

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

## Florida Department of Business and Professional Regulation - Residential Performance Method

|                                  |  |                                          |  |
|----------------------------------|--|------------------------------------------|--|
| Project Name: Perkins            |  | Builder Name:                            |  |
| Street:                          |  | Permit Office:                           |  |
| City, State, Zip: , FL,          |  | Permit Number:                           |  |
| Owner:                           |  | Jurisdiction:                            |  |
| Design Location: FL, Gainesville |  | County: Suwannee(Florida Climate Zone 2) |  |

  

|                                                          |                  |                                        |                 |                         |
|----------------------------------------------------------|------------------|----------------------------------------|-----------------|-------------------------|
| 1. New construction or existing                          | New (From Plans) | 10. Wall Types(1377.0 sqft.)           | Insulation      | Area                    |
| 2. Single family or multiple family                      | Detached         | a. Frame - Wood, Exterior              | R=13.0          | 1377.00 ft <sup>2</sup> |
| 3. Number of units, if multiple family                   | 1                | b. N/A                                 |                 |                         |
| 4. Number of Bedrooms                                    | 3                | c. N/A                                 |                 |                         |
| 5. Is this a worst case?                                 | No               | d. N/A                                 |                 |                         |
| 6. Conditioned floor area above grade (ft <sup>2</sup> ) | 1368             | 11. Ceiling Types(1368.0 sqft.)        | Insulation      | Area                    |
| Conditioned floor area below grade (ft <sup>2</sup> )    | 0                | a. Flat ceiling under att (Vented)     | R=30.0          | 1368.00 ft <sup>2</sup> |
| 7. Windows(102.0 sqft.)                                  | Description      | b. N/A                                 |                 |                         |
| a. U-Factor:                                             | DbI, U=0.26      | c. N/A                                 |                 |                         |
| SHGC:                                                    | SHGC=0.20        | 12. Roof(Comp. Shingles, Vented) Deck  | R=0.0           | 1530 ft <sup>2</sup>    |
| b. U-Factor:                                             | N/A              | 13. Ducts, location & insulation level | R               | ft <sup>2</sup>         |
| SHGC:                                                    |                  | a. Sup: Attic, Ret: Attic, AH: Main    | 6               | 274                     |
| c. U-Factor:                                             | N/A              | b.                                     |                 |                         |
| SHGC:                                                    |                  | c.                                     |                 |                         |
| Area Weighted Average Overhang Depth:                    | 1.500 ft         | 14. Cooling Systems                    | kBtu/hr         | Efficiency              |
| Area Weighted Average SHGC:                              | 0.200            | a. Central Unit                        | 30.0            | SEER:15.00              |
| 8. Skylights                                             | Description      | 15. Heating Systems                    | kBtu/hr         | Efficiency              |
| U-Factor:(AVG)                                           | N/A              | a. Electric Heat Pump                  | 30.0            | HSPF:8.50               |
| SHGC:(AVG):                                              | N/A              | 16. Hot Water Systems                  |                 |                         |
| 9. Floor Types                                           | Insulation       | a. Electric                            | Cap: 50 gallons | EF: 0.920               |
| a. Slab-On-Grade Edge Insulation                         | R= 0.0           | b. Conservation features               |                 |                         |
| b. N/A                                                   | R=               |                                        |                 |                         |
| c. N/A                                                   | R=               |                                        |                 |                         |
|                                                          |                  | 17. Credits                            |                 | None                    |
|                                                          |                  |                                        |                 | CF, Pstat               |

Glass/Floor Area: 0.075

Total Proposed Modified Loads: 39.97

Total Baseline Loads: 40.02

### PASS

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

PREPARED BY: \_\_\_\_\_

DATE: 2-28-23

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

OWNER/AGENT: \_\_\_\_\_

DATE: \_\_\_\_\_

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



BUILDING OFFICIAL: \_\_\_\_\_

DATE: \_\_\_\_\_

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.
- Default duct leakage does not require a Duct Leakage Test Report.
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 4.73 ACH50 (R402.4.1.2).



## INPUT SUMMARY CHECKLIST REPORT

## PROJECT

|                 |                  |                    |                |                    |                |
|-----------------|------------------|--------------------|----------------|--------------------|----------------|
| Title:          | Perkins          | Bedrooms:          | 3              | Address type:      | Street Address |
| Building Type:  | User             | Conditioned Area:  | 1368           | Lot #:             | ---            |
| Owner:          |                  | Total Stories:     | 1              | Block/SubDivision: | ---            |
| Builder Name:   |                  | Worst Case:        | No             | PlatBook:          | ---            |
| Permit Office:  |                  | Rotate Angle:      | 0              | Street:            |                |
| Jurisdiction:   |                  | Cross Ventilation: |                | County:            | Suwannee       |
| Family Type:    | Detached         | Whole House Fan:   |                | City, State, Zip:  | FL,            |
| New/Existing:   | New (From Plans) | Terrain:           | Rural          |                    |                |
| Year Construct: | 2023             | Shielding:         | Moderate/Rural |                    |                |
| Comment:        |                  |                    |                |                    |                |

## CLIMATE

| ✓ Design Location   | Tmy Site               | 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_REGIONA | 32                | 92               | 70                     | 75                     | 1305.5              | 51              | Medium           |

## BLOCKS

| ✓ Number | Name   | Area | Volume      |
|----------|--------|------|-------------|
| ___ 1    | Block1 | 1368 | 12312 cu ft |

## SPACES

| ✓ Number | Name | Area | Volume | Kitchen | Occupants | Bedrooms | Finished | Cooled | Heated |
|----------|------|------|--------|---------|-----------|----------|----------|--------|--------|
| ___ 1    | Main | 1368 | 12312  | Yes     | 6         | 3        | Yes      | Yes    | Yes    |

## FLOORS

(Total Exposed Area = 1368 sq.ft.)

| ✓ #   | Floor Type             | Space | Exposed Perim | Perimeter R-Value | Area    | U-Factor | Joist R-Value | Tile | Wood | Carpet |
|-------|------------------------|-------|---------------|-------------------|---------|----------|---------------|------|------|--------|
| ___ 1 | Slab-On-Grade Edge Ins | Main  | 153           | 0                 | 1368 ft | 0.563    | ---           | 0.20 | 0.60 | 0.20   |

## ROOF

| ✓ #   | Type          | Materials            | Roof Area | Gable Area | Roof Color | Rad Barr | Solar Absor. | SA Tested | Emitt | Emitt Tested | Deck Insul. | Pitch (deg) |
|-------|---------------|----------------------|-----------|------------|------------|----------|--------------|-----------|-------|--------------|-------------|-------------|
| ___ 1 | Gable or shed | Composition shingles | 1530 ft²  | 342 ft²    | Medium     | N        | 0.85         | No        | 0.9   | No           | 0           | 26.57       |

## ATTIC

| ✓ #   | Type       | Ventilation | Vent Ratio (1 in) | Area     | RBS | IRCC |
|-------|------------|-------------|-------------------|----------|-----|------|
| ___ 1 | Full attic | Vented      | 300               | 1368 ft² | N   | N    |

## CEILING

(Total Exposed Area = 1368 sq.ft.)

| ✓ #   | Ceiling Type                     | Space | R-Value | Ins. Type | Area      | U-Factor | Framing Frac. | Truss Type |
|-------|----------------------------------|-------|---------|-----------|-----------|----------|---------------|------------|
| ___ 1 | Flat ceiling under attic(Vented) | Main  | 30.0    | Blown     | 1368.0ft² | 0.053    | 0.11          | Wood       |

## INPUT SUMMARY CHECKLIST REPORT

## WALLS

(Total Exposed Area = 1377 sq.ft.)

| ✓ # | Ornt | Adjacent To | Wall Type    | Space | Cavity R-Value | Width Ft | In | Height Ft | In | Area sq.ft. | U-Factor | Sheath R-Value | Frm. Frac. | Solar Absor. | Below Grade |
|-----|------|-------------|--------------|-------|----------------|----------|----|-----------|----|-------------|----------|----------------|------------|--------------|-------------|
| 1   | N    | Exterior    | Frame - Wood | Main  | 13.0           | 48.0     | 0  | 9.0       | 0  | 432.0       | 0.094    |                | 0.23       | 0.75         | 0 %         |
| 2   | E    | Exterior    | Frame - Wood | Main  | 13.0           | 28.0     | 6  | 9.0       | 0  | 256.5       | 0.094    |                | 0.23       | 0.75         | 0 %         |
| 3   | S    | Exterior    | Frame - Wood | Main  | 13.0           | 48.0     | 0  | 9.0       | 0  | 432.0       | 0.094    |                | 0.23       | 0.75         | 0 %         |
| 4   | W    | Exterior    | Frame - Wood | Main  | 13.0           | 28.0     | 6  | 9.0       | 0  | 256.5       | 0.094    |                | 0.23       | 0.75         | 0 %         |

## DOORS

(Total Exposed Area = 60 sq.ft.)

| ✓ # | Ornt | Adjacent To | Door Type | Space | Storms | U-Value | Width Ft | In | Height Ft | In | Area    |
|-----|------|-------------|-----------|-------|--------|---------|----------|----|-----------|----|---------|
| 1   | N    | Exterior    | Insulated | Main  | None   | 0.40    | 3.00     | 0  | 6.00      | 8  | 20.0ft² |
| 2   | S    | Exterior    | Insulated | Main  | None   | 0.40    | 3.00     | 0  | 6.00      | 8  | 20.0ft² |
| 3   | W    | Exterior    | Wood      | Main  | None   | 0.40    | 3.00     | 0  | 6.00      | 8  | 20.0ft² |

## WINDOWS

(Total Exposed Area = 102 sq.ft.)

| ✓ # | Ornt | Wall ID | Frame | Panes        | NFRC U-Factor | SHGC | Imp | Storm | Total Area (ft²) | Same Units | Width (ft) | Height (ft) | --Overhang--<br>Depth (ft) | Sep. (ft) | Interior Shade | Screen |
|-----|------|---------|-------|--------------|---------------|------|-----|-------|------------------|------------|------------|-------------|----------------------------|-----------|----------------|--------|
| 1   | N    | 1       | Vinyl | Low-E Double | Y 0.26        | 0.20 | N   | N     | 9.0              | 1          | 3.00       | 3.00        | 1.5                        | 2.3       | None           | None   |
| 2   | N    | 1       | Vinyl | Low-E Double | Y 0.26        | 0.20 | N   | N     | 15.0             | 1          | 3.00       | 5.00        | 1.5                        | 2.3       | None           | None   |
| 3   | S    | 3       | Vinyl | Low-E Double | Y 0.26        | 0.20 | N   | N     | 60.0             | 4          | 3.00       | 5.00        | 1.5                        | 2.3       | None           | None   |
| 4   | W    | 4       | Vinyl | Low-E Double | Y 0.26        | 0.20 | N   | N     | 12.0             | 1          | 6.00       | 2.00        | 1.5                        | 2.3       | None           | None   |
| 5   | W    | 4       | Vinyl | Low-E Double | Y 0.26        | 0.20 | N   | N     | 6.0              | 1          | 2.00       | 3.00        | 1.5                        | 2.3       | None           | None   |

## INFILTRATION

| ✓ # | Scope      | Method           | SLA     | CFM50 | ELA   | EqLA  | ACH    | ACH50 | Space(s) | Infiltration Test Volume |
|-----|------------|------------------|---------|-------|-------|-------|--------|-------|----------|--------------------------|
| 1   | Wholehouse | Proposed ACH(50) | 0.00027 | 971   | 53.25 | 99.97 | 0.0972 | 4.7   | All      | 12312 cu ft              |

## MASS

| ✓ # | Mass Type             | Area  | Thickness | Furniture Fraction | Space |
|-----|-----------------------|-------|-----------|--------------------|-------|
| 1   | Default(8 lbs/sq.ft.) | 0 ft² | 0 ft      | 0.30               | Main  |

## HEATING SYSTEM

| ✓ # | System Type        | Subtype/Speed | AHRI # | Efficiency | Capacity kBtu/hr | ---Geothermal HeatPump---<br>Entry Power Volt Current | Ducts | Block |
|-----|--------------------|---------------|--------|------------|------------------|-------------------------------------------------------|-------|-------|
| 1   | Electric Heat Pump | None/Single   |        | HSPF: 8.50 | 30.0             | 0.00 0.00 0.00                                        | sys#1 | 1     |

## COOLING SYSTEM

| ✓ # | System Type  | Subtype/Speed | AHRI # | Efficiency | Capacity kBtu/hr | Air Flow cfm | SHR  | Duct  | Block |
|-----|--------------|---------------|--------|------------|------------------|--------------|------|-------|-------|
| 1   | Central Unit | None/Single   |        | SEER:15.0  | 30.0             | 900          | 0.85 | sys#1 | 1     |

# INPUT SUMMARY CHECKLIST REPORT

## HOT WATER SYSTEM

| ✓ #   | System Type          | Subtype             | Location    | EF(UEF)       | Cap        | Use    | SetPnt               | Fixture Flow | Pipe Ins. | Pipe length   |
|-------|----------------------|---------------------|-------------|---------------|------------|--------|----------------------|--------------|-----------|---------------|
| ___ 1 | Electric             | None                | Main        | 0.92 (0.92)   | 50.00 gal  | 60 gal | 120 deg              | Standard     | None      | 99            |
|       | Recirculation System | Recirc Control Type | Loop length | Branch length | Pump power | DWHR   | Facilities Connected | Equal Flow   | DWHR Eff  | Other Credits |
| ___ 1 | No                   |                     | NA          | NA            | NA         | No     | NA                   | NA           | NA        | None          |

## DUCTS

| ✓ Duct # | Supply Location | R-Value | Area    | Return Location | R-Value | Area   | Leakage Type    | Air Handler | CFM 25 TOT | CFM 25 OUT | QN | RLF | HVAC # Heat | HVAC # Cool |
|----------|-----------------|---------|---------|-----------------|---------|--------|-----------------|-------------|------------|------------|----|-----|-------------|-------------|
| ___ 1    | Attic           | 6.0     | 274 ft² | Attic           | 6.0     | 68 ft² | Default Leakage | Main        | (Default)  | (Default)  |    |     | 1           | 1           |

## TEMPERATURES

| Programable Thermostat: Y                |                                         |                                         |                                         | Ceiling Fans: N                         |                              |                                         |                                         |                                         |                                         |                                         |                                         |                                         |          |
|------------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|----------|
| Cooling                                  | <input type="checkbox"/> Jan            | <input type="checkbox"/> Feb            | <input type="checkbox"/> Mar            | <input type="checkbox"/> Apr            | <input type="checkbox"/> May | <input checked="" type="checkbox"/> Jun | <input checked="" type="checkbox"/> Jul | <input checked="" type="checkbox"/> Aug | <input checked="" type="checkbox"/> Sep | <input type="checkbox"/> Oct            | <input type="checkbox"/> Nov            | <input type="checkbox"/> Dec            |          |
| Heating                                  | <input checked="" type="checkbox"/> Jan | <input checked="" type="checkbox"/> Feb | <input checked="" type="checkbox"/> Mar | <input type="checkbox"/> Apr            | <input type="checkbox"/> May | <input type="checkbox"/> Jun            | <input type="checkbox"/> Jul            | <input type="checkbox"/> Aug            | <input type="checkbox"/> Sep            | <input type="checkbox"/> Oct            | <input checked="" type="checkbox"/> Nov | <input checked="" type="checkbox"/> Dec |          |
| Venting                                  | <input type="checkbox"/> Jan            | <input type="checkbox"/> Feb            | <input checked="" type="checkbox"/> Mar | <input checked="" type="checkbox"/> Apr | <input type="checkbox"/> May | <input type="checkbox"/> Jun            | <input type="checkbox"/> Jul            | <input type="checkbox"/> Aug            | <input type="checkbox"/> Sep            | <input checked="" type="checkbox"/> Oct | <input checked="" type="checkbox"/> Nov | <input type="checkbox"/> Dec            |          |
| Thermostat Schedule: HERS 2006 Reference |                                         |                                         |                                         |                                         |                              |                                         |                                         |                                         |                                         |                                         |                                         |                                         |          |
| ✓ Schedule Type                          |                                         | 1                                       | 2                                       | 3                                       | 4                            | 5                                       | 6                                       | Hours 7                                 | 8                                       | 9                                       | 10                                      | 11                                      | 12       |
| ___ Cooling (WD)                         | AM<br>PM                                | 78<br>80                                | 78<br>80                                | 78<br>80                                | 78<br>80                     | 78<br>78                                | 78<br>78                                | 78<br>78                                | 78<br>78                                | 80<br>78                                | 80<br>78                                | 80<br>78                                | 80<br>78 |
| ___ Cooling (WEH)                        | AM<br>PM                                | 78<br>80                                | 78<br>80                                | 78<br>80                                | 78<br>80                     | 78<br>78                                | 78<br>78                                | 78<br>78                                | 78<br>78                                | 80<br>78                                | 80<br>78                                | 80<br>78                                | 80<br>78 |
| ___ Heating (WD)                         | AM<br>PM                                | 65<br>68                                | 65<br>68                                | 65<br>68                                | 65<br>68                     | 65<br>68                                | 65<br>68                                | 65<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68 |
| ___ Heating (WEH)                        | AM<br>PM                                | 65<br>68                                | 65<br>68                                | 65<br>68                                | 65<br>68                     | 65<br>68                                | 65<br>68                                | 65<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68                                | 68<br>68 |

