














Existing Residential Kit - HVAC Units Supplying Existing and New Areas

Typically, Architects Design the Permit Documents Showing Only New Renovations or Additions; Their Drawings Do Not Usually Show Enough Information of the Existing Residence to Perform the Code Required Manual J Room-by-Room Heat Load for an HVAC Design and Energy Calculations Consisting of the Entire Home. Energy Code Consulting Has Developed this [Existing Residential Kit](#) Just for This Purpose.

Knowing that Older Homes May Not Have Scaled Drawings, a Field Sketch of the Existing Building Showing the Geometry and Envelope Component Materials Will be Needed. All Rooms Served by the HVAC System(s) Still Require the Room-by-Room Heat Load Calculations to Determine Capacity and Demand Associated with Existing, Added and/or Renovated Rooms. This Heat Load Calculation Will Also Determine Room-by-Room Air Balance for The Building. Adding Rooms to an Existing Unit Means Removing Some Current Amount of Air Being Delivered, Thus to Correctly Design an HVAC System, a Full Energy Study of the Entire Building is Required to Ensure Home Comfort and Equipment Sizing Through a 3D Energy Model That Exactly Matches the Particular Building.

In this “Kit” You Will Find These Introductory/Instructions, a Sample Sketch, Our Basic [Residential Information Form](#) and Blank Graph Paper. Sketch the Existing Building on the Graph Paper Provided (Your Local Property Appraiser’s Online Sketch is a Good Starting Point for the Exterior Measurements). Match as Much of the Same Information in the Format Shown on the Sample Drawing, Following the Notes Below.

Particular Detail Should Be Given:

-  Show the Compass Orientation Via a North Arrow, Conditioned Square Feet of Existing and New
-  Draw Each Room to Scale (Each Block on the Graph Paper Equals 1 Square Foot)
-  Add Your Designated Room Names (Kitchens Should Show Range Location; Laundry the Dryer; Bath(s) Have Both Shower/Tub, Toilet and/or Current Exhaust Fans; Any Attic Access Panels)
-  Identify Each Building Envelope Component Type (Floor, Walls, Roof Type Including Cladding) with R-Values, U-Value and Solar Heat Gain Coefficients (Windows and Glass Doors); Existing and New May Have Different Values
 -  Floor Changes (on Slab, Raised Floor Over Garage/Lanai, Etc.), Floor Joist Heights Will Be Needed
 -  Show Each Wall: Block or Frame for Exterior and Interior, and if 2x4” or 2x6”
 -  Indicate the Roof Structure and Its Cladding (Shingles, Metal, Tile, Etc. with Color)
 -  Ceiling Heights and Types per Room (Flat, Cathedral, Tray, Coffered, High Hat, Etc.)
 -  Show Each Window Type in Inches with Width Times Height (Fixed, Operable Single or Double Hung, Case, Horizontal, Etc. and Whether Single or Double Pane {Glass, Air Space, Glass}); Skylights or Solar Tubes; Doors: Solid Wood, Metal Core Filled, Sliding Glass or French Doors.
 -  Indicate How Much Roof Overhangs/Extends Past the Walls, as Well as Measure the Offset (The Distance from the Top of the Window to the Bottom of the Facia (Highest Point for Gable Ends).
-  Place Air Handler, Condenser, Supply Registers and Return Grilles in Their Current locations, along with any Thermostat(s); If Available, Sketch Current Duct Layout, and Provide HVAC System Model Numbers.
-  Water Heater Type (Instant or Storage with Gallons), Electric or Gas (Propane or Natural), Location and Efficiency if Known.
-  Complete the Residential Information Form Showing the Envelope Component Materials for the New and Existing Portions of the Building. Two Forms May be Needed or Notes Can be Placed at the Bottom. Save Afterwards, Else it is Just a Blank Form, or Print Out, Complete and Email Back.

While This May Seem Like a Lot of Information, it is Needed to Complete the Heat Loads, HVAC Drawings and Energy Code to Provide the Most Precise Calculations and Verifying the New Building’s Changed Demand Still Meets Your Home’s Indoor Comfort with the Existing Equipment.

HVAC RESIDENTIAL INFORMATION FORM - BUILDING ENVELOPE DATA REQUIRED FOR NEW, EXISTING / RENOVATIONS OR ADDITIONS

Energy Code Consulting's HVAC Design Packages Include All Code Required Calculations (Manual J Room-by-Room Heat Loads, Manual D Full Scale Duct Drawings, Manual T Air Device Selection, Manual Zr Zoning, Manual S Equipment Selection, and Florida Energy Code Forms). All reports and Color CAD HVAC Drawings are Provided to Ensure You Have an Efficient, Compliant and Comfortable Design That Matches Your Home.

Contact Person: _____ Email: _____

Company Name: _____ Phone: _____ Date: _____

PROVIDE REQUIRED PROJECT INFORMATION AND DRAWINGS LISTED BELOW

Builder Name: _____ Project Name: _____

Project Address: _____ Project City, Zip Code: _____

Project County: _____ Permit Office Name or Jurisdiction #: _____

MINIMUM DRAWING REQUIREMENTS:

Site Plan or North Arrow, Scaled Floor Plan, Building Elevations, Detailed Wall Section.
 Conditioned / Living Area Square Feet Per Level, Garage Area Square Feet and Room Names Must be Listed on the Floor Plans.
 Provide Floor and Framing Plans on Multi-Level Homes, along with Detailed Truss Types and Sizes .
 Each Building Envelope Component's Insulation R-Value and Glass NFRC Ratings (Floor, Wall, Door, Glass and Roof).
 Provide Glass Envelope Component Locations in Addition to the SHGC and U-Values.
 Electrical Floor Plan Preferred.
 Provide Existing Duct Layout if Re-using Existing Duct Systems; Show Supply, Return, Ventilation / Exhaust items, Etc.
 For Items Not Shown on the Permit Ready Drawings or Not Provided Below, Those Items Will be Equal to the Energy Code Baseline Recommendations and Listed on HVAC Drawing 1, "Total Building Summary Loads," Which is Only One of the Items Included in Your Efficiency, Compliant and Comfort HVAC Design Package.

PROVIDE NEEDED INFORMATION BELOW TO MEET FLORIDA REQUIREMENTS, BUT ALSO TO FINE TUNE YOUR CUSTOM HVAC DESIGN

Home's Front Door Faces Which Direction: N NE E SE S SW W NW Existing Home Year Constructed: _____

Floor(s): Slab on Grade? Yes No Raised Floor(s) Thermal Layer R-Value = _____

Interior Floor Covering Percentage: Tile = _____ % Wood/Vinyl = _____ % Carpet = _____ %

Roof Color: Light Medium Dark Galvanized Galvalum

Roof Type: Hot Vented Attic Cool Sealed Attic Flat Built up Single Assembly Sloped Other: _____

Roof Cover: Barrel Tile Flat Tile/Slate Shingle Metal Concrete Gravel Membrane Other: _____

Roof / Ceiling Thermal Layer: R-Value = ____ Credits = Radiant Barrier Interior Radiation Control Coating

Roof Configuration: Full Hip Gable Shed Flat Other: _____ Roof Pitch = ____ /12

Block Exterior Wall: Thermal Layer(s) R-Value = ____ Insulation Location = Exterior Interior Integral

Frame Exterior Wall(s): Thermal Layer R-Value = ____ Garage Wall R-Value = ____ Partition Wall R-Value = ____

Exterior Wall Color: Light Medium Dark or Solar Absorptance Fraction = _____

Exterior Door Type: Solid Wood Metal Insulation Fiberglass Core (For Glass Doors, See Window Selection)

Existing Glass: A) Frame: Metal Wood Vinyl B) Panes: Single Double Triple C) Coating: Clear Tinted Low-E

New Operable Windows U-Value = ____ Solar Heat Gain Coefficient = ____ Frame: Metal Clad Wood Vinyl

New Fixed Windows U-Value = ____ Solar Heat Gain Coefficient = ____ Frame: Metal Clad Wood Vinyl

New Sliding Glass Door(s) U-Value = ____ Solar Heat Gain Coefficient = ____ Frame: Metal Clad Wood Vinyl

New French Glass Door(s) U-Value = ____ Solar Heat Gain Coefficient = ____ Frame: Metal Clad Wood Vinyl

Storage Water Heater: Gallons = _____ Type = Electric N Gas P Gas EFF= ____ Location: Garage Attic Interior

Instant Water Heater: Type = Electric N Gas P Gas EFF = ____ Location: Garage Attic Interior Exterior

HVAC System(s): Condenser Location = Exterior (**Show** Exact Locations of Equipment on Drawing)

HVAC System(s): Air Handler Location = Garage Attic Interior Exterior (**Show** Location(s) on Drawing)

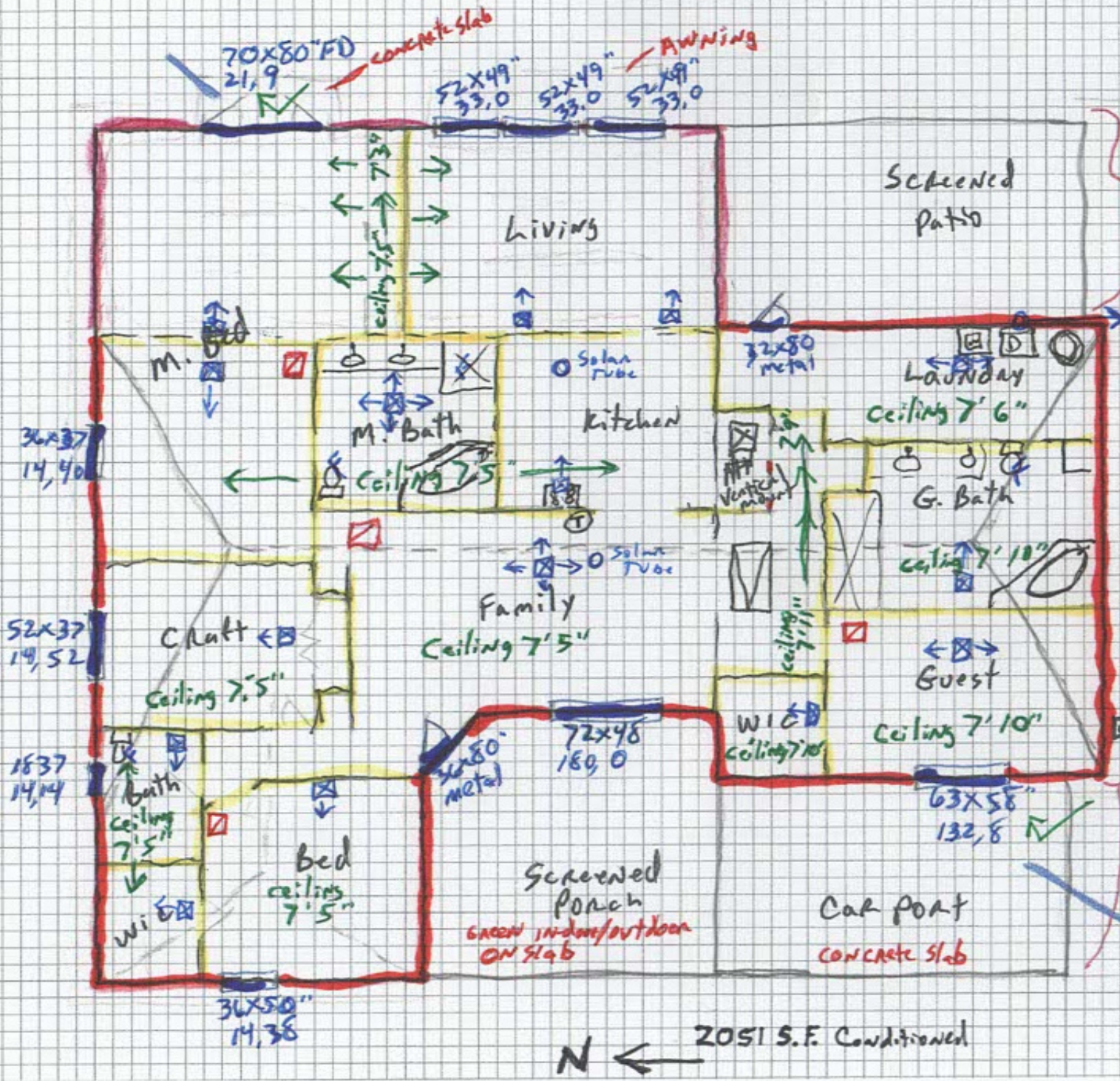
NOTES:

In cases where the Energy Code Baseline Values do not pass code, ECC will select components to achieve a passing score

NEATLY FILL IN DATA • CHANGES MADE AFTER SUBMISSION WILL REQUIRE A NEW PROJECT SUBMISSION FORM AND DESIGN PACKAGE REQUEST



SAMPLE



This section of House is OSB board with Flat membrane roof (white)

ENERGY CODE CONSULTING

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Florida's Energy Code Experts

This section of House is Concrete Block walls with Vented attic R-19

- entire house is concrete on slab.
- All windows are double hung
- U - 0.30
- SHGC - 0.30
- 100% Screen on outside

