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# Load Short Form
## *Entire House*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry, Fl 32669 Phone 352-472-2761 Fax: 352-472-1809 Email. joe atbounds@yahoo com or bounds_hvac@yahoo com Web. www bounds.

## Project Information

For: Reeves Residence, O'Neil Construction

## Design Information

| | Htg | Clg |
|---|---|---|
| Outside db (°F) | 33 | 92 |
| Inside db (°F) | 68 | 75 |
| Design TD (°F) | 35 | 17 |
| Daily range | - | M |
| Inside humidity (%) | 50 | 50 |
| Moisture difference (gr/lb) | 29 | 52 |

**Infiltration**

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

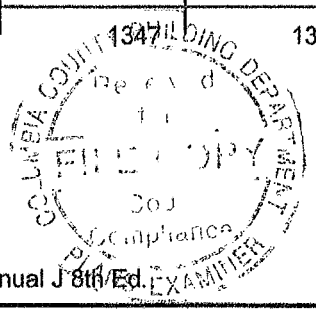
### HEATING EQUIPMENT

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

### COOLING EQUIPMENT

| | | | |
|---|---|---|---|
| Make | n/a | | |
| Trade | n/a | | |
| Cond | n/a | | |
| Coil | n/a | | |
| AHRI ref | 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 | cfm/Btuh |
| Static pressure | | 0 | in H2O |
| Load sensible heat ratio | | 0 | |

| ROOM NAME | Area (ft²) | Htg load (Btuh) | Clg load (Btuh) | Htg AVF (cfm) | Clg AVF (cfm) |
|---|---|---|---|---|---|
| Upstairs d | 880 | 11423 | 7215 | 580 | 580 |
| Downstairs d | 1751 | 15327 | 13661 | 767 | 767 |
| Entire House d | 2631 | 26750 | 20654 | 1347 | 1347 |
| Other equip loads | | 0 | 0 | | |
| Equip. @ 0 97 RSM | | | 20034 | | |
| Latent cooling | | | 2832 | | |
| TOTALS | 2631 | 26750 | 22867 | 1347 | 1347 |



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

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# Load Short Form
## *Downstairs*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry, Fl 32669 Phone: 352-472-2761 Fax 352-472-1809 Email joe atbounds@yahoo.com or bounds_hvac@yahoo.com Web: www bounds.

## Project Information

For: Reeves Residence, O'Neil Construction

## Design Information

| | Htg | Clg |
|---|---|---|
| Outside db (°F) | 33 | 92 |
| Inside db (°F) | 68 | 75 |
| Design TD (°F) | 35 | 17 |
| Daily range | - | M |
| Inside humidity (%) | 50 | 50 |
| Moisture difference (gr/lb) | 29 | 52 |

**Infiltration**

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

### HEATING EQUIPMENT

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Model | 25HBC324(A,W)**30 |
| AHRI ref | 3699485 |

| | | |
|---|---|---|
| Efficiency | 8 HSPF | |
| Heating input | | |
| Heating output | 22600 | Btuh @ 47°F |
| Temperature rise | 27 | °F |
| Actual air flow | 767 | cfm |
| Air flow factor | 0.050 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Space thermostat | | |

### COOLING EQUIPMENT

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Cond | 25HBC324(A,W)**30 |
| Coil | FB4CNF024 |
| AHRI ref | 3699485 |

| | | |
|---|---|---|
| Efficiency | 11.0 EER, 13 SEER | |
| Sensible cooling | 16100 | Btuh |
| Latent cooling | 6900 | Btuh |
| Total cooling | 23000 | Btuh |
| Actual air flow | 767 | cfm |
| Air flow factor | 0.056 | cfm/Btuh |
| Static pressure | 1.00 | in H2O |
| Load sensible heat ratio | 0 89 | |

| ROOM NAME | Area (ft²) | Htg load (Btuh) | Clg load (Btuh) | Htg AVF (cfm) | Clg AVF (cfm) |
|---|---|---|---|---|---|
| guest room | 208 | 2666 | 1458 | 133 | 82 |
| guest bath | 105 | 1241 | 362 | 62 | 20 |
| 1/2 bath | 33 | 82 | 62 | 4 | 3 |
| WIC | 43 | 94 | 71 | 5 | 4 |
| library | 180 | 2398 | 2238 | 120 | 126 |
| foyer | 170 | 945 | 387 | 47 | 22 |
| dining | 246 | 3453 | 3541 | 173 | 199 |
| kitchen | 215 | 1280 | 2675 | 64 | 150 |
| living | 270 | 1991 | 1928 | 100 | 108 |
| hall 2 | 70 | 0 | 0 | 0 | 0 |
| pantry | 49 | 145 | 109 | 7 | 6 |
| laundry | 111 | 1032 | 831 | 52 | 47 |
| hall 1 | 51 | 0 | 0 | 0 | 0 |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Downstairs | d | 1751 | 15327 | 13661 | 767 | 767 |
| Other equip loads | | | 0 | 0 | | |
| Equip. @ 0 97 | RSM | | | 13252 | | |
| Latent cooling | | | | 1650 | | |
| TOTALS | | 1751 | 15327 | 14902 | 767 | 767 |

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# Load Short Form
## *Upstairs*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry, Fl 32669 Phone 352-472-2761 Fax. 352-472-1809 Email joe atbounds@yahoo.com or bounds_hvac@yahoo.com Web www bounds.

## Project Information

For Reeves Residence, O'Neil Construction

## Design Information

| | Htg | Clg |
|---|---|---|
| Outside db (°F) | 33 | 92 |
| Inside db (°F) | 68 | 75 |
| Design TD (°F) | 35 | 17 |
| Daily range | - | M |
| Inside humidity (%) | 50 | 50 |
| Moisture difference (gr/lb) | 29 | 52 |

**Infiltration**

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

### HEATING EQUIPMENT

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Model | 25HBC318(A,W)**30 |
| AHRI ref | 3699493 |

| | | |
|---|---|---|
| Efficiency | 8 HSPF | |
| Heating input | | |
| Heating output | 17400 | Btuh @ 47°F |
| Temperature rise | 27 | °F |
| Actual air flow | 580 | cfm |
| Air flow factor | 0 051 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Space thermostat | | |

### COOLING EQUIPMENT

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Cond | 25HBC318(A,W)**30 |
| Coil | FB4CNF018 |
| AHRI ref | 3699493 |

| | | |
|---|---|---|
| Efficiency | 11 0 EER, 13 SEER | |
| Sensible cooling | 12180 | Btuh |
| Latent cooling | 5220 | Btuh |
| Total cooling | 17400 | Btuh |
| Actual air flow | 580 | cfm |
| Air flow factor | 0 080 | cfm/Btuh |
| Static pressure | 1.00 | in H2O |
| Load sensible heat ratio | 0.86 | |

| ROOM NAME | Area (ft²) | Htg load (Btuh) | Clg load (Btuh) | Htg AVF (cfm) | Clg AVF (cfm) |
|---|---|---|---|---|---|
| mech. | 11 | 0 | 0 | 0 | 0 |
| hall | 82 | 0 | 0 | 0 | 0 |
| bath 2 | 84 | 1196 | 418 | 61 | 34 |
| master closet | 93 | 1457 | 348 | 74 | 28 |
| master bath | 105 | 1619 | 388 | 82 | 31 |
| master bedroom | 218 | 2033 | 2507 | 103 | 202 |
| stairs | 64 | 715 | 505 | 36 | 41 |
| bedroom 3 | 105 | 2334 | 2045 | 119 | 164 |
| bedroom 2 | 121 | 2068 | 1004 | 105 | 81 |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Upstairs<br>Other equip loads<br>Equip @ 0 97 RSM<br>Latent cooling | d | 880 | 11423<br>0 | 7215<br>0<br>6998<br>1182 | 580 | 580 |
| TOTALS | | 880 | 11423 | 8181 | 580 | 580 |

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

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# Project Summary
## *Entire House*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry, Fl 32669 Phone: 352-472-2761 Fax: 352-472-1809 Email joe.atbounds@yahoo.com or bounds_hvac@yahoo.com Web: www bounds

## Project Information

For: Reeves Residence, O'Neil Construction

Notes

## Design Information

Weather: Gainesville, FL, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 33 | °F |
| Inside db | 68 | °F |
| Design TD | 35 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 92 | °F |
| Inside db | 75 | °F |
| Design TD | 17 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 52 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 26750 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 26750 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 20654 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.97 | |
| Equipment sensible load | 20034 | Btuh |

### Infiltration

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

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 2631 | 2631 |
| Volume (ft³) | 23675 | 23675 |
| Air changes/hour | 0.11 | 0 06 |
| Equiv. AVF (cfm) | 43 | 24 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 2832 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Equipment latent load | 2832 | Btuh |
| Equipment total load | 22867 | Btuh |
| Req total capacity at 0 70 SHR | 2.4 | ton |

### Heating Equipment Summary

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

### Cooling Equipment Summary

| | |
|---|---|
| Make | n/a |
| Trade | n/a |
| Cond | n/a |
| Coil | n/a |
| AHRI ref | 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 cfm/Btuh |
| Static pressure | 0 in H2O |
| Load sensible heat ratio | 0 |

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

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# Project Summary
## *Downstairs*
## Bounds Heating and Air

Job:
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By: Joe Mullins

26545 West Newberry Road, Newberry, Fl. 32669 Phone: 352-472-2761 Fax: 352-472-1809 Email joe.atbounds@yahoo.com or bounds_hvac@yahoo.com Web. www bounds.

## Project Information

For: Reeves Residence, O'Neil Construction

Notes

## Design Information

Weather: Gainesville, FL, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 33 | °F |
| Inside db | 68 | °F |
| Design TD | 35 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 92 | °F |
| Inside db | 75 | °F |
| Design TD | 17 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 52 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 15327 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 15327 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 13661 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.97 | |
| Equipment sensible load | 13252 | Btuh |

### Infiltration

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

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 1751 | 1751 |
| Volume (ft³) | 15755 | 15755 |
| Air changes/hour | 0.09 | 0.05 |
| Equiv AVF (cfm) | 23 | 13 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 1650 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Equipment latent load | 1650 | Btuh |
| Equipment total load | 14902 | Btuh |
| Req total capacity at 0.70 SHR | 1 6 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Model | 25HBC324(A,W)**30 |
| AHRI ref | 3699485 |

| | | |
|---|---|---|
| Efficiency | 8 HSPF | |
| Heating input | | |
| Heating output | 22600 | Btuh @ 47°F |
| Temperature rise | 27 | °F |
| Actual air flow | 767 | cfm |
| Air flow factor | 0 050 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Space thermostat | | |

### Cooling Equipment Summary

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Cond | 25HBC324(A,W)**30 |
| Coil | FB4CNF024 |
| AHRI ref | 3699485 |

| | | |
|---|---|---|
| Efficiency | 11 0 EER, 13 SEER | |
| Sensible cooling | 16100 | Btuh |
| Latent cooling | 6900 | Btuh |
| Total cooling | 23000 | Btuh |
| Actual air flow | 767 | cfm |
| Air flow factor | 0 056 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Load sensible heat ratio | 0 89 | |

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

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# Project Summary
## *Upstairs*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry Fl 32669 Phone: 352-472-2761 Fax. 352-472-1809 Email joe.atbounds@yahoo.com or bounds_hvac@yahoo.com Web: www bounds

## Project Information

For: Reeves Residence, O'Neil Construction

Notes

## Design Information

Weather: Gainesville, FL, US

### Winter Design Conditions

| | | |
|---|---|---|
| Outside db | 33 | °F |
| Inside db | 68 | °F |
| Design TD | 35 | °F |

### Summer Design Conditions

| | | |
|---|---|---|
| Outside db | 92 | °F |
| Inside db | 75 | °F |
| Design TD | 17 | °F |
| Daily range | M | |
| Relative humidity | 50 | % |
| Moisture difference | 52 | gr/lb |

### Heating Summary

| | | |
|---|---|---|
| Structure | 11423 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Humidification | 0 | Btuh |
| Piping | 0 | Btuh |
| Equipment load | 11423 | Btuh |

### Sensible Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 7215 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Blower | 0 | Btuh |
| Use manufacturer's data | n | |
| Rate/swing multiplier | 0.97 | |
| Equipment sensible load | 6998 | Btuh |

### Infiltration

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

| | Heating | Cooling |
|---|---|---|
| Area (ft²) | 880 | 880 |
| Volume (ft³) | 7920 | 7920 |
| Air changes/hour | 0.15 | 0.08 |
| Equiv. AVF (cfm) | 20 | 11 |

### Latent Cooling Equipment Load Sizing

| | | |
|---|---|---|
| Structure | 1182 | Btuh |
| Ducts | 0 | Btuh |
| Central vent (0 cfm) | 0 | Btuh |
| Equipment latent load | 1182 | Btuh |
| Equipment total load | 8181 | Btuh |
| Req total capacity at 0 70 SHR | 0.8 | ton |

### Heating Equipment Summary

| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Model | 25HBC318(A,W)**30 |
| AHRI ref | 3699493 |

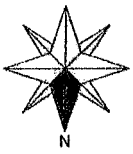
| | | |
|---|---|---|
| Efficiency | 8 HSPF | |
| Heating input | | |
| Heating output | 17400 | Btuh @ 47°F |
| Temperature rise | 27 | °F |
| Actual air flow | 580 | cfm |
| Air flow factor | 0 051 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Space thermostat | | |

### Cooling Equipment Summary

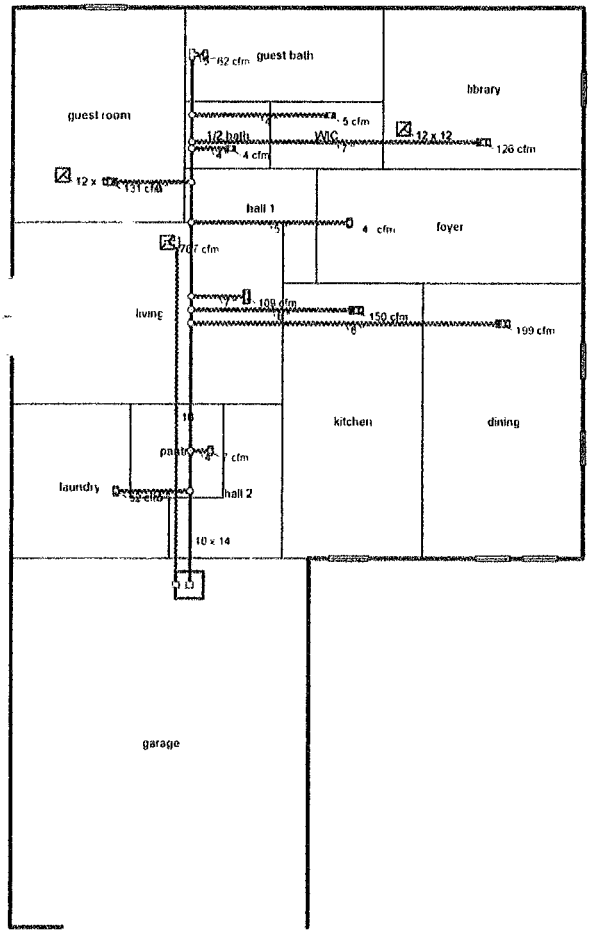
| | |
|---|---|
| Make | Carrier |
| Trade | BASE 13 PURON HP |
| Cond | 25HBC318(A,W)**30 |
| Coil | FB4CNF018 |
| AHRI ref | 3699493 |

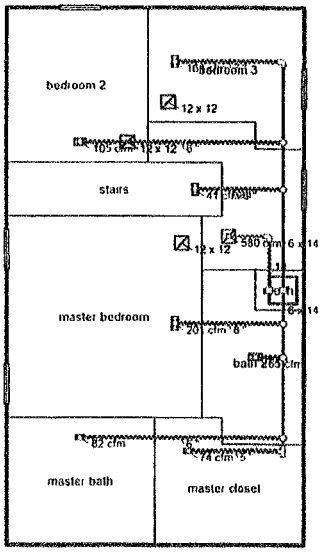
| | | |
|---|---|---|
| Efficiency | 11 0 EER, 13 SEER | |
| Sensible cooling | 12180 | Btuh |
| Latent cooling | 5220 | Btuh |
| Total cooling | 17400 | Btuh |
| Actual air flow | 580 | cfm |
| Air flow factor | 0.080 | cfm/Btuh |
| Static pressure | 1 00 | in H2O |
| Load sensible heat ratio | 0 86 | |

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




Level 1




| | | |
|---|---|---|
| **Job #:**<br>**Performed by Joe Mullins for:**<br>Reeves Residence | **Bounds Heating and Air**<br>26545 West Newberry Road<br>Newberry, Fl 32669<br>Phone 352-472-2761 Fax: 352-472-1809<br>www boundshvac.com joe atbounds@yahoo.com o | Scale: 1 . 166<br>Page 1<br>Right-Suite® Universal 2012<br>12 1 04 RSU01870<br>2013-Sep-24 15 38 02<br>ghtsoft HVAC\O'Neil - Reeves rup |

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# Duct System Summary
## *Downstairs*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road, Newberry, Fl 32669 Phone: 352-472-2761 Fax: 352-472-1809 Email joe.atbounds@yahoo.com or bounds_hvac@yahoo com Web. www bounds.

## Project Information

For: Reeves Residence, O'Neil Construction

| | Heating | Cooling |
|---|---|---|
| External static pressure | 1.00 in H2O | ***1.00*** in H2O |
| Pressure losses | 0.30 in H2O | 0 30 in H2O |
| Available static pressure | 0.70 in H2O | 0 70 in H2O |
| Supply / return available pressure | 0 39 / 0 31 in H2O | 0 39 / 0 31 in H2O |
| Lowest friction rate | 0 156 in/100ft | 0 156 in/100ft |
| Actual air flow | 767 cfm | 767 cfm |
| Total effective length (TEL) | 449 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/2 bath | h 82 | 4 | 3 | 0 171 | 4 0 | 0x0 | VIFx | 35 5 | 190 0 | st3 |
| WIC | h 94 | 5 | 4 | 0 179 | 4.0 | 0x0 | VIFx | 45.5 | 170 0 | st3 |
| dining | c 3541 | 173 | 199 | 0 156 | 8.0 | 0x0 | VIFx | 43 0 | 205.0 | st3 |
| foyer | h 945 | 47 | 22 | 0 158 | 5 0 | 0x0 | VIFx | 39 0 | 205.0 | st3 |
| guest bath | h 1241 | 62 | 20 | 0.266 | 5 0 | 0x0 | VIFx | 40 5 | 105.0 | st3 |
| guest room | h 2666 | 133 | 82 | 0 167 | ***6.0*** | ***0x0*** | VIFx | 36 0 | 195.0 | st3 |
| kitchen | c 2675 | 64 | 150 | 0 162 | 8 0 | 0x0 | VIFx | 33.0 | 205 0 | st3 |
| laundry | h 1032 | 52 | 47 | 0.178 | 5 0 | 0x0 | VIFx | 12 5 | 205 0 | st3 |
| library | c 2238 | 120 | 126 | 0.164 | 7 0 | 0x0 | VIFx | 55 0 | 180 0 | st3 |
| living | c 1928 | 100 | 108 | 0.167 | 7 0 | 0x0 | VIFx | 25 8 | 205.0 | st3 |
| pantry | h 145 | 7 | 6 | 0.178 | 4.0 | 0x0 | VIFx | 11 5 | 205.0 | st3 |

## Supply Trunk Detail Table

| Name | Trunk Type | Htg (cfm) | Clg (cfm) | Design FR | Veloc (fpm) | Diam (in) | H x W (in) | Duct Material | Trunk |
|---|---|---|---|---|---|---|---|---|---|
| st3 | Peak AVF | 767 | 767 | 0 156 | 789 | 12.0 | 14 x 10 | RectFbg | |

***Bold/italic values have been manually overridden***

## Return Branch Detail Table

| Name | Grill 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| rb2 | 0x 0 | 767 | 767 | 201.3 | 0 156 | 549 | 16 0 | 0x 0 | | VlFx | |

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# Duct System Summary
## *Upstairs*
## Bounds Heating and Air

Job:
Date: Jul 11, 2013
By: Joe Mullins

26545 West Newberry Road Newberry, Fl 32669 Phone: 352-472-2761 Fax: 352-472-1809 Email: joe.atbounds@yahoo.com or bounds_hvac@yahoo.com Web: www.bounds

## Project Information

For: Reeves Residence, O'Neil Construction

| | Heating | Cooling |
|---|---|---|
| External static pressure | 1.00 in H2O | ***1.00*** in H2O |
| Pressure losses | 0.30 in H2O | 0 30 in H2O |
| Available static pressure | 0 70 in H2O | 0 70 in H2O |
| Supply / return available pressure | 0 51 / 0.19 in H2O | 0 51 / 0 19 in H2O |
| Lowest friction rate | 0.252 in/100ft | 0 252 in/100ft |
| Actual air flow | 580 cfm | 580 cfm |
| Total effective length (TEL) | 278 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 | 1196 | 61 | 34 | 0 270 | 5 0 | 0x0 | VlFx | 7 0 | 180 0 | st1 |
| bedroom 2 | h | 2068 | 105 | 81 | 0 258 | 6 0 | 0x0 | VlFx | 26.0 | 170.0 | st2 |
| bedroom 3 | c | 2045 | 119 | 164 | 0 389 | 7 0 | 0x0 | VlFx | 25.0 | 105.0 | st2 |
| master bath | h | 1619 | 82 | 31 | 0.258 | 6 0 | 0x0 | VlFx | 26 0 | 170 0 | st1 |
| master bedroom | c | 2507 | 103 | 202 | 0.252 | 8 0 | 0x0 | VlFx | 10.5 | 190.0 | st1 |
| master closet | h | 1457 | 74 | 28 | 0.408 | 5 0 | 0x0 | VlFx | 19.0 | 105 0 | st1 |
| stairs | c | 505 | 36 | 41 | 0 261 | ***6.0*** | ***0x0*** | VlFx | 14 0 | 180 0 | st2 |

## 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 | 320 | 294 | 0 252 | 549 | 7 9 | 14 x 6 | RectFbg | |
| st2 | Peak AVF | 260 | 286 | 0.258 | 490 | 7 5 | 14 x 6 | RectFbg | |

## Return Branch Detail Table

| Name | Grill 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| rb3 | 0x0 | 580 | 580 | 77.0 | 0 252 | 543 | 14 0 | 0x 0 | | VlFx | |

***Bold/italic values have been manually overridden***