	0
	Redistribution												0	0	0	0
	Subtotal												33519	24428	20487	12051
14	Duct loads												11%	18%	11%	16%
	Total room load												37271	28767	22708	13924
	Air required (cfm)												1200	1200	731	581





# Right-J Worksheet Down & Upstairs

A/C Designs of St. Augustine Inc.

**Job:** Lilly Family Residence  
**Date:** Sep 22, 2009  
**By:**

1 Room name		Bedrooms												
2 Exposed wall		0.0 ft												
3 Ceiling height		9.0 ft heat/cool												
4 Room dimensions		1272.0 x 1.0 ft												
5 Room area		1272.0 ft <sup>2</sup>												
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> ·°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.28	2.41	0	0	0	0				
	G	61B	0.740	n	26.64	21.65	0	0	0	0				
	W	12C-0sw	0.091	n	3.28	2.41	0	0	0	0				
	G	61A	0.740	n	26.64	21.65	0	0	0	0				
11	W	12C-0sw	0.091	n	3.28	2.41	315	255	835	615				
	G	61A	0.740	n	26.64	21.65	60	0	1598	1299				
	W	12C-0sw	0.091	ne	3.28	2.41	0	0	0	0				
	W	12C-0sw	0.091	e	3.28	2.41	0	0	0	0				
	G	61A	0.740	e	26.64	46.46	0	0	0	0				
	G	61A	0.740	e	26.64	46.46	0	0	0	0				
	G	61A	0.740	e	26.64	46.46	0	0	0	0				
	G	61A	0.740	e	26.64	46.46	0	0	0	0				
	G	61A	0.740	e	26.64	46.46	0	0	0	0				
	W	12C-0sw	0.091	e	3.28	2.41	432	389	1274	938				
	G	61A	0.740	e	26.64	46.46	15	0	400	697				
	G	61A	0.740	e	26.64	46.46	8	0	213	372				
	G	61A	0.740	e	26.64	46.46	20	0	533	929				
	W	12C-0sw	0.091	s	3.28	2.41	0	0	0	0				
	G	61A	0.740	s	26.64	24.09	0	0	0	0				
	G	61A	0.740	s	26.64	24.09	0	0	0	0				
	W	12C-0sw	0.091	s	3.28	2.41	180	157	516	380				
	G	61A	0.740	s	26.64	24.09	18	13	480	401				
	G	61A	0.740	s	26.64	24.09	5	5	120	97				
	W	12C-0sw	0.091	sw	3.28	2.41	0	0	0	0				
	D	11J0	0.600	sw	21.60	18.90	0	0	0	0				
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0				
	G	61C	0.740	w	26.64	46.46	0	0	0	0				
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0				
	W	12C-0sw	0.091	w	3.28	2.41	0	0	0	0				
	G	61A	0.740	w	26.64	46.46	0	0	0	0				
	W	12C-0sw	0.091	w	3.28	2.41	432	368	1206	887				
	G	61A	0.740	w	26.64	46.46	36	0	959	1672				
	G	61A	0.740	w	26.64	46.46	20	0	533	929				
	G	61A	0.740	w	26.64	46.46	8	0	213	372				
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0				
	G	61A	0.740	nw	26.64	36.90	0	0	0	0				
	W	12C-0sw	0.091	nw	3.28	2.41	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0				
	D	11D0	0.390	n	14.04	12.28	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	0	0	0	0				
	P	12C-0sw	0.091	-	3.28	1.51	162	162	531	245				
	C	16B-38ad	0.026	-	0.94	1.43	1272	1272	1191	1819				
	C	16B-19ad	0.049	-	1.76	2.69	0	0	0	0				
	F	22A-tph	1.358	-	48.89	0.00	1272	0	0	0				
	F	20P-19t	0.050	-	1.80	0.75	0	0	0	0				
6	c) AED excursion									0				
	Envelope loss/gain								10601	11653				
12	a) Infiltration								2432	724				
	b) Room ventilation								0	0				
13	Internal gains:		Occupants @	500						0				
			Appliances @	1200						0				
	Subtotal (lines 6 to 13)								13032	12376				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
	Subtotal								13032	12376				
14	Duct loads						12%	20%	1531	2467				
	Total room load								14563	14843				
	Air required (cfm)								469	619				

