

# HVAC System Design Form

## RESIDENTIAL & COMMERCIAL



PE LOAD CALCS, LLC  
901.257.5910  
www.peloadcalcs.com  
anthony.amadio@peloadcalcs.com

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### PROJECT INFORMATION

Contact Person: Phone:  
Company Name: Email:  
Building Address:  
Builder Name: Permit Jurisdiction:  
Additional Info:

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### INSTRUCTIONS

Please complete this form. If specified on building plans, or not applicable, or left for the designer to determine, then please leave item blank. If you need any help, please do not hesitate to contact us.

1. A complete set of drawings and specifications is required, or:
  - A. For New Construction, include floor plans, elevations, wall sections, framing, electrical/reflected ceiling plans, and window/skylight and door schedules. On all floor plans, please indicate North direction. Also indicate preferred location of air handler and any specific duct material preferences (supply types and locations, duct material, etc.).
  - B. For Existing Construction, if a complete set of drawings and specifications are not available, an accurate exterior floor plan, showing windows, doors, skylights, doors, and their dimensions, and other information must be provided. Include and note any attached unconditioned areas (i.e., attached garages). It is recommended to include pictures of the building exterior that shows the house color, wall covering, and roofing material. Record dimensions for windows and doors to the nearest inch, and all other exterior perimeter dimensions to the nearest half foot. On all floor plans, please indicate the North direction. Interior wall dimensions are not required for buildings with existing ductwork.
2. Complete this survey and email to: [anthony.amadio@peloadcalcs.com](mailto:anthony.amadio@peloadcalcs.com), with documents attached.
3. You will receive an invoice via email and a follow-up phone call confirming services to be performed. Please pay by check or credit card prior to performing work.

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### SERVICES REQUESTED

Load Calcs  
Load Calcs & Equipment Selection  
Load Calcs, Equipment Selection & Duct Design  
Mechanical Ventilation System Design  
Energy Code Compliance Reports  
Additional Services:



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## BUILDING INFORMATION

Construction Type:

Total Conditioned Square Feet:

# of Stories:

Foundation:

Ceiling Heights:

Additional Info:

Front Door/Building Facing Direction:

# of Bedrooms:

# of Fireplaces:

# of Skylights:

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## DESIGN INPUT (Part 1 of 2)

### Above Grade Walls

Wall Construction:

Exterior Veneer:

Exterior Color:

Additional Info:

Board Insulation R-Value:

Frame Insulation R-Value:

ICF/SIP/Concr/Block R-Value:

### Roof Construction

Roof Configuration:

Roof Material:

Roof Pitch:

Roof Color:

Additional Info:

Attic Type:

Ceiling Slope:

Insulation R-Value:

Roof Vent Ratio:

### Windows, Glass Doors & Skylights

Operable Windows:

Fixed Windows:

French Doors:

Sliding Doors:

Skylights:

Additional Info:

Frame:

Frame:

Frame:

Frame:

Frame:

U-Values:

U-Values:

U-Values:

U-Values:

U-Values:

SHGC:

SHGC:

SHGC:

SHGC:

SHGC:

### Exterior Doors

Front Door(s):

Back Door(s):

Additional Info:

Side Door(s):

Other Doors:



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## DESIGN INPUT (Part 2 of 2)

### Concrete Slab (if applicable)

Insulation R-Value:

Insulation Location:

Additional Info:

### Crawlspace, Above Unconditioned Basement or Garage (if applicable)

Crawlspace Type:

Crawlspace Wall R-Value:

Floor Joist R-Value:

Additional Info:

### Below Grade Walls of Conditioned Basement (if applicable)

Below Grade Depth:

Frame Insulation R-Value:

Wall Construction:

Board Insulation R-Value:

Interior Frame:

ICF/SIP/Concr/Block R-Value:

Additional Info:

### Ducts

Location of Ducts:

Supply Outlets:

Duct R-Value:

Main Return:

Trunk Material:

Room Returns:

Branch Material:

Return Air Filters:

Additional Info:

### Equipment Selection

Cooling System Type:

AHU 1 Location:

Heating System Type:

AHU 2 Location:

Fresh Air Ventilation:

AHU 3 Location:

Additional Info:

### Water Heater

Type:

SubType:

Location:

Capacity:

Efficiency:

Additional Info:



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## **HVAC SYSTEM DESIGN DISCLAIMER**

PE Load Calcs LLC performs load calculations, equipment selections, and duct designs of residential and commercial buildings using ACCA/ASHRAE procedures and current codes. All calculations are based on information given to PE Load Calcs in the form of surveys, drawings, sketches, pictures, and meetings. In certain cases, PE Load Calcs may make reasonable assumptions about design conditions and construction materials that may or may not be accurate for the building of concern. It is the responsibility of the installing HVAC contractor to verify the design conditions, construction materials, and compatibility with existing equipment before equipment purchase and installation.

All HVAC system design work are based upon information provided by the particular party submitting a particular project to PE Load Calcs. PE Load Calcs does not independently verify that the data provided to us is correct or complete, and any design made by PE Load Calcs are based upon the information provided by third parties. PE Load Calcs makes no claim that the information provided to us is correct or complete.

PE Load Calcs utilizes the latest Wrightsoft's Right-Suite Universal which is an ACCA Certified and ASHRAE recommended HVAC system design software. The mathematical model and design of the HVAC system, designed by PE Load Calcs, is only as accurate as the input provided. PE Load Calcs makes every attempt possible to be as detailed and accurate as possible, however, there is no reasonable means to mathematically model an HVAC system that has not been properly installed, or has had after-the-fact building modifications or HVAC system component alterations or substitutions.

If there is any construction modifications (floor plan, roofing material, window types/sizes, insulation characteristics, or any other change that will alter the load calculation results), HVAC equipment substitutions, duct sizing or layout changes, which is not noted in this report, and therefore not provided to PE Load Calcs for consideration for the HVAC system design, then PE Load Calcs may not guarantee the performance of the HVAC system design, and all design standards and procedures performed for this HVAC system design, including this report, may no longer be valid.

PE Load Calcs will not guarantee the performance of the HVAC system design if the equipment selection and/or duct design has been performed by another party. Also, PE Load Calcs will not guarantee the performance of the HVAC system design that has not been properly installed or tested to verify performance has conformed to manufacturer specifications and design criteria provided in this report. It is up to the installing HVAC contractor to properly install, test, and verify all components of the HVAC system. All installing HVAC contractors are expected to follow ACCA Standards 5 and 9 for quality HVAC equipment installation.

All information on any existing HVAC equipment (prior to design) to remain with an existing structure must be provided to PE Load Calcs prior to the design for appropriate selection of new and compatible equipment. It is up to the installing HVAC contractor to verify equipment compatibility between with the newly installed equipment (per design) and any existing equipment remaining, via manufacture specifications and airflow/static pressure measurements.

PE Load Calcs does not provide architectural or engineering plans or diagrams for the public or for use by contractors or construction companies as final "construction documents". PE Load Calcs works with architectural and engineering firms and with contractors in connection with their designs of HVAC systems.

Copies of this report, including the completed balance report (and any other documents that need to be completed by the installing HVAC contractor verifying equipment performance meeting design requirements and manufacturer specifications), must be kept on file by the installing HVAC contractor, and also a copy given to the homeowner to remain attached to the HVAC equipment, and to any other party of specific interest (i.e., code official, county, builder/architect).