



**Project Summary**  
**ENTIRE HOUSE**  
**CONNIE'S E-CALCS**

Job: AC-ANDERSON-HL  
Date: 1-20-25  
By:

Phone: 561-748-7745

### Project Information

For: DANA & WENDY ANDERSON  
MEADOWLANDS, LOT-22, SW MEADOWLANDS DR, LAKE CITY

Notes: ANDERSON CONSTRUCTION INDUSTRIES INC.

### Design Information

Weather: Jacksonville Intl AP, FL, US

#### Winter Design Conditions

|            |       |
|------------|-------|
| Outside db | 33 °F |
| Inside db  | 70 °F |
| Design TD  | 38 °F |

#### Summer Design Conditions

|                     |          |
|---------------------|----------|
| Outside db          | 93 °F    |
| Inside db           | 75 °F    |
| Design TD           | 18 °F    |
| Daily range         | M        |
| Relative humidity   | 50 %     |
| Moisture difference | 51 gr/lb |

#### Heating Summary

|                      |            |
|----------------------|------------|
| Structure            | 37043 Btuh |
| Ducts (R-6.0)        | 7359 Btuh  |
| Central vent (0 cfm) | 0 Btuh     |
| (none)               |            |
| Humidification       | 0 Btuh     |
| Piping               | 0 Btuh     |
| Equipment load       | 44402 Btuh |

#### Sensible Cooling Equipment Load Sizing

|                         |            |
|-------------------------|------------|
| Structure               | 38006 Btuh |
| Ducts (R-6.0)           | 7085 Btuh  |
| Central vent (0 cfm)    | 0 Btuh     |
| (none)                  |            |
| Blower                  | 2543 Btuh  |
| Use manufacturer's data | y          |
| Rate/swing multiplier   | 1.00       |
| Equipment sensible load | 47634 Btuh |

#### Infiltration

|                      |            |
|----------------------|------------|
| Method               | Simplified |
| Construction quality | Average    |
| Fireplaces           | 0          |

#### Latent Cooling Equipment Load Sizing

|                       |           |
|-----------------------|-----------|
| Structure             | 2706 Btuh |
| Ducts                 | 1814 Btuh |
| Central vent (0 cfm)  | 0 Btuh    |
| (none)                |           |
| Equipment latent load | 4520 Btuh |

|                           | Heating | Cooling |
|---------------------------|---------|---------|
| Area (ft <sup>2</sup> )   | 2224    | 2224    |
| Volume (ft <sup>3</sup> ) | 20572   | 20572   |
| Air changes/hour          | 0.32    | 0.16    |
| Equiv. AVF (cfm)          | 110     | 55      |

|                                       |            |
|---------------------------------------|------------|
| <b>Equipment Total Load (Sen+Lat)</b> | 52154 Btuh |
| Req. total capacity at 0.91 SHR       | 4.4 ton    |

#### Heating Equipment Summary

|                                              |                   |
|----------------------------------------------|-------------------|
| Make                                         | RHEEM             |
| Trade                                        | RHEEM             |
| Model                                        | RP19AY60AJVCA     |
| AHRI ref                                     |                   |
| Efficiency                                   | 8.5 HSPF2         |
| Heating input                                |                   |
| Heating output                               | 54000 Btuh @ 47°F |
| Temperature rise                             | 27 °F             |
| Actual air flow                              | 1817 cfm          |
| Air flow factor                              | 0.041 cfm/Btuh    |
| Static pressure                              | 0 in H2O          |
| Space thermostat                             |                   |
| Capacity balance point = 14 °F               |                   |
| Backup:                                      |                   |
| Input = 16 kW, Output = 53912 Btuh, 100 AFUE |                   |

#### Cooling Equipment Summary

|                          |                       |
|--------------------------|-----------------------|
| Make                     | RHEEM                 |
| Trade                    | RHEEM                 |
| Cond                     | RP19AY60AJVCA         |
| Coil                     | RHMVY6021SEACAJ       |
| AHRI ref                 |                       |
| Efficiency               | 10.5 EER2, 17.5 SEER2 |
| Sensible cooling         | 37800 Btuh            |
| Latent cooling           | 16200 Btuh            |
| Total cooling            | 54000 Btuh            |
| Actual air flow          | 1817 cfm              |
| Air flow factor          | 0.040 cfm/Btuh        |
| Static pressure          | 0 in H2O              |
| Load sensible heat ratio | 0.91                  |

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



wrightsoft

Right-Suite® Universal 2023 23.0.05 RSU60766  
C:\GCIAC-ANDRSN-LAKE-CITY-HL.rup Calc = MJ8 Front Door faces: S

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**Load Short Form**  
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**Design Information**

|                             | Htg | Clg | Infiltration         |            |
|-----------------------------|-----|-----|----------------------|------------|
| Outside db (°F)             | 33  | 93  | Method               | Simplified |
| Inside db (°F)              | 70  | 75  | Construction quality | Average    |
| Design TD (°F)              | 38  | 18  | Fireplaces           | 0          |
| Daily range                 | -   | M   |                      |            |
| Inside humidity (%)         | 50  | 50  |                      |            |
| Moisture difference (gr/lb) | 33  | 51  |                      |            |

**HEATING EQUIPMENT**

Make RHEEM  
Trade RHEEM  
Model RP19AY60AJVCA  
AHRI ref

Efficiency 8.5 HSPF2  
Heating input  
Heating output 54000 Btuh @ 47°F  
Temperature rise 27 °F  
Actual air flow 1817 cfm  
Air flow factor 0.041 cfm/Btuh  
Static pressure 0 in H2O  
Space thermostat  
Capacity balance point = 14 °F

Backup:

Input = 16 kW, Output = 53912 Btuh, 100 AFUE

**COOLING EQUIPMENT**

Make RHEEM  
Trade RHEEM  
Cond RP19AY60AJVCA  
Coil RHMVY6021SEACAJ  
AHRI ref

Efficiency 10.5 EER2, 17.5 SEER2  
Sensible cooling 37800 Btuh  
Latent cooling 16200 Btuh  
Total cooling 54000 Btuh  
Actual air flow 1817 cfm  
Air flow factor 0.040 cfm/Btuh  
Static pressure 0 in H2O  
Load sensible heat ratio 0.91

| ROOM NAME         | Area<br>(ft²) | Htg load<br>(Btuh) | Clg load<br>(Btuh) | Htg AVF<br>(cfm) | Clg AVF<br>(cfm) |
|-------------------|---------------|--------------------|--------------------|------------------|------------------|
| SINGLE FAMILY     | 2224          | 44402              | 45091              | 1817             | 1817             |
| ENTIRE HOUSE      | 2224          | 44402              | 45091              | 1817             | 1817             |
| Other equip loads |               | 0                  | 2543               |                  |                  |
| Equip. @ 1.00 RSM |               |                    | 47634              |                  |                  |
| Latent cooling    |               |                    | 4520               |                  |                  |
| TOTALS            | 2224          | 44402              | 52154              | 1817             | 1817             |

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