

January 1, 2012 came and  
went, now what?

**Waterloo Region Home Builders  
Pre Dinner Meeting**

February 16, 2012

# Energy Efficiency – Part 12

(as of December 9, 2011 update)

## Energy Efficiency Requirements for Housing

EnerGuide 80  
NRCan Procedures  
12.2.1.2(3)(a)

Supplementary Standard  
SB- 12  
12.2.1.2(3)(b)

Prescriptive  
Compliance  
SB-12 - 2.1.1.

Performance  
Compliance  
SB-12 - 2.1.2.

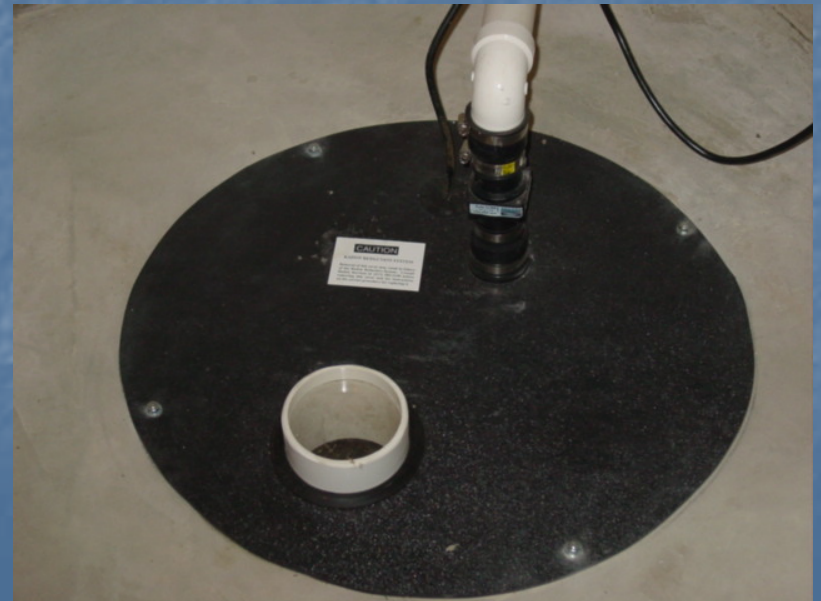
Other Acceptable  
Compliance  
SB-12 - 2.1.3.

# What's new?

- R-Values have increased significantly
- Attic hatches have been addressed (R20)
- Reduced insulation at roof eaves (R20)
- Separate Table for Additions T 2.1.1.10
  - R24 Exterior Walls
  - R50 Ceilings with Attic Space
  - R31 Ceilings with out Attic Space
  - R20 Basement Walls

# What do we expect to see, sumps?

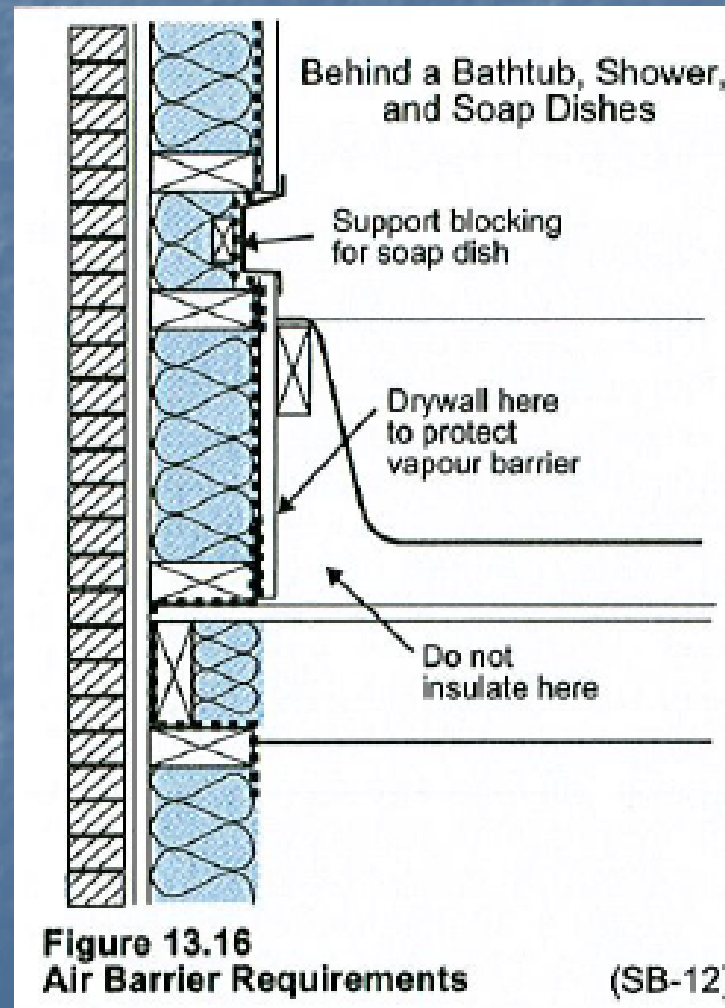
- Sump pits to be sealed
- Non-sealed sump pits still permitted in cold cellars since this is out side of the building envelope



# What do we expect to see, air barrier?

- Air Barrier Inspection is now an independent inspection
- If you are installing a exterior air barrier a separate inspection will be required to be booked prior to any cladding

# Air Barrier Wall Section



# What do we expect to see, basements?

- Concrete floor slabs in basements are required to be caulked at the intersection of the floor and at all penetrations
- Check with your local Building Department, the interpretation of this varies from municipality to municipality

# What do we expect to see, windows?

- Window requirements changed U-values and air leakage rates. All municipalities require these stickers to remain on the windows until after the insulation inspection.
- Should stickers fall off or be removed, the window manufacturer can supply spec's to the building inspector for approval. These are to be site specific.

# What do we expect to see, sunrooms?

- Sunrooms have been specifically addressed, increased U-value on glazing



# What do we expect to see, Energy Star?

- Energy Star is a specific program and is to be followed as per the specifications
- Energy Star label is not required for occupancy, but we expect a report for the Energy Advisor confirming the house meets the requirements and has been submitted to NRCan

# What do we expect to see?

- Energy Efficiency Design Summary (EEDS) has been updated and version 2 is being circulated by your local Building Department
- Please ensure the EEDS info and info on drawings/sections match. Conflicting information will slow the permit process

# Energy Efficiency Design Summary

Energy Efficiency Design Summary (Part 9 Residential)			
This form is used to summarize the energy efficiency design of the project. Information on completing this form is on the reverse			
For use by Principal Authority			
Application No:		Model/Certification Number	
<b>A. Project Information</b>			
Building number, street name		Unit number	Lot/Con
Municipality		Postal code	Reg. Plan number / other description
<b>B. Compliance Option</b>			
<input type="checkbox"/> SB-12 Prescriptive [SB-12 - 2.1.1.]	Table: Package: A B C D E F G H I J K L M (circle one)		
<input type="checkbox"/> SB-12 Performance* [SB-12 - 2.1.2.]	* Attach energy performance calculations using an approved software		
<input type="checkbox"/> Energy Star®* [SB-12 - 2.1.3.]	* Attach BOP form		
<input type="checkbox"/> EnerGuide 80®*	* House must be evaluated by NRCan advisor and meet a rating of 80		
<b>C. Project Design Conditions</b>			
<b>Climatic Zone (SB-1):</b>		<b>Heating Equipment Efficiency</b>	
<input type="checkbox"/> Zone 1 (< 5000 degree days)		<input type="checkbox"/> ≥ 90% AFUE	
<input type="checkbox"/> Zone 2 (≥ 5000 degree days)		<input type="checkbox"/> ≥ 78% < 90% AFUE	
<b>Space Heating Fuel Source</b>		<input type="checkbox"/> Gas	
<input type="checkbox"/> Solid Fuel		<input type="checkbox"/> Propane	
<input type="checkbox"/> Earth Energy		<input type="checkbox"/> Oil	
<input type="checkbox"/> Electric		<input type="checkbox"/> Other Building Conditions	
<b>Windows+Skylights+Glass Doors</b>		<input type="checkbox"/> ICF Basement	
Gross Wall Area = _____ m <sup>2</sup>		<input type="checkbox"/> Walkout Basement	
Gross Window+ Area = _____ m <sup>2</sup>		<input type="checkbox"/> Log/Post&Beam	
% Windows+ _____ %		<input type="checkbox"/> ICF Above Grade	
		<input type="checkbox"/> Slab-on-ground	
<b>D. Building Specifications</b> [provide values and ratings of the energy efficiency components proposed, or attach Energy Star BOP form]			
<b>Building Component</b>	<b>RSI / R values</b>	<b>Building Component</b>	<b>Efficiency Ratings</b>
<b>Thermal Insulation</b>		<b>Windows &amp; Doors<sup>1</sup></b>	
Ceiling with Attic Space		Windows/Sliding Glass Doors	
Ceiling without Attic Space		Skylights	
Exposed Floor		<b>Mechanicals</b>	
Walls Above Grade		Space Heating Equip. <sup>2</sup>	
Basement Walls		HRV Efficiency (%)	
Slab (all >600mm below grade)		DHW Heater (EF)	
Slab (edge only ≤600mm below grade)		NOTES	
Slab (all ≤600mm below grade, or heated)		1. Provide U-Value in W/m <sup>2</sup> .K, or ER rating	
		2. Provide AFUE or indicate if condensing type combined system used	
<b>E. Performance Design Verification</b> [complete applicable sections if SB-12 Performance, Energy Star or EnerGuide80 options used]			
<i>SB-12 Performance:</i>			
The annual energy consumption using Subsection 2.1.1. SB-12 Package _____ is _____ GJ (1 GJ = 1000MJ)			
The annual energy consumption of this house as designed is _____ GJ			
The software used to simulate the annual energy use of the building is: _____			
The building is being designed using an air leakage of _____ air changes per hour @50Pa.			
Energy Star: BOP form attached. The house will be labeled on completion by:			
Energy Star and EnerGuide80:			
Evaluator/Advisor/Rater Name:		Evaluator/Advisor/Rater Licence #:	
<b>F. Designers</b> [names of designers who are responsible for the building code design and whose plans accompany the permit application]			
Architectural		Mechanical	

# What do we expect to see?

- January 1, 2012 brought in the requirement of an Occupancy Permit
  - less than 3 storeys in building height,
  - less than 600m<sup>2</sup>,
  - no accommodation for tourists,
  - does not have a dwelling unit above another dwelling unit, and
  - does not have any dwelling units sharing a common means of egress

# After today...

- The working group made up of MMAH, OHBA, LMCBO and OBOA is currently reviewing comments on the EEDS, this is an evolving document to make sure the exchange of info to consistent and user friendly
- Currently City of Kitchener has a proposal for the Performance Path and is reviewing to provide comments back to the Builder and Consultant
- Please stay in touch with your local Building Department for further updates

Questions?

# Thanks



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