



# Building Officials Newsletter

Building Standards  
July 2002

## Building Code Discussed in the Legislature

The Committee of Finance of the 3<sup>rd</sup> Session of the 24<sup>th</sup> Saskatchewan Legislature, as part of its examination of the budget for Corrections and Public Safety, discussed Saskatchewan's building code.

Honourable Andrew Thomson, the Minister responsible for *The Uniform Building and Accessibility Standards Act* responded to questions about:

- how the building code is created and changed,
- who is involved in making changes to the building code,
- how municipalities enforce the building code,
- what is the purpose of having a building code,
- who does the building code protect,
- who is responsible for enforcement of the building code,
- who keeps records on building code compliance,
- where liability for compliance with the building code lies,
- what liability is there for people who don't follow the building code, and
- what liability is there for municipalities that don't inspect new buildings for compliance with the building code.

The Minister elaborated on the challenge facing an individual who is looking at purchasing an older building, to determine whether it complied with the building code when it was built or complies with today's code.

Other than the questions of liability, which can only be answered by the courts, building officials and

municipalities should be prepared to answer these good questions and many others in their normal course of business. Building owners frequently make assumptions about what the building code is and what it does, but seldom come into direct contact with application of the building code and the building code enforcement process. Building officials can help clarify people's understanding and expectations of the building code, by taking time to answer questions and making an effort to explain the scope and limitations of the building code's impact on building construction.

Building Standards supports building officials and municipalities by answering similar questions and providing similar explanations. When the province adopted the building code in 1988, rather than leaving it to the municipalities to adopt, it established a framework for greater uniformity across the province. As local authorities continue to improve and standardize their administration and enforcement practices and policies, the uniformity of compliance with the requirements will continue to improve. §

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### Attached to this issue ...

A-8 Sprinklers in Care Homes

## Potential Proposed Technical Changes to NBC 1995

Part of the new code development system calls for pre-circulation to the provinces and territories of technical changes prior to the public review (Fall 2002) to identify any policy-related concerns. Saskatchewan has agreed to participate fully in the national/provincial/territorial code development system, and has received brief summaries of significant technical changes that have been proposed by the Standing Committees. A list of proposals for the National Building Code of Canada (NBC) 1995 is shown below. **This summary identifies significant changes that might be proposed for the next edition of the NBC. You are strongly urged to contact Building Standards, at your earliest convenience, if you have concerns about, or support for, these concepts. If you have questions about the details of the proposals, please reserve your review and comments until the public review period this fall.**

- Parallel proposals in Part 9 to proposed changes in Part 3.
- Delete reference to provincial, territorial or municipal regulations.
- Relocate requirements for fire safety at demolition and construction sites to the National Fire Code of Canada.
- Permit use of materials of limited combustibility, based on specific criteria, in noncombustible construction.
- Allow alternatives to concrete or masonry construction for 2 hour firewalls.
- Clarify and simplify the concept of mezzanines in a comprehensive set of requirements.
- Introduce requirements for a voice communication system in certain mercantile occupancies
- Add the concept of universal toilet room in barrier-free design requirements.
- Introduce a complete re-write of Part 4, resulting from significant work on structural design requirements for snow and wind loads and earthquake engineering.
- Clarify which environmental separators and assemblies exposed to the exterior require structural design.
- Add a reference in Part 5 to a CSA guideline on durability.
- Replace lengthy provisions in Part 5 that reference standards for materials, components and installation with a general provision referencing all standards in the Part 2 table of referenced standards.
- Expand or introduce Appendix notes for Part 5 to clarify exceptions, the concept of minimizing the occurrence of particular phenomena, and application of maximum air barrier system leakage rates.
- Add performance requirements for control of air leakage and vapour diffusion in Part 5.
- Change heat transfer control requirements in Part 5 to reduce the likelihood of ice damming.
- Relocate requirements for sound transmission from Part 3 to Part 5.
- Allow some unoccupied building spaces (i.e., closets) to be exempt from ventilation requirements.
- Permit use of natural ventilation where climatic conditions make it feasible.
- Clarify and consolidate requirements on air duct systems in Part 6.
- Add a reference to an NFPA standard on air washers and evaporative cooling sections or towers.
- Expand requirements for CO detectors to all buildings that contain a residential occupancy and a fuel-burning appliance or a storage garage.
- Require all post-disaster buildings to comply with Parts 3, 4, 5, and 6 rather than Part 9.
- Require lateral load analysis in specific combinations of braced walls and openings in Part 9 buildings.
- Permit use of 1 in 30 (rather than 1 in 50) year return period for snow loads on Part 9 buildings.
- Require emergency egress windows from all basements in houses.
- Clarify provisions for stairs, handrails and guards in a comprehensive set of requirements.
- Reorganize and clarify spatial separation requirements for houses.
- Add requirements for insulated concrete foundation walls and reinforce masonry foundations.
- Add provisions for support of exterior decks.
- Add prescriptive requirements for protection from precipitation.
- Revise mechanical ventilation requirements for houses.

Other proposed changes will reflect work being done to convert the NBC to an objective-based code. In addition, special changes that have been approved by the CCBFC (i.e., foamed plastic insulated panels, nonmetallic raceways, snow loads on arched roof structures, application of Part 5 to all assemblies exposed to the exterior, snow loads on Part 9 buildings) and issued as part of revisions and errata packages are proposed for inclusion in the public review. §

## Connections in Aluminium and Copper Wiring

*by Jim Hawtin, Fire Prevention Officer, Office of the Fire Commissioner, Saskatoon*

During a recent fire investigation it was determined that the fire was caused by arcing in an electrical receptacle.

The reason that arcing occurred was the combination of aluminum and copper wire being joined by a mechanical connection.

Difficulties with aluminum wiring are found not in the wire span but at the ends where the connections are made. Unsatisfactory performance has resulted from directly substituting aluminum wire for copper, for example, using the fittings, receptacles, and switches that were designed for copper wire. The quality of the installer's work is critical to avoid problems that result from aluminum's peculiar physical and chemical properties. Here are some points to keep in mind.

First, the electrical conductivity of aluminum is somewhat lower than copper. As a general rule of thumb, aluminum wire will be larger than copper wire for a given current rating. Wire tables must be consulted for exact confirmation.

Second, aluminum is very chemically active. Exposed surfaces always have an oxide coating. This oxide film acts as an insulator and is a major problem in making electrical connections. For some installations, chemical treatment is applied when making connections to minimize this oxide film formation.

Third, the thermal expansion coefficient of aluminum is different than copper, and any combination of these two metals must make allowances for this. Connections that are tight at one temperature may be loose at another. Also the continued tightening and loosening by changing temperature can result in a permanently loose connection.

Finally, another problem, mainly with the early products, was cold flow. Aluminum creeps like putty when subjected to pressure and it flows away from the pressure points, resulting in a poor connection.

The basic problems with aluminum wiring have been largely corrected by new aluminum alloys connectors. The connectors, receptacles, and switches appear similar to their old counterparts, but the selection of materials and their design has, for the most part, corrected the problem. The devices acceptable for aluminum are so marked. Aluminum cable is routinely used for service drops (from pole to weatherhead).

Aluminum, having a lower melting temperature (660°C, 1220° F) than copper (1083° C, 1981° F), will usually be melted by most fires and, therefore, provides little useful information after a substantial fire.

Aluminum wiring was frequently used in Saskatchewan in the early 1970s because it was more economical to buy than copper wiring. However, installers found that it took longer to install and soon the demand increased its cost. Contractors then switched back to copper with the result that a mixture of copper and aluminum wiring exists in houses where renovations or additions have occurred. The Canadian Electrical Code permits the use of either aluminum or copper wire but there are specific rules in the code relating to making connections with aluminum wire that must be followed. §

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### Heritage Brick Search

The Saskatchewan Heritage Foundation is looking for approximately 105,000 "old" bricks for an expansion to Government House National Historic Site in Regina.

Bricks of this type are commonly found in southern Manitoba and Saskatchewan, though some were shipped elsewhere on the prairie. If you know of any vacant or about-to-be demolished yellow brick buildings which may be faced with this kind of brick, please contact the Foundation. They will require the building's location, and would also like to know the owner's name and telephone number. In light of the large volume of bricks required, unless a number of houses with the same brick are available, they are probably looking for a two or three storey building, such as a school, hospital, prison, power plant, flour mill, church, business block, etc.

For more information about the bricks and the addition, please visit [www.municipal.gov.sk.ca/heritage/brcksrch/brcksrch.shtml](http://www.municipal.gov.sk.ca/heritage/brcksrch/brcksrch.shtml). If you know of any buildings from which the Foundation may be able to salvage the needed bricks, please contact:

Frank Korvemaker  
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Saskatchewan Heritage Foundation  
1855 Victoria Avenue, Rm. 430  
REGINA SK S4P 3V7  
[fkorvemaker@cyr.gov.sk.ca](mailto:fkorvemaker@cyr.gov.sk.ca)  
Phone (306) 787-5878  
Fax (306) 787-0069



# Canadian Commission on Building and Fire Codes

## Second Public Consultation on Objective-Based Codes

(source [www.nrc.ca/ccbfc/tgs/obc/2PC\\_E.shtml](http://www.nrc.ca/ccbfc/tgs/obc/2PC_E.shtml))

Between October 2002 and January 2003 a public consultation is planned that will constitute a second stage in soliciting your participation in the transition of Canada's National Code Documents to objective-based format.

In late 2000/early 2001, code users were asked for their views on the analysis that had been used to determine what objectives are addressed by the National Code Documents. Comments received have influenced the final articulation of these objectives. At that same time, limited prototypes of the National Code Documents in objective-based format were published and code users' comments on the practicality and usefulness of the format were solicited. The response to this part of the consultation revealed very strong support for the concept and proposed structure of objective-based codes.

Following the previous consultation, a new task group – the Task Group on Drafting of Objective-Based Codes – was formed. Reporting jointly to the Canadian Commission on Building and Fire Codes and the Provincial/Territorial Policy Advisory Committee on Codes, this task group has guided the further development of the concept to the point where, this Fall, we will be able to present complete versions of the 1995 National Code Documents converted to objective-based format.

If you would like to be informed when the documents for this second stage public consultation are available, please send an e-mail to the following address: [codes.consultation@nrc.ca](mailto:codes.consultation@nrc.ca). §

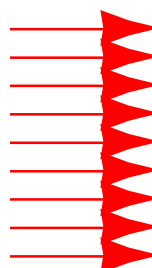
(More information about Objective-Based Codes can be found at [www.nrc.ca/ccbfc/tgs/obc/index.shtml](http://www.nrc.ca/ccbfc/tgs/obc/index.shtml).)

Public Review Schedule	
Objectives/General Concept	<i>completed</i> Fall 2000
Intent Analysis	Fall 2002
Technical Changes	Fall 2002
1995 Codes in Objective-Based Form	Fall 2002
Codes Publication	<i>expected</i> 2004

## 4<sup>th</sup> Revisions and Errata — National Building Code of Canada 1995

Copies of the 4<sup>th</sup> revisions and errata package dated April 2002 have been released and distributed by the Canadian Commission on Building and Fire Codes. This package includes a significant number of changes: new editions of referenced standards, special changes that have been approved since release of the 3<sup>rd</sup> package (see the January 2002 issue of this newsletter for these special changes), and an extensive new table of fire and sound resistance of floors, ceilings and roofs. According to Saskatchewan legislation, revisions and errata packages are in force when they are issued.

If you have not received your copy of the package please visit the Institute for Research in Construction's website at [www.nrc.ca/irc/publications/downloadform.html](http://www.nrc.ca/irc/publications/downloadform.html) or contact their publications office at 1-800-672-7990. §

 **Watch for announcements about how Saskatchewan code users can participate in joint national/provincial/territorial public review activities this fall!**

## Building Official Licensee's Actions Result in Suspension Hearing

The chief building official is authorized by section 11 of *The Building and Accessibility Standards Administration Regulations* to cancel or suspend building official's licences for cause.

This spring the chief building official was provided with information showing that a Class 1 licensee had provided building code enforcement services on a project that required the services of a Class 3 Building Official. The licensee was notified by registered mail that the chief building official intended to suspend his Class 1 licence for a period of 3 months and notify the rural municipality for which services had been provided. The licensee was offered opportunity to be heard by the chief building official on this matter. The licensee contacted Building Standards and arranged for a suitable date to meet and provide his explanation.

The licensee had provided inspections and reports about a property and three buildings. These buildings were to be moved onto the property and joined to form one building containing A2, E and C occupancies. Based on these inspections the licensee approved and issued two building permits and made regular visits to the site to monitor the progress of construction. The licensee did not require the owner to provide suitable plans and designs for the location and construction, based on the owner's signed agreement that a professional engineer would be hired to design and inspect the work. Although the licensee thought he could rely on this agreement, it was clear that the rural municipality and the owner were not receiving enforcement services anticipated by the Saskatchewan legislation and that the licensee's involvement in the permit and site visits misled the rural municipality and the owner to believe that they were receiving appropriate enforcement services. The licensee explained that he thought his services were simply administrative, and that he thought reliance on the owner's intention to hire a professional engineer would cover the municipality's duty to enforce the building code.

As a result of the licensee's hearing, the chief building official decided not to proceed with the suspension. The roles and responsibilities of owners, designers, municipalities, and building officials were reviewed with the licensee. The licensee understood and agreed he is only authorized under his Class 1 licence to provide enforcement services on one and two unit dwellings and that he should avoid any involvement in projects outside

## SPAG News

by Tim Macaulay,  
Saskatchewan Health

News from the Saskatchewan Plumbing Advisory Group (SPAG) meeting on May 6, 2002.

- Discussion regarding the updating of the current *Plumbing and Drainage Regulations, 1996*. Saskatchewan Health has decided not to proceed with adopting the 1995 National Plumbing Code (NPC) and instead the department will wait for the next NPC which should be released in 2004. SPAG agrees with this decision.
- Saskatchewan Health and the Health Districts are conducting a review of the environmental health programs with the intention of freeing up resources for other program responsibilities. During this review both the department and the Health Districts see the need to get out of plumbing inspection duties. SPAG will work with Saskatchewan Health to develop a discussion paper that will outline the options for regulating/inspecting plumbing installations in areas where Health Districts are involved. A decision regarding Health's role in plumbing should be made within the next year.

Those who have questions regarding SPAG should contact Tim Macaulay, Saskatchewan Health at (306) 787-7128, fax (306) 787-3237, or e-mail [tmacaula@health.gov.sk.ca](mailto:tmacaula@health.gov.sk.ca).

the scope of his licence to prevent future misunderstandings. Nonetheless, the record of this hearing is now a part of this licensee's permanent record and might have an impact upon any future suspension or cancellation considered by the chief building official.

One intent of the building officials licensing program is to provide municipalities with some assurance that the person that they appoint to provide enforcement services has adequate technical knowledge of the applicable legislation and the building code. The role of the chief building official is to oversee the licensing program in accordance with the regulations, which includes taking appropriate actions to safeguard the integrity and reliability of building official licences.

The chief building official appeals to all licensees and local authorities to be vigilant in compliance with the legislation and to call for advice about or clarification of the requirements. §



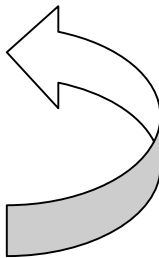
*Plan to attend the Fall 2002  
Saskatchewan Building  
Officials Association  
Conference, October 23–25  
at the Saskatoon Travelodge.  
For registration and room  
reservation information, and  
a preliminary agenda, visit  
[www.sboa.sk.ca](http://www.sboa.sk.ca).*

### **Change is Good!**

Please change your e-mail addresses for Building Standards staff to <firstinitiallastname@cps.gov.sk.ca> as shown in the next column. You can also use [buildingstandards@cps.gov.sk.ca](mailto:buildingstandards@cps.gov.sk.ca) (which is checked every day someone is in the office) to make sure that your message isn't unattended while someone is on holidays.

Our new department's website [www.cps.gov.sk.ca](http://www.cps.gov.sk.ca) is being finalized and will be operational soon. §

**Be sure to respond to building official licence renewal reminders — failure to renew a valid licence could result in having to re-write licence examinations!**



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Comments, suggestions and constructive criticism about this newsletter are welcomed.

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buildstandards.shtml](http://www.municipal.gov.sk.ca/safety/buildstandards.shtml)**

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Please submit the following information to the address/fax/e-mail noted above.

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