



A Check List for Building R-2000 Homes

CONGRATULATIONS for having attended the R-2000 Builders Workshop and successfully completing the test.

You are now qualified to build homes with the R2000 distinction.

OFNTSC welcomes the opportunity to work with you in certifying your homes. Here are the steps to certifying your homes:

Step 1: Send a copy of the drawing of the homes to OFNTSC:

We prefer to receive the plans in both hardcopy and electronic copy. Please include the following information (if possible):

Complete set of house plans including	
<ul style="list-style-type: none">• Floor plans• Elevations & sections• Lot #, address etc.	<ul style="list-style-type: none">• Site plan• Window schedule• Section Spec. Form
Complete set of mechanics specifications	
<ul style="list-style-type: none">• Ventilations equipment including exhaust fans• Space & DHW heating equipment• Certified fireplace and/or woodstove• Location of HVAC components shown on house plans• Location of all exterior vents shown on house plans	
Water conserving plumbing fixtures	
IAQ & Environment Features	

Step 2: We will help you submit an Application form to the OFNTSC

Step 3: OFNTSC (or R2000 Advisor) will input the house plans into the Hot 2000 software program to determine the energy consumptions of the building and compare it to the R-2000 energy target. We will work with you by phone, fax or email to find the most cost-effective way to meet the energy performance requirements. We will send you a letter summarizing requirements within 5-7 workdays.

Note: A complete list of R-2000 requirements can be found in the R-2000 Standard found in your Builders Manual; however, here are a few items we have found important to highlight:

- The house must pass the 1.5 ACH at 50 Pa. Air tightness test
- Low E argon windows with insulated spacers are required
- Basement must have full height basement insulations
- All gas, propane and oil fired space and water heating equipment must be direct or power vented
- Minimum OBC insulation levels must be met or exceeded
- Cold room doors must be insulated and air sealed
- Sump pits must have a sealed cover

All other insulation levels are determined through the HOT 2000 Design evaluation process noted above.

Step 4: Hire an HRAI certified ventilation and heating designer/installer

- Mechanical contractors installing HRVs in R-2000 homes must have an HRAI Ventilations Installers of Designers License number indicating they have taken the three-day course and passed the exam.
- All heating and cooling systems installed in R-2000 houses must be designed and installed in accordance with CSA F280 and the HRAI Digest. That is, a formal heat loss and duct design must be done on each house. These designs must be on file with OFNTSC before the final inspection on the house.

Note: In all cases we ask that your mechanical contractors verify the capacity of the heating system with us before it is installed. This ensures equipment is not oversized.



Step 5 **Begin Construction and call us at the Insulation Stage**

On your first R-2000 house we will perform an insulation/vapor barrier inspection, just before drywall, to help you to identify any weak points and techniques to help achieve the air tightness level required. It is always useful to have your insulator on hand when doing this inspection which takes approximately 1 hour to perform.

Note: *Allow for approximately 2-4 working days notice for this Pre-Drywall Inspection. Pre-drywall inspections are recommended on any houses that you feel have details or issues that may prove difficult during the air test – the goal is to help you pass the air tightness test.*

Step 6: **Arrange for an Air Tightness Test (Blower Door Test) right after drywall installation**

- Allow for 2-4 working days notice for this test
- This test is ideally done just after the drywall is completed. Allow for approximately 1 hour of uninterrupted access to perform the test and the envelope needs to be substantially completed:
 - Windows installed
 - Service penetrations in the furnace, dryer vent, range hood vent, HRV vents in, attic hatch installed

Step 7: **Complete Construction**

Step 8: **Arrange for an R-2000 Final Inspection**

- Allow for 2-4 working days notice for this inspection
- This can be done any time after the furnace and HRV are in and operational and the house is substantially complete. The inspection takes approximately 1 hour.
- At this inspection we determine if:
 - The house is build as per the information we received and input into the HOT 2000 Program
 - The material and appliances used were as specified and meet the IAQ and Material Conservation Pick List requirements
 - The appliances meet R-2000 requirements
 - The balance of the HRV and CFM setting are as per the design

Step 9: **Complete and submit the files to the R-2000 program**

Once your home has passed the inspections, your inspector will modify the Hot 2000 software showing an “as Built” energy assessment. Assemble all the necessary paperwork and submit this file to OFNTSC for R-2000 certifications.

Step 10: **The homeowner will receive a package of documents from OFNTSC including the certification of their new home.**

Final Notes: **To keep your R-2000 License in good standing you must:**

- Build an R-2000 House at minimum of once every 3 years;
- Keep your Licensing Agreement up to date and in every good standing with OFNTSC
- Attend an R-2000 Builder’s Update Workshop ever second year.

A small percentage of houses will be audited for quality assurance by NRCAN.

Typically this is a “paper” audit only, reviewing the work of the design evaluator. On occasion the builder may be asked to verify specific information.

Very special thanks go to Air Solutions for allowing to adapt and use the R-2000 checklist.

For more information, please contact our
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