King George County Community Development

Residential Plans Examiner Review Form
For HVAC System Design (Loads, Equipment, Ducts)
Provided by Mechanical Contractor

Contractor ________________________
Mechanical License # ______________
Building permit # ___________________
Home Address (street or lot #, block, subdivision)
____
____

REQUIRED ATTACHMENTS **ATTACHED**
Manual J Form (and supporting worksheets): Yes ◯ No ◯

Air Distribution worksheet must be available to inspector on mechanical Rough-in inspection of duct work

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor Temperature __________ F
Indoor Temperature __________ F
Total Heat loss __________ Btu

Summer Design Conditions

Outdoor Temperature __________ F
Indoor Temperature __________ F
Grains difference ______ GR @ _____ % Rh
Sensible heat gain __________ Btu
Latent heat gain __________ Btu
Total heat gain __________ Btu

Building Construction Information (this information must match information provided by builder)

Building

Orientation (Front door faces) ________________
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms ________________
Conditioned floor area ____________ Sq Ft
Number of occupants ___________

Windows

Eave overhang depth ___________ Ft
Internal Shade ____________
blinds, drapes, etc.
Number of skylights _____________

HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type ______________________
Furnace, heat pump, boiler, etc.
Model ________________________
Heating output capacity ________________ Btu
Auxiliary heat output capacity ___________ Btu

Cooling Equipment Data

Equipment type ______________
air conditioner, heat pump, etc.
Model _____________________
Sensible cooling capacity _________Btu
Latent cooling capacity __________ Btu
Total cooling capacity __________ Btu

Blower Data

Heating CFM _____ CFM
Cooling CFM _____ CFM

DUCT INSPECTION OPTION (N1103.2.2.1)

Testing options for ductwork: Select one - (see page 2 for details)

- ☐ Post construction test — Approved testing agency required
- ☐ Rough-in test — Approved testing agency required

<u>All ductwork must be Tested per Section N1103.3.3 of the 2021 VRC</u>

N1103.2.2 Sealing. All ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or Section M1601.4.1 of the Virginia Residential Code. Verification of compliance with this section shall be in accordance with either Section N1103.3.3 or Section N1103.3.4.

<u>N1103.3.3 Testing option.</u> *<u>Duct tightness shall be verified by one of the following:</u>*

1. **Rough-in-Test:** The total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m^2) of conditioned floor area where the air handler is installed at the time of test. Where the air handler is not installed at the time of test, the total leakage shall be less than or equal to 3 cubic feet per minute (85 L/min) per 100 square feet (9.29 m^2) of conditioned floor area.

2. **Post Construction Test:** Total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m^2) of conditioned floor area.

When one of these options are chosen, testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section N1103.3.3 and approved recognized industry standards***<u>. If choosing this option individual testing must be approved by Building Official. The contractor installing the HVAC can be the person who does the testing</u>***

Print Name: ______________________________
Signature: ______________________________
Date: ___/___/___