FORM R405-2020

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

| | | | |
|---|---|---|---|
| Project Name: | Souza Renovation | Builder Name: | |
| Street: | 355 Short Lane | Permit Office: | Columbia County |
| City, State, Zip: | Lake City , FL , 32025 | Permit Number: | |
| Owner: | Camille Souza | Jurisdiction: | |
| Design Location: | FL, Gainesville | County: | Columbia (Florida Climate Zone 2 ) |

| | | | | |
|---|---|---|---|---|
| 1. New construction or existing | New (From Plans) | | | |
| 2. Single family or multiple family | Detached | | | |
| 3. Number of units, if multiple family | 1 | | | |
| 4. Number of Bedrooms | 6 | | | |
| 5. Is this a worst case? | No | | | |
| 6. Conditioned floor area above grade (ft²) | 3410 | | | |
| Conditioned floor area below grade (ft²) | 0 | | | |
| 7. Windows (441.1 sqft.) | Description | | Area | |
| a. U-Factor: | Dbl, U=0.36 | | 441.13 | ft² |
| SHGC: | SHGC=0.25 | | | |
| b. U-Factor: | N/A | | | ft² |
| SHGC: | | | | |
| c. U-Factor: | N/A | | | ft² |
| SHGC: | | | | |
| Area Weighted Average Overhang Depth: | | | 2.919 | ft. |
| Area Weighted Average SHGC: | | | 0.250 | |
| 8. Skylights | | | Area | |
| c. U-Factor:(AVG) | N/A | | | ft² |
| SHGC(AVG): | N/A | | | |
| 9. Floor Types (3410.0 sqft.) | | Insulation | Area | |
| a. Slab-On-Grade Edge Insulation | | R=0.0 | 2397.00 | ft² |
| b. Floor Over Other Space | | R=19.0 | 1013.00 | ft² |
| c. N/A | | R= | | ft² |

| | | | |
|---|---|---|---|
| 10. Wall Types (2856.0 sqft.) | Insulation | Area | |
| a. Frame - Wood, Exterior | R=13.0 | 2856.00 | ft² |
| b. N/A | R= | | ft² |
| c. N/A | R= | | ft² |
| d. N/A | R= | | ft² |
| 11. Ceiling Types (2782.7 sqft.) | Insulation | Area | |
| a. Under Attic (Vented) | R=38.0 | 2782.70 | ft² |
| b. N/A | R= | | ft² |
| c. N/A | R= | | ft² |
| 12. Ducts | | R | ft² |
| a. Sup: Attic, Ret: Attic, AH: 1st Floor | | 6 | 852.5 |
| 13. Cooling systems | kBtu/hr | Efficiency | |
| a. Central Unit | 25.0 | SEER:15.00 | |
| 14. Heating systems | kBtu/hr | Efficiency | |
| a. Electric Heat Pump | 36.2 | HSPF:8.20 | |
| 15. Hot water systems | | | |
| a. Natural Gas | | Cap: 50 gallons | |
| | | EF: 0.590 | |
| b. Conservation features | | | |
| None | | | |
| 16. Credits | | CV, Pstat | |

Glass/Floor Area: 0.129

Total Proposed Modified Loads: 79.49

Total Baseline Loads: 80.15

**PASS**

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

PREPARED BY: _____

DATE: 4 / 29 / 2022

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

OWNER/AGENT: _____

DATE: 7.11.22

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.**

**- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 5.00 ACH50 (R402.4.1.2).**

# INPUT SUMMARY CHECKLIST REPORT

## PROJECT

| | | | | | |
|---|---|---|---|---|---|
| Title: | Souza Renovation | Bedrooms: | 6 | Address Type: | Street Address |
| Building Type: | User | Conditioned Area: | 3410 | Lot # | |
| Owner Name: | Camille Souza | Total Stories: | 2 | Block/Subdivision: | |
| # of Units: | 1 | Worst Case: | No | PlatBook: | |
| Builder Name: | | Rotate Angle: | 0 | Street: | 355 Short Lane |
| Permit Office: | Columbia County | Cross Ventilation: | Yes | County: | Columbia |
| Jurisdiction: | | Whole House Fan: | No | City, State, Zip: | Lake City , FL , 32025 |
| Family Type: | Detached | | | | |
| New/Existing: | New (From Plans) | | | | |
| 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_REGI | 32 | 92 | 70 | 75 | 1305.5 | 51 | Medium |

## BLOCKS

| Number | Name | Area | Volume |
|---|---|---|---|
| 1 | Block1 | 3410 | 27280 |

## SPACES

| Number | Name | Area | Volume | Kitchen | Occupants | Bedrooms | Infil ID | Finished | Cooled | Heated |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1st Floor | 2397 | 19176 | Yes | 6 | 3 | 1 | Yes | Yes | Yes |
| 2 | 2nd Floor | 1013 | 8104 | No | 6 | 3 | 1 | Yes | Yes | Yes |

## FLOORS

| √ | # | Floor Type | Space | Perimeter | Perimeter R-Value | Area | Joist R-Value | Tile | Wood | Carpet |
|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Slab-On-Grade Edge Insulation | 1st Floor | 227.46 ft | 0 | 2397 ft² | ---- | 0 | 0 | 1 |
| _____ | 2 | Floor Over Other Space | 2nd Floor | ---- | ---- | 1013 ft² | 19 | 0 | 0 | 1 |

## 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 | Metal | 3041 ft² | 472 ft² | Medium | Y | 0.96 | No | 0.9 | No | 0 | 33.69 |

## ATTIC

| √ | # | Type | Ventilation | Vent Ratio (1 in) | Area | RBS | IRCC |
|---|---|---|---|---|---|---|---|
| _____ | 1 | Partial cathedral ceili | Vented | 300 | 2530 ft² | Y | N |

# INPUT SUMMARY CHECKLIST REPORT

## CEILING

| √ | # | Ceiling Type | Space | R-Value | Ins Type | Area | Framing Frac | Truss Type |
|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Under Attic (Vented) | 1st Floor | 38 | Double Batt | 1668.7 ft² | 0.11 | Wood |
| _____ | 2 | Under Attic (Vented) | 2nd Floor | 38 | Batt | 1114 ft² | 0.11 | Wood |

## WALLS

| √ | # | Ornt | Adjacent To | Wall Type | Space | Cavity R-Value | Width Ft | Width In | Height Ft | Height In | Area | Sheathing R-Value | Framing Fraction | Solar Absor. | Below Grade% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ____ | 1 | S | Exterior | Frame - Wood | 1st Floor | 13 | 26 | 8 | 8 | | 213.3 ft² | | 0.23 | 0.75 | 0 |
| ____ | 2 | E | Exterior | Frame - Wood | 1st Floor | 13 | 5 | | 8 | | 40.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 3 | S | Exterior | Frame - Wood | 1st Floor | 13 | 54 | 2 | 8 | | 433.3 ft² | | 0.23 | 0.75 | 0 |
| ____ | 4 | E | Exterior | Frame - Wood | 1st Floor | 13 | 28 | | 8 | | 224.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 5 | N | Exterior | Frame - Wood | 1st Floor | 13 | 80 | 10 | 8 | | 646.7 ft² | | 0.23 | 0.75 | 0 |
| ____ | 6 | W | Exterior | Frame - Wood | 1st Floor | 13 | 33 | | 8 | | 264.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 7 | S | Exterior | Frame - Wood | 2nd Floor | 13 | 26 | 8 | 8 | | 213.3 ft² | | 0.23 | 0.75 | 0 |
| ____ | 8 | E | Exterior | Frame - Wood | 2nd Floor | 13 | 38 | | 8 | | 304.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 9 | N | Exterior | Frame - Wood | 2nd Floor | 13 | 26 | 8 | 8 | | 213.3 ft² | | 0.23 | 0.75 | 0 |
| ____ | 10 | W | Exterior | Frame - Wood | 2nd Floor | 13 | 38 | | 8 | | 304.0 ft² | | 0.23 | 0.75 | 0 |

## DOORS

| √ | # | Ornt | Door Type | Space | Storms | U-Value | Width Ft | Width In | Height Ft | Height In | Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | S | Insulated | 1st Floor | None | .46 | 3 | | 6 | 8 | 20 ft² |

## WINDOWS

Orientation shown is the entered, Proposed orientation.

| √ | # | Ornt | Wall ID | Frame | Panes | NFRC | U-Factor | SHGC | Imp | Area | Overhang Depth | Overhang Separation | Int Shade | Screening |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | S | 1 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 15.8 ft² | 1 ft 0 in | 2 ft 0 in | None | None |
| _____ | 2 | S | 3 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 28.0 ft² | 9 ft 6 in | 0 ft 6 in | None | None |
| _____ | 3 | S | 3 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 16.3 ft² | 9 ft 6 in | 0 ft 6 in | None | None |
| _____ | 4 | S | 3 | TIM | Low-E Double | Yes | 0.36 | 0.25 | N | 40.0 ft² | 9 ft 6 in | 0 ft 6 in | None | None |
| _____ | 5 | E | 4 | Metal | Low-E Double | Yes | 0.36 | 0.25 | N | 40.0 ft² | 1 ft 0 in | 4 ft 0 in | None | None |
| _____ | 6 | N | 5 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 24.0 ft² | 1 ft 6 in | 0 ft 6 in | None | None |
| _____ | 7 | N | 5 | Metal | Low-E Double | Yes | 0.36 | 0.25 | N | 160.0 ft² | 1 ft 6 in | 0 ft 6 in | None | None |
| _____ | 8 | N | 5 | TIM | Low-E Double | Yes | 0.36 | 0.25 | N | 20.0 ft² | 1 ft 6 in | 0 ft 6 in | None | None |
| _____ | 9 | W | 6 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 28.0 ft² | 1 ft 6 in | 9 ft 0 in | None | None |
| _____ | 10 | S | 7 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 13.1 ft² | 0 ft 6 in | 0 ft 4 in | None | None |
| _____ | 11 | N | 9 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 14.0 ft² | 1 ft 0 in | 4 ft 0 in | None | None |
| _____ | 12 | W | 10 | Vinyl | Low-E Double | Yes | 0.36 | 0.25 | N | 42.0 ft² | 1 ft 6 in | 0 ft 6 in | None | None |

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# INPUT SUMMARY CHECKLIST REPORT

## INFILTRATION

| # | Scope | Method | SLA | CFM 50 | ELA | EqLA | ACH | ACH 50 |
|---|---|---|---|---|---|---|---|---|
| 1 | Wholehouse | Proposed ACH(50) | .000254 | 2273.3 | 124.72 | 234.15 | .1293 | 5 |

## HEATING SYSTEM

| √ | # | System Type | Subtype | Speed | Efficiency | Capacity | Block | Ducts |
|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Electric Heat Pump/ | None | Single | HSPF:8.2 | 36.22 kBtu/hr | 1 | sys#1 |

## COOLING SYSTEM

| √ | # | System Type | Subtype | Subtype | Efficiency | Capacity | Air Flow | SHR | Block | Ducts |
|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Central Unit/ | None | Single | SEER: 15 | 24.95 kBtu/hr | 750 cfm | 0.7 | 1 | sys#1 |

## HOT WATER SYSTEM

| √ | # | System Type | SubType | Location | EF | Cap | Use | SetPnt | Conservation |
|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Natural Gas | None | Exterior | 0.59 | 50 gal | 40 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 ---- Location | R-Value | Area | ---- Return ---- Location | Area | Leakage Type | Air Handler | CFM 25 TOT | CFM25 OUT | QN | RLF | HVAC # Heat | Cool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Attic | 6 | 852.5 ft² | Attic | 170.5 ft² | Default Leakage | 1st Floor | (Default) c | (Default) c | | | 1 | 1 |

## TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cooling | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] | [X] | [X] | [ ] | [ ] | [ ] |
| Heating | [X] | [X] | [X] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] |
| Venting | [ ] | [ ] | [X] | [X] | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] | [ ] |

# INPUT SUMMARY CHECKLIST REPORT

| 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 |

## MASS

| Mass Type | Area | Thickness | Furniture Fraction | Space |
|---|---|---|---|---|
| Default(8 lbs/sq.ft. | 0 ft² | 0 ft | 0.3 | 1st Floor |
| Default(8 lbs/sq.ft. | 0 ft² | 0 ft | 0.3 | 2nd Floor |

FORM R405-2020

# ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

## ESTIMATED ENERGY PERFORMANCE INDEX* = 99

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

355 Short Lane, Lake City, FL, 32025

| | | |
|---|---|---|
| 1. New construction or existing | | New (From Plans) |
| 2. Single family or multiple family | | Detached |
| 3. Number of units, if multiple family | | 1 |
| 4. Number of Bedrooms | | 6 |
| 5. Is this a worst case? | | No |
| 6. Conditioned floor area (ft²) | | 3410 |
| 7. Windows** | Description | Area |
| a. U-Factor: | Dbl, U=0.36 | 441.13 ft² |
| SHGC: | SHGC=0.25 | |
| 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: | | 2.919 ft. |
| Area Weighted Average SHGC: | | 0.250 |
| 8. Skylights | Description | Area |
| a. U-Factor(AVG): | N/A | ft² |
| SHGC(AVG): | N/A | |
| 9. Floor Types | Insulation | Area |
| a. Slab-On-Grade Edge Insulation | R=0.0 | 2397.00 ft² |
| b. Floor Over Other Space | R=19.0 | 1013.00 ft² |
| c. N/A | R= | ft² |

| | | |
|---|---|---|
| 10. Wall Type and Insulation | Insulation | Area |
| a. Frame - Wood, Exterior | R=13.0 | 2856.00 ft² |
| b. N/A | R= | ft² |
| c. N/A | R= | ft² |
| d. N/A | R= | ft² |
| 11. Ceiling Type and insulation level | Insulation | Area |
| a. Under Attic (Vented) | R=38.0 | 2782.70 ft² |
| b. N/A | R= | ft² |
| c. N/A | R= | ft² |
| 12. Ducts, location & insulation level | R | ft² |
| a. Sup: Attic, Ret: Attic, AH: 1st Floor | 6 | 852.5 |
| 13. Cooling systems | kBtu/hr | Efficiency |
| a. Central Unit | 25.0 | SEER:15.00 |
| 14. Heating systems | kBtu/hr | Efficiency |
| a. Electric Heat Pump | 36.2 | HSPF:8.20 |
| 15. Hot water systems | | |
| a. Natural Gas | | Cap: 50 gallons<br>EF: 0.59 |
| b. Conservation features | | |
| None | | |
| Credits (Performance method) | | CV, Pstat |

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: 7.11.22

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 Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.