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FORM 405-10


FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

| | |
|---|---|
| <p>Project Name: 1206092 Street: 267 SW Watson St. City, State, Zip: Ft White , fl , 32038- Owner: Robert Jolley Design Location: FL, Gainesville</p> | <p>Builder Name: SLK Construction Permit Office: <i>Columbia</i> Permit Number: <i>30306</i> Jurisdiction: <i>221000</i></p> |
|---|---|

| | |
|---|---|
| <p>1. New construction or existing Addition 2. Single family or multiple family Single-family 3. Number of units, if multiple family 1 4. Number of Bedrooms(Bedrms In Addition) 0(0) 5. Is this a worst case? No 6. Conditioned floor area above grade (ft²) 360 Conditioned floor area below grade (ft²) 0 7. Window(48.0 sqft.) Description Area a. U-Factor: Dbl, U=0.50 48.00 ft² SHGC: SHGC=0.50 b. U-Factor: N/A ft² SHGC: c. U-Factor: N/A ft² SHGC: d. U-Factor: N/A ft² SHGC: Area Weighted Average Overhang Depth: 1.250 ft. Area Weighted Average SHGC: 0.500 8. Floor Types (360.0 sqft.) Insulation Area a. Crawlspace R=19.0 360.00 ft² b. N/A R= ft² c. N/A R= ft²</p> | <p>9. Wall Types (432.0 sqft.) Insulation Area a. Frame - Wood, Exterior R=13.0 432.00 ft² b. N/A R= ft² c. N/A R= ft² d. N/A R= ft² 10. Ceiling Types (360.0 sqft.) Insulation Area a. Under Attic (Vented) R=30.0 360.00 ft² b. N/A R= ft² c. N/A R= ft² 11. Ducts R ft² a. Sup: Exterior, Ret: Exterior, AH: Exterior 6 72 12. Cooling systems kBtu/hr Efficiency a. PTACand Room Unit 10.0 EER:13.00 13. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 10.0 HSPF:7.70 14. Hot water systems- None required a. Cap: N/A EF: 0.000 b. Conservation features 15. Credits Pstat</p> |
|---|---|

| | | |
|-------------------------|---------------------------------------|------|
| Glass/Floor Area: 0.133 | Total Proposed Modified Loads: 8.65 | PASS |
| | Total Standard Reference Loads: 10.81 | |

| | |
|--|---|
| <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: <u>EVAN BEAMSELEY</u> DATE: <u>6/25/12</u></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: center;">  </div> <p>BUILDING OFFICIAL: _____ DATE: _____</p> |
|--|---|

- Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist

PROJECT

| | | | | | |
|----------------|------------------|--------------------|-----|--------------------|---------------------------|
| Title: | 1206092 | Bedrooms: | 0 | Address Type: | Street Address |
| Building Type: | FLProp2010 | Conditioned Area: | 360 | Lot # | |
| Owner: | Robert Jolley | Total Stories: | 1 | Block/SubDivision: | |
| # of Units: | 1 | Worst Case: | No | PlatBook: | |
| Builder Name: | SLK Construction | Rotate Angle: | 0 | Street: | 267 SW Watson St. |
| Permit Office: | | Cross Ventilation: | | County: | Columbia |
| Jurisdiction: | | Whole House Fan: | | City, State, Zip: | Ft White , fl , 32038- |
| Family Type: | Single-family | | | | |
| New/Existing: | Addition | | | | |
| Comment: | | | | | |

CLIMATE

| ✓ | Design Location | TMY Site | IECC Zone | Design Temp 97.5 % | Design Temp 2.5 % | Int Design Temp Winter | Int Design Temp Summer | Heating Degree Days | Design Moisture | Daily Temp Range |
|-------|-----------------|----------------------|-----------|-----------------------|----------------------|---------------------------|---------------------------|------------------------|--------------------|---------------------|
| _____ | FL, Gainesville | FL_GAINESVILLE_REGIO | 2 | 32 | 92 | 70 | 75 | 1305.5 | 51 | Medium |

BLOCKS

| Number | Name | Area | Volume |
|--------|--------|------|--------|
| 1 | Block1 | 360 | 2880 |

SPACES

| Number | Name | Area | Volume | Kitchen | Occupants | Bedrooms | Infil ID | Finished | Cooled | Heated |
|--------|---------------|------|--------|---------|-----------|----------|----------|----------|--------|--------|
| 1 | RoomsInBlock1 | 360 | 2880 | No | 0 | 0 | 1 | Yes | Yes | Yes |

FLOORS

| ✓ | # | Floor Type | Space | Exposed PeriWall | Ins. R-Value | Area | Floor Joist R-Value | Tile | Wood | Carpet |
|-------|---|------------|---------------|------------------|--------------|---------|---------------------|------|------|--------|
| _____ | 1 | CrawlSpace | RoomsInBlock1 | 54 ft | 0 | 360 ft² | 19 | 0 | 0 | 1 |

ROOF

| ✓ | # | Type | Materials | Roof Area | Gable Area | Roof Color | Solar Absor. | SA Tested | Emitt | Emitt Tested | Deck Insul. | Pitch (deg) |
|-------|---|---------------|----------------------|-----------|------------|------------|--------------|-----------|-------|--------------|-------------|-------------|
| _____ | 1 | Gable or shed | Composition shingles | 379 ft² | 60 ft² | Dark | 0.96 | No | 0.9 | No | 0 | 18.4 |

ATTIC

| ✓ | # | Type | Ventilation | Vent Ratio (1 in) | Area | RBS | IRCC |
|-------|---|------------|-------------|-------------------|---------|-----|------|
| _____ | 1 | Full attic | Vented | 300 | 360 ft² | N | N |

CEILING

| ✓ | # | Ceiling Type | Space | R-Value | Area | Framing Frac | Truss Type |
|-------|---|----------------------|---------------|---------|---------|--------------|------------|
| _____ | 1 | Under Attic (Vented) | RoomsInBlock1 | 30 | 360 ft² | 0.11 | 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 | E | Exterior | Frame - Wood | RoomsInBlock | 13 | 12 | | 8 | | 96 ft² | | 0.23 | 0.75 | 0 |
| | 2 | S | Exterior | Frame - Wood | RoomsInBlock | 13 | 30 | | 8 | | 240 ft² | | 0.23 | 0.75 | 0 |
| | 3 | W | Exterior | Frame - Wood | RoomsInBlock | 13 | 12 | | 8 | | 96 ft² | | 0.23 | 0.75 | 0 |

DOORS

| ✓ | # | Ornt | Door Type | Space | Storms | U-Value | Width Ft | In | Height Ft | In | Area |
|---|---|------|-----------|-------|--------|---------|----------|----|-----------|----|---------|
| | 1 | E | Wood | | None | 0.2 | 0.1 | | 0.1 | | 0.1 ft² |

WINDOWS

Orientation shown is the entered, Proposed orientation.

| ✓ | # | Ornt | Wall ID | Frame | Panes | NFRC | U-Factor | SHGC | Storms | Area | Overhang Depth | Separation | Int Shade | Screening |
|---|---|------|---------|-------|--------------|------|----------|------|--------|--------|----------------|------------|-----------|-----------|
| | 1 | E | 1 | Metal | Low-E Double | Yes | 0.5 | 0.5 | N | 12 ft² | 1 ft 6 in | 1 ft 0 in | HERS 2006 | None |
| | 2 | S | 2 | Metal | Low-E Double | Yes | 0.5 | 0.5 | N | 24 ft² | 1 ft 0 in | 3 ft 0 in | HERS 2006 | None |
| | 3 | W | 3 | Metal | Low-E Double | Yes | 0.5 | 0.5 | N | 12 ft² | 1 ft 6 in | 1 ft 0 in | HERS 2006 | None |

INFILTRATION

| # | Scope | Method | SLA | CFM 50 | ELA | EqLA | ACH | ACH 50 |
|---|----------|------------|----------|--------|--------|--------|--------|--------|
| 1 | BySpaces | Best Guess | 0.000699 | 660.99 | 36.287 | 68.244 | 0.5389 | 13.770 |

HEATING SYSTEM

| ✓ | # | System Type | Subtype | Efficiency | Capacity | Block | Ducts |
|---|---|--------------------|--------------------------|------------|------------|-------|-------|
| | 1 | Electric Heat Pump | Through the Wall(Single) | HSPF: 7.7 | 10 kBtu/hr | 1 | sys#1 |

COOLING SYSTEM

| ✓ | # | System Type | Subtype | Efficiency | Capacity | Air Flow | SHR | Block | Ducts |
|---|---|-------------------|---------|------------|------------|----------|------|-------|-------|
| | 1 | PTACand Room Unit | Single | EER: 13 | 10 kBtu/hr | 300 cfm | 0.75 | 1 | sys#1 |

SOLAR HOT WATER SYSTEM

| ✓ | FSEC Cert # | Company Name | System Model # | Collector Model # | Collector Area | Storage Volume | FEF |
|---|-------------|--------------|----------------|-------------------|----------------|----------------|-----|
| | | | | | ft² | | |

DUCTS

| ✓ | # | ---- Supply ---- Location | R-Value | Area | ---- Return ---- Location | Area | Leakage Type | Air Handler CFM 25 | Percent Leakage | QN | RLF | HVAC# Heat | Cool |
|---|---|---------------------------|---------|--------|---------------------------|--------|--------------|--------------------|-----------------|------|------|------------|------|
| | 1 | Exterior | 6 | 72 ft² | Exterior | 18 ft² | DSE=0.88 | Exterior 0.0 cfm | 0.00 % | 0.00 | 0.60 | 1 | 1 |

TEMPERATURES

Programable Thermostat: Y

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 | <input checked="" type="checkbox"/> |
| 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 | <input checked="" type="checkbox"/> |
| 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 | <input checked="" type="checkbox"/> |

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 | 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 |
| | PM | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| Heating (WD) | AM | 66 | 66 | 66 | 66 | 66 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| | PM | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 66 | 66 |
| Heating (WEH) | AM | 66 | 66 | 66 | 66 | 66 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| | PM | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 66 | 66 |

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS: 267 SW Watson St.
Ft White, fl, 32038-

PERMIT #:

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

| COMPONENT | SECTION | SUMMARY OF REQUIREMENT(S) | CHECK |
|---------------------------|---------|---|-------|
| Air leakage | 402.4 | To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq.ft. Testing or visual inspection required. Fireplaces: gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2. | |
| Thermostat & controls | 403.1 | At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load. | |
| Ducts | 403.2.2 | All ducts, air handlers, filter boxes and building cavities which 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 503.2.7.2 of this code. | |
| | 403.3.3 | Building framing cavities shall not be used as supply ducts. | |
| Water heaters | 403.4 | Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch. | |
| Mechanical ventilation | 403.5 | Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas. | |
| Swimming Pools & Spas | 403.9 | Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0. | |
| Cooling/heating equipment | 403.6 | Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages. | |
| Ceilings/knee walls | 405.2.1 | R-19 space permitting. | |

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 80

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

267 SW Watson St., Ft White, fl, 32038-

| | | | | |
|--|---------------|---|------------|------------------------|
| 1. New construction or existing | Addition | 9. Wall Types | Insulation | Area |
| 2. Single family or multiple family | Single-family | a. Frame - Wood, Exterior | R=13.0 | 432.00 ft ² |
| 3. Number of units, if multiple family | 1 | b. N/A | R= | ft ² |
| 4. Number of Bedrooms | 0(0) | 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) | 360 | 10. Ceiling Types | Insulation | Area |
| 7. Windows** | Description | a. Under Attic (Vented) | R=30.0 | 360.00 ft ² |
| a. U-Factor: | Dbl, U=0.50 | b. N/A | R= | ft ² |
| SHGC: | SHGC=0.50 | c. N/A | R= | ft ² |
| b. U-Factor: | N/A | 11. Ducts | R | ft ² |
| SHGC: | | a. Sup: Exterior, Ret: Exterior, AH: Exterior | 6 | 72 |
| c. U-Factor: | N/A | 12. Cooling systems | kBtu/hr | Efficiency |
| SHGC: | | a. PTACand Room Unit | 10.0 | EER:13.00 |
| d. U-Factor: | N/A | 13. Heating systems | kBtu/hr | Efficiency |
| SHGC: | | a. Electric Heat Pump | 10.0 | HSPF:7.70 |
| Area Weighted Average Overhang Depth: | 1.250 ft. | 14. Hot water systems- None required | | Cap: N/A |
| Area Weighted Average SHGC: | 0.500 | a. | | EF: |
| 8. Floor Types | Insulation | b. Conservation features | | |
| a. Crawlspace | R=19.0 | 15. Credits | | Pstat |
| b. N/A | R= | | | |
| c. N/A | R= | | | |

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 EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Residential System Sizing Calculation

Summary

Robert Jolley
267 SW Watson St.
Ft White, fl 32038-

Project Title:
1206092

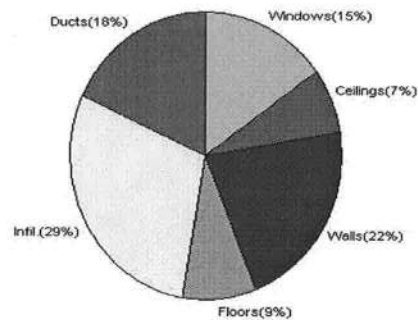
6/25/2012

| | | | | | |
|---|-----------|-------|------------------------------------|-------------|-------|
| Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M) | | | | | |
| Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.) | | | | | |
| Winter design temperature(MJ8 99%) | 33 | F | Summer design temperature(MJ8 99%) | 92 | F |
| Winter setpoint | 70 | F | Summer setpoint | 75 | F |
| Winter temperature difference | 37 | F | Summer temperature difference | 17 | F |
| Total heating load calculation | | | 5826 | Btuh | |
| Total cooling load calculation | | | 8845 | Btuh | |
| Submitted heating capacity | % of calc | Btuh | Submitted cooling capacity | % of calc | Btuh |
| Total (Electric Heat Pump) | 171.7 | 10000 | Sensible (SHR = 0.75) | 112.0 | 7500 |
| Heat Pump + Auxiliary(0.0kW) | 171.7 | 10000 | Latent | 116.4 | 2500 |
| | | | Total (Electric Heat Pump) | 113.1 | 10000 |

WINTER CALCULATIONS

Winter Heating Load (for 360 sqft)

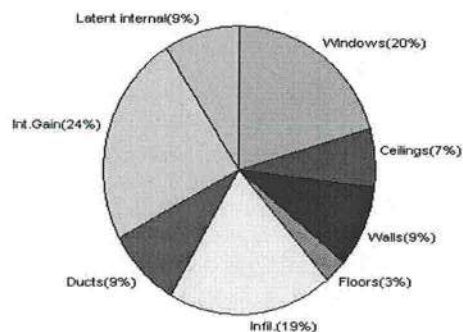
| Load component | | Load | |
|------------------------|----------|-------------|-------------|
| Window total | 48 sqft | 888 | Btuh |
| Wall total | 384 sqft | 1261 | Btuh |
| Door total | 0 sqft | 0 | Btuh |
| Ceiling total | 360 sqft | 424 | Btuh |
| Floor total | 360 sqft | 513 | Btuh |
| Infiltration | 41 cfm | 1677 | Btuh |
| Duct loss | | 1063 | Btuh |
| Subtotal | | 5826 | Btuh |
| Ventilation | 0 cfm | 0 | Btuh |
| TOTAL HEAT LOSS | | 5826 | Btuh |



SUMMER CALCULATIONS

Summer Cooling Load (for 360 sqft)

| Load component | | Load | |
|---------------------------------------|----------|-------------|-------------|
| Window total | 48 sqft | 1793 | Btuh |
| Wall total | 384 sqft | 801 | Btuh |
| Door total | 0 sqft | 0 | Btuh |
| Ceiling total | 360 sqft | 596 | Btuh |
| Floor total | | 237 | Btuh |
| Infiltration | 31 cfm | 578 | Btuh |
| Internal gain | | 2120 | Btuh |
| Duct gain | | 574 | Btuh |
| Sens. Ventilation | 0 cfm | 0 | Btuh |
| Blower Load | | 0 | Btuh |
| Total sensible gain | | 6698 | Btuh |
| Latent gain(ducts) | | 213 | Btuh |
| Latent gain(infiltration) | | 1135 | Btuh |
| Latent gain(ventilation) | | 0 | Btuh |
| Latent gain(internal/occupants/other) | | 800 | Btuh |
| Total latent gain | | 2147 | Btuh |
| TOTAL HEAT GAIN | | 8845 | Btuh |



8th Edition

EnergyGauge® System Sizing

PREPARED BY: *EVAN BEANSLEY*

DATE: *6/25/12*

EnergyGauge® / USRFZB v3.0

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Robert Jolley
267 SW Watson St.
Ft White, fl 32038-

Project Title:
1206092
Building Type: User

6/25/2012

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 F (MJ8 99%)

| Component Loads for Whole House | | | | | | | | |
|---------------------------------|--|------------|---------|---------------------|------------|------|----------------|-----------|
| Window | Panes/Type | Frame | U | Orientation | Area(sqft) | X | HTM= | Load |
| 1 | 2, NFRC 0.50 | Metal | 0.50 | E | 12.0 | | 18.5 | 222 Btuh |
| 2 | 2, NFRC 0.50 | Metal | 0.50 | S | 24.0 | | 18.5 | 444 Btuh |
| 3 | 2, NFRC 0.50 | Metal | 0.50 | W | 12.0 | | 18.5 | 222 Btuh |
| | Window Total | | | | 48.0(sqft) | | | 888 Btuh |
| Walls | Type | Ornt. | Ueff. | R-Value (Cav/Sh) | Area | X | HTM= | Load |
| 1 | Frame - Wood | - Ext | (0.089) | 13.0/0.0 | 84 | | 3.28 | 276 Btuh |
| 2 | Frame - Wood | - Ext | (0.089) | 13.0/0.0 | 216 | | 3.28 | 709 Btuh |
| 3 | Frame - Wood | - Ext | (0.089) | 13.0/0.0 | 84 | | 3.28 | 276 Btuh |
| | Wall Total | | | | 384(sqft) | | | 1261 Btuh |
| Ceilings | Type/Color/Surface | | Ueff. | R-Value | Area | X | HTM= | Load |
| 1 | Vented Attic/D/Shing | | (0.032) | 30.0/0.0 | 360 | | 1.2 | 424 Btuh |
| | Ceiling Total | | | | 360(sqft) | | | 424Btuh |
| Floors | Type | | Ueff. | R-Value | Size | X | HTM= | Load |
| 1 | Stem/Crawlsp(Carpet)(v) | | (0.049) | 19.0/0.0 | 360.0 sqft | | 1.4 | 513 Btuh |
| | Floor Total | | | | 360 sqft | | | 513 Btuh |
| | Envelope Subtotal: | | | | | | | 3086 Btuh |
| Infiltration | Type | Wholehouse | ACH | Volume(cuft) | Wall Ratio | CFM= | | |
| | Natural | | 0.86 | 2880 | 1.00 | 41.4 | | 1677 Btuh |
| Duct load | Average sealed, R6.0, Supply(Ext), Return(Ext) | | | | | | (DLM of 0.223) | 1063 Btuh |
| All Zones | Sensible Subtotal All Zones | | | | | | | 5826 Btuh |

WHOLE HOUSE TOTALS

| | | |
|--------------------|--|----------------------------------|
| Totals for Heating | Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss | 5826 Btuh 0 Btuh 5826 Btuh |
|--------------------|--|----------------------------------|

Manual J Winter Calculations

Residential Load - Component Details (continued)

Robert Jolley
267 SW Watson St.
Ft White, fl 32038-

Project Title:
1206092
Building Type: User

6/25/2012

EQUIPMENT

| | | |
|-----------------------|---|------------|
| 1. Electric Heat Pump | # | 10000 Btuh |
|-----------------------|---|------------|

Key: Window types -NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)

U - (Window U-Factor)

HTM - (ManualJ Heat Transfer Multiplier)



Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Robert Jolley
267 SW Watson St.
Ft White, fl 32038-

Project Title:
1206092

6/25/2012

Reference City: Gainesville, FL

Temperature Difference: 17.0F(MJ8 99%)

Humidity difference: 54gr.

Component Loads for Whole House

| Window | Type* | | | | | | Overhang | | Window Area(sqft) | | | HTM | | Load | |
|-------------------------|---|------------|----|------|----|------|-------------|-------|-------------------|--------|-----------------------------|--------------|----------|-----------|-----------|
| | Panes | SHGC | U | InSh | IS | Ornt | Len | Hgt | Gross | Shaded | Unshaded | Shaded | Unshaded | | |
| 1 | 2 NFRC | 0.50, 0.50 | No | No | No | E | 1.5ft | 1.0ft | 12.0 | 0.7 | 11.3 | 19 | 57 | 653 Btuh | |
| 2 | 2 NFRC | 0.50, 0.50 | No | No | No | S | 1.0ft | 3.0ft | 24.0 | 16.1 | 7.9 | 19 | 23 | 487 Btuh | |
| 3 | 2 NFRC | 0.50, 0.50 | No | No | No | W | 1.5ft | 1.0ft | 12.0 | 0.7 | 11.3 | 19 | 57 | 653 Btuh | |
| Window Total | | | | | | | | | 48 (sqft) | | | | | 1793 Btuh | |
| Walls | Type | | | | | | U-Value | | R-Value | | Area(sqft) | | HTM | | Load |
| | | | | | | | | | Cav/Sheath | | | | | | |
| 1 | Frame - Wood - Ext | | | | | | 0.09 | | 13.0/0.0 | | 84.0 | | 2.1 | | 175 Btuh |
| 2 | Frame - Wood - Ext | | | | | | 0.09 | | 13.0/0.0 | | 216.0 | | 2.1 | | 451 Btuh |
| 3 | Frame - Wood - Ext | | | | | | 0.09 | | 13.0/0.0 | | 84.0 | | 2.1 | | 175 Btuh |
| Wall Total | | | | | | | | | | | | 384 (sqft) | | 801 Btuh | |
| Ceilings | Type/Color/Surface | | | | | | U-Value | | R-Value | | Area(sqft) | | HTM | | Load |
| | | | | | | | | | | | | | | | |
| 1 | Vented Attic/DarkShingle | | | | | | 0.032 | | 30.0/0.0 | | 360.0 | | 1.66 | | 596 Btuh |
| Ceiling Total | | | | | | | | | | | | 360 (sqft) | | 596 Btuh | |
| Floors | Type | | | | | | | | R-Value | | Size | | HTM | | Load |
| | | | | | | | | | | | | | | | |
| 1 | Stem/Crawlsp(Carpet)(v) | | | | | | | | 19.0 | | 360 (sqft) | | 0.7 | | 237 Btuh |
| Floor Total | | | | | | | | | | | | 360.0 (sqft) | | 237 Btuh | |
| Envelope Subtotal: | | | | | | | | | | | | | | | 3427 Btuh |
| Infiltration | Type | | | | | | Average ACH | | Volume(cuft) | | Wall Ratio | | CFM= | | Load |
| | | | | | | | | | | | | | | | |
| | Natural | | | | | | 0.65 | | 2880 | | 1 | | 31.0 | | 578 Btuh |
| Internal gain | | | | | | | Occupants | | Btuh/occupant | | Appliance | | Load | | |
| | | | | | | | 4 | | X 230 | | + <td colspan="2">1200</td> | | 1200 | | |
| Sensible Envelope Load: | | | | | | | | | | | | | | | 6125 Btuh |
| Duct load | Average sealed, Supply(R6.0-Exter), Return(R6.0-Exter) (DGM of 0.094) | | | | | | | | | | | | | | 574 Btuh |
| Sensible Load All Zones | | | | | | | | | | | | | | | 6698 Btuh |

Manual J Summer Calculations

Residential Load - Component Details (continued)

Robert Jolley
267 SW Watson St.
Ft White, fl 32038-

Project Title:
1206092

Climate:FL_GAINESVILLE_REGIONAL_A

6/25/2012

| WHOLE HOUSE TOTALS | | |
|-----------------------------------|---|------------------|
| Whole House Totals for Cooling | Sensible Envelope Load All Zones | 6125 Btuh |
| | Sensible Duct Load | 574 Btuh |
| | Total Sensible Zone Loads | 6698 Btuh |
| | Sensible ventilation | 0 Btuh |
| | Blower | 0 Btuh |
| | Total sensible gain | 6698 Btuh |
| | Latent infiltration gain (for 54 gr. humidity difference) | 1135 Btuh |
| | Latent ventilation gain | 0 Btuh |
| | Latent duct gain | 213 Btuh |
| | Latent occupant gain (4.0 people @ 200 Btuh per person) | 800 Btuh |
| | Latent other gain | 0 Btuh |
| | Latent total gain | 2147 Btuh |
| | TOTAL GAIN | 8845 Btuh |

| EQUIPMENT | | |
|-----------------------|---|------------|
| 1. PTAC and Room Unit | # | 10000 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(½))
(Ornt - compass orientation)



Version 8