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President's Message – Spring/Summer

For many of us, spring brings new meaning, as the ground begins to breathe and the birds build their nests. We're busy reviewing new construction projects and assessing existing dwellings.

FNNBOA continues to move forward, creating a lot of synergies with its partners and of course, with the building officers. Since our last newsletter, FNNBOA had a booth and gave a presentation at a housing conference in Whitehorse, Yukon. We have also been following up with many of the contacts we made at our AFOA conference booth in Winnipeg in February.

FNNBOA is also busy with its education mandate. The association has established a partnership with Humber College to provide on-line inspection courses. This will be advantageous to those working north of 60 or in remote communities. FNNBOA has also revised the Part 9 training courses to ensure that the examples used reflect real housing experiences in our communities. The Part 9 training is part of the agreement FNNBOA recently reached with the Ontario Ministry of Municipal Affairs and Housing.

On the certification front, several members have received their certificates. The Council is issuing certification for all three levels. It

is important that we continue to move in this direction to ensure building officers are meeting the required skills and experience.

When we attend meetings, we notice more and more building officers are sporting the FNNBOA logo on their shirts. We are pleased to see that members are proudly wearing their shirts.

In this edition of the newsletter, you will notice that we have added a section called Eagle's Eye on Housing, where we discuss practical solutions for common problems.

Congratulations to Jim Munroe for his inclusion as a member of the Standing Committee on Housing and Small Buildings for the Canadian Commission on Building and Fire Codes. The CCBFC is responsible for updating and revising the National Building Code for The National Research Council. This is an exciting time to be involved, as the transition to objective-based codes is made. Read our brief introduction to the release of the objective-based codes and its implications for community housing policies.

Watch this development closely, as in future editions we hope to provide practical interpretations of the technical changes to the code and its application.



Objective-based codes are here — finally!

The 2005 edition of the National Building Code of Canada (NBC) is now available. Everyone is asking: Why did it take so long?

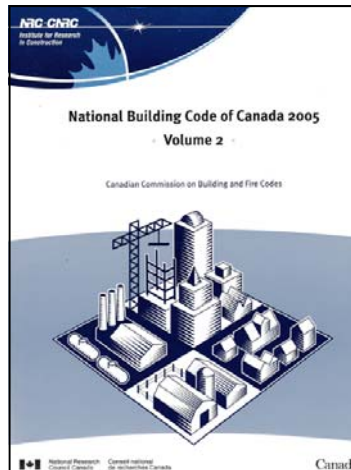
While Canada's national construction codes have continually improved over the years, they have also become more complex. As well, emerging technologies and methods have increased dramatically to meet homeowners' demand for more energy-efficient, environmentally friendly products.

The Canadian Commission on Building and Fire Codes (CCBFC) has therefore undertaken to develop an easier-to-understand, easier-to-implement system of objective-based codes, published in September 2005.

Current users of Part 9 will find the format and layout familiar, but with additional references outlining the objectives the code provision is intended to achieve, and describing the functions the building or its components must successfully perform. The builder is no longer bound by the code provisions to meet "prescriptive requirements," but will use either "acceptable solutions" or "alternate solutions."

Objective-based codes will foster innovation from Canadian manufacturers to meet the public demand for better product selection.

The move to objective-based codes was the reason for the delay in updating the NBC's 1995 edition, and involved more than 800 technical changes. Besides adding prescriptive measures for recent innovations such as insulated concrete forms, the shift required that each provision meet one of the objectives of



the building code.

SAFETY: Fire Safety, Structural Safety, Safety in Use, Resistance to Unwanted Entry and Safety at Construction and Demolition Sites

ACCESSIBILITY: Barrier-Free Path of Travel, Barrier-Free Facilities

HEALTH: Indoor Conditions, Sanitation, Noise Protection, Vibration or Deflection Limitation, Hazardous Substances and Containment

FIRE & STRUCTURAL PROTECTION OF

BUILDING: Fire Protection of the Building, Structural Sufficiency of the Building, Protection of Adjacent Buildings from Fire, Protection of Adjacent Buildings from Structural Damage

Gone from the new codes is the requirement to provide a door to a room containing a water closet. Why? If you look at the objectives listed above, a door to a water closet doesn't meet one of the objectives, and is therefore not required.

The same process has an impact on bedroom windows. By analyzing the objectives, we find that the requirement for a window is to provide a second means of egress. If an alternate solution is to provide a hatch, no window is required, since artificial lighting and mechanical ventilation needs are met.

The challenge for First Nations' builders is in using objective-based codes to develop housing policies and practices that reflect local cus-

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toms, traditions and values. It is important to remind readers that the NBC is a minimum standard that even the Canada Code Centre admits does not reflect the realities of harsher climatic, geographic and occupancy conditions found in rural, remote and First Nations' communities.

First Nations' housing policies should adopt a code, yes, but they should go beyond and outline better building prac-

tices and more appropriate materials. Minimum codes are not necessarily adequate and appropriate to our communities' needs.

Funding requirements for housing dollars are now being released only on the provision that Band Council Resolutions adopt some form of official building code. If your First Nation has adopted the "most current edition of the National Building Code," the 2005 NBC is now in effect in your community.

Watch for training sessions on the new codes to begin in June, with the arrival of the CD version of the code.

For more information contact:

Canadian Commission on Building and Fire Codes

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New Part 9 training pilot

Anyone who has had to read through technical manuals knows that they are often very dry and difficult to read. Readers may have to go over the manual several times in order to retain and understand the material. This type of learning style has been proven effective for only a small percentage of individuals. It may explain why the adult learner fails at a high rate when confronted with technical training.

Adult learning, we now understand, should include other training methods, such as visual (pictures, objects, etc), tactile (being able to pick up and hold objects) and experiential (actively doing something). Under our partnership arrangements with MMAH, FNNBOA proudly agreed to provide supplemental material to Part 9 training courses that reflects the housing requirements and adult-learning needs of First Nations communities. These courses are important because they are a requirement for national certification by FNNBOA.

FNNBOA first challenged the OBC Part 9 course - The Building Envelope. This five-day (37-hour) basic course deals with plan examination and inspections of the house structure and the building envelope.

It includes: An Introduction to the OBC; The House - General; Difficulties Confronting Building Inspectors; Reading Plans; Building Permit Application; Site Plans; Footings; Foundation Walls; Concrete Slabs on Ground; Roof and Ceiling Construction; Floor Construction; Wall Construction; Other Structural Components.

During this challenging week, participants can be expected to spend an additional 80 hours preparing to write the final exam.

The switch to objective-based codes meant the project team had to supplement the OBC material to take the changes into account. A somewhat tedious job, but we are proud to announce that

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FNNBOA Booth unveiled at Aboriginal Financial Officers Association national conference

This year, the AFOA's annual conference was held in Winnipeg on February 22nd and 23rd. Attended by more than 700 delegates from across Canada, this was a great venue to showcase and promote FNNBOA's goals on enhancing the FNBO's skills through certification and capacity development. AFOA's goals are to enhance the financial practices and management skills of those responsible for the stewardship of Aboriginal resources. Volunteering their time to staff the booth were co-president Bud Jobin and regional representative Seeta Rocola. A special thanks to CMHC and conference organizers for helping to set up and dismantle the booth.

The booth will go a long way towards increasing the visibility of FNNBOA and our goals. Already this year bookings have been made to have a booth at the Whitehorse Housing Conference May 2nd and 3rd, the Saskatchewan First Nations Housing Symposium in Saskatoon April 19th and 20th, and the Prairie and Territories First Nations and Inuit Housing Symposium on September 18th to 20th, 2006 in Edmonton.

While in Winnipeg, the co-president met with CMHC representatives Donna Burke and Jeff Rill, technical resource officer, to advance FNNBOA as a



FNNBOA Regional Representative Seeta Rocola and FNNBOA Co-President Bud Jobin

source of capacity-development programs.

Watch for our booth in your area. Visit us and receive the latest edition of our newsletter and a FNNBOA poster.

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we've now laid the template for addressing First Nations adult-learning requirements. The revisions in the course meet regional needs and update the material.

The training program retains all of the original exercises, and uses the final test from the manuals, but delivers it in a classroom setting through visual aids such as power point, pictures and actual house plans. It also adds activities to allow participants to flex their new skills.

Most Building Officers working today got into the industry as a second career and had no clear path to professional development. With this aging workforce, the door is open for our youth to choose careers as First Nations Building Officers.

A focus group has been established, and we anticipate a pilot session with the material in April 2006. This course adds to the successful completion of prior training programs: Introduction to Inspecting Existing Dwellings, Inspecting Existing Dwellings and the EnerGuide for Existing Houses training course.



FNNBOA Biographies

Douglas Odjick - *Algonquin Anishinabe Nation Tribal Council (AANTC)*



Douglas is a member of the Kitigan Zibi Anishinabeg in southwestern Quebec. His career started after he received certification in carpentry and as a construction engineering technician. He has worked in a variety of construction-related jobs, including general contracting, community housing administration, and now as a construction and architectural

technician for the AANTC.

Tribal council technical services include inspection, estimating, producing preliminary plans for

community buildings, producing terms of reference for tendering of both professional and construction contracting.

Douglas enjoys working with people from all the communities represented, on building projects that make each community proud.



Walter Mishibinijima - *Housing Inspector Wikwemikong Unceded Indian Reserve*

Walter has worked in all facets of housing, from labour to inspections and project management for the past 34 years. He also provides training on the Better Builder Series, WETT and inspecting existing dwellings, and is very instrumental in ensuring houses are built to the building codes.

Walter also started the "Fostering Futures Fund," which provides financial support for current and past foster children attending community colleges or universities. To raise funds, Walter does an annual 350-kilometre walk from Rabbit Island (Manitoulin Island) to Sault Ste. Marie. The trip takes him several days. For the past 22 years, Walter has opened his home to foster children and more than 100 children have benefited from his care.



Helen Ward-Wakelin - *Housing Inspector for (15) First Nations Communities / Technical Services for the North Shore Micmac District Council*

Helen provides inspection services for all new Section 95 &

Section 10 Housing Construction projects with CMHC involving mainland bands. Helen also helps to deliver the Residential Rehabilitation Assistance Program (RRAP) and conducts (Portfolio) inspections on existing Section 95 housing units.

Helen is an active member of the On Reserve Liaison Housing Committee which consults with INAC, Health Canada, CMHC, APC and

First Nation's representatives in the housing field. The committee is focused on housing issues facing First Nation's communities in the Atlantic.

Besides providing inspection services, Helen is the owner of Craft N Grow, an indoor and outdoor garden centre, computer and hand-made Mik'Maq craft retailer in Eel Ground First Nation, New Brunswick.



Ontario inspectors support FNNBOA and certification

On January 30, 2006, the First Nations' inspectors held their annual Native Inspection Services Initiatives (NISI) meeting in Ottawa.

At the meeting, inspectors discussed whether to form an association under Ontario First Nations Technical Services Corporation (OFNTSC) and use their proposed certification, or to support the First Nations National Building Officers Association to establish a provincial chapter and apply for certification under the existing national certification program.

The majority of inspectors voted to create a chapter under FNNBOA and to eventually become certified by the independent Certification Council. Therefore, OFNTSC's proposed

certification/accreditation model for inspectors in Ontario was rejected.

The chapter will give the inspectors excellent networking and communication opportunities to discuss housing-inspection issues with professionals working in other communities. It will also open the doors for better training opportunities.

Over the next few months, the chapter will work on establishing a committee and working with its partners and stakeholders to identify the inspectors' professional needs. The chapter will also help to implement national policies, such as certification and accreditation, and to identify training needs.

Investment payoff for PAGC

The Prince Albert Grand Council (PAGC) technical-services group has just submitted a post-retrofit EnerGuide For Houses (EGH) assessment for a house in LaRonge, Saskatchewan. The rating increased from 47 to 71 as a result of added insulation in the attic and basement, and air-sealing activities. The air changes per hour were reduced from 6.14 to 2.35.

The band will receive a grant of \$1492, which will be matched by SaskEnergy. More importantly, they have reduced their energy consumption by 46.4 percent, and

should be able to save that again on their space-heating bill.

This success story is a reality because of the vision and hard work of PAGC Technical Services, with encouragement from FNNBOA and the support of NRCAN, CMHC and INAC. In addition, Vince Generaux from PAGC delivered an EGH training session in late November, along with experienced EGH trainer Ian Startup, in Prince Albert. Approximately 12 First Nations technical-service providers from British Columbia, Alberta and within Saskatchewan attended five days of en-

ergy-advisor training, comprised of in-class sessions and nine on-site EGH house assessments.





Eagle's Eye On Housing

What Caused Fungus Growth in Siding?



Cause: Describing what is happening requires a basic Building Science understanding of Moisture Flow Mechanisms. Moisture moves by either **gravity, capillarity / wicking, vapour diffusion** or through **airborne vapour transport**. The picture shows a mid-1990s modular home using Panel Type Siding attached directly to the wall assembly. Rain-driven moisture is running down the siding (**gravity**) and penetrating into the wall assembly at joints of the exterior wall cladding (**capillary**). Failed caulking and the lack of flashings at horizontal junctions have compounded the problem. Once the moisture has penetrated the cladding face, it remains trapped, providing a source of moisture for the fungus pictured. Not surprisingly, once the panels were removed, the interior wall-space cavities were also mouldy.

With Acknowledgement to the Better Builder Series

Rain and snow can penetrate building cladding systems when there are openings, and when there are sufficient pressures to drive the water into the assembly. Despite wider roof overhangs and cantilevered projections, walls will

still get wet during rain storms that are accompanied by driving winds. Proper flashings and sealants represent the first line of defence against rain penetration. Even good-quality exterior caulking and sealants can develop cracks over time as materials age and building elements shift. Eventually, water will enter through those cracks. Protection of wall sheathing with properly installed house wrap (Tyvek, for example) is referred to as the **Second Plane of Protection** in the NBC 2005.

If the driving forces are controlled and accommodated in the design, rain penetration can be effectively controlled. Water entry from **capillary action, gravity** and **air pressure differences** can be controlled through rain screen design principles. Through the introduction of an air space behind the cladding (or joint), and additional venting, air pressure behind the cladding can equal that on the face of the wall, eliminating the force responsible for causing moisture to move inward by air-pressure gradients.

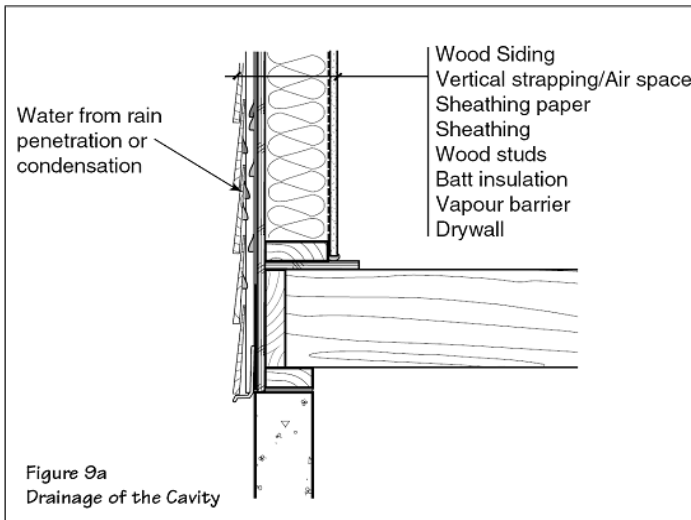
The Simple Rain Screen Wall

The simple rain screen wall consists of an outer layer of siding or cladding, and an inner wall separated by an air space (Figure 9a). The air cavity must be equipped with drains at the bottom of the cavity to remove any moisture which accumulates in the cavity. This air space also prevents the entry of water into the building assembly through capillary action. The NBC 2005 edition refers to this cavity as a **capillary break**. To perform effectively, the rain-screen design requires an effective **air barrier system** within the building envelope (either at the inner face of the wall or as a component of the exterior sheathing).

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Installing a cavity in the wall system, comprised of 1x2 vertical strapping, and providing a moisture-resistant coating to the interior face of the cladding is one example of a **simple rain screen system**. A more familiar example would be brick-faced cladding.

Brick-faced cladding does indeed have an air space (**capillary break**) with weep holes installed at the bottom to let condensed moisture drip out of the cavity space. This may be an acceptable solution to areas that have less than 60 inches of rain in a given year. However, building science also takes into account air-pressure flows (**air moves from high pressure to low pressure**) taking with it uncontrolled moisture flows. If your area has more than 60 inches of rain a year, consider a **pressure-equalized rain screen system**.

For more information, see CMHC Research Highlights: The Rain Screen Wall System (order # 70139), which clarifies the difference between **simple rain screen systems** and **pressure-equalized rain screen systems**.

Eagle's Eye On Crawl Spaces

Dirt crawl spaces with open vents represent old crawl-space thinking.

Crawl spaces are a common foundation option in First Nations' communities. By minimizing the height of the foundation wall, both excavation and material costs involved in the construction can be reduced. Similarly, by incorporating less exposed surface area and a reduced volume of air to be heated, crawl spaces can minimize heating expenses while still providing access to protected storage areas.

Crawl-space thinking in the past used this costing model to economize on available funding dollars. Occupants of these units however found them to be musty and smelly, and the houses often had to be replaced prematurely. Crawl spaces can be designed and constructed to contain either heated or unheated space. As a general rule, heated crawl spaces will perform better than unheated crawl spaces. Today we think in terms of the **house as a system**, and use building-science principles in designing and selecting foundation types.

In our next edition ...

- Discover how your crawl space is affecting indoor air quality and your health.
- More on the new objective-based codes.
- We continue to spotlight exceptional FNBO members.
- We release results from the Certification Council's review of applications for certification.