



Updating of the BC Building Code by the Building and Safety Standards Branch (BSSB) to adopt the 2015 NBC mid-rise requirements

Issue: 25% frontage requirement for mid-rise residential buildings of wood construction

Background

In 2009, the B.C. Building Code (BCBC) was changed to permit 5 & 6 storey mid-rise multi-family residential buildings of wood frame construction. Since then, wood-frame mid-rise construction in B.C. has become the largest single growth market for B.C. structural wood products and is now expanding out from Vancouver to the Fraser Valley, Southern Vancouver Island and the Okanagan. Data provided by Urban Analytics shows that this market sector provides the most affordable housing option in BC, particularly in Metro Vancouver and other urban areas.

The BSSB is currently updating the BCBC for 2018 and plans to adopt the 2015 National Building Code (NBC) provisions for mid-rise buildings of combustible construction, which apply to multi-family residential, office and mixed-use wood construction. As part of their proposal, the BSSB is also proposing to modify the existing 2012 BCBC mid-rise provisions.

The technical fire safety requirements described in both the 2012 BCBC and the 2015 NBC mid-rise provisions are recognized as meeting the fire safety objectives of the BCBC, but they differ in a number of ways. In particular, one significant difference is that the NBC provisions mandate at least 25% of the building perimeter be located within 15 m of a street for firefighting and emergency rescue purposes. The 2012 BCBC provisions simply require that the main entrance of the building be located within 15 m of a street.

This NBC '25% access rule' is unique to these types of mid-rise combustible buildings. It is not a requirement for any other type of building regulated under the BCBC, regardless of their construction type, size or use.

The Canadian Wood Council (CWC) and Wood *WORKS!* BC (WW BC) have met with BSSB a number of times to provide market and technical information, and to offer assistance regarding stakeholder reviews of their proposed code provisions. However, BSSB has not yet committed to resolving this issue to ensure continuity of the mid-rise wood frame market in BC.

What would the impact be if the 25% frontage requirement was implemented?

An in-depth market study completed in B.C. on the impact of mandating the 25% access rule showed:

- developers would lose between 1/4 and 1/3 of available building space on a given lot, thereby eliminating mid-rise from in-fill lots, which are prevalent in Vancouver and other Metro Vancouver cities,
- many planned mid-rise wood buildings in suburban areas of Metro Vancouver and the Fraser Valley would not be economically feasible, and
- upwards of 40-50% of lots previously purchased for mid-rise wood would have to be re-evaluated using another building material, and/or potentially sold off by developers.

The Government of Ontario, who is also advocating for wood building, recognized the potential negative impact of this 25% requirement after undertaking several technical studies. As a result, they made the decision to require only at 10% frontage requirement in their updated provincial building code.

In our view, adopting the 25% frontage requirement in BC would be counter to the BC Government's commitment of increasing domestic use of BC wood products and of providing affordable housing options in the next ten years. In addition, it would be another blow to the industry at a time when it is facing significant CVD and AD duties on shipments to the U.S.

What is timing of the proposed update to the BC Building Code?

BSSB's goal is to fully implement the updated building code by December 31, 2018. It is anticipated that the Minister (Municipalities and Housing) will approve the 2018 BCBC in Quarter 2 as at least a six-month transition period is required to prepare building code officials and users for the new code. BSSB has a short period of time (March – April 2018) to decide on their strategy and finalize the code language after the public review period closes.

What is the status?

The BSSB solicited feedback (Nov. 2017) from 'expert' stakeholders on their proposed approach for mid-rise wood construction in the 2018 BCBC. Both CWC and Wood WORKS! BC commented on BSSB's proposal and made recommendations that would allow BSSB to take a different approach to provide maximum flexibility for designers / builders in B.C. to build affordable mid-rise construction, while still meeting all fire safety requirements of the building code.

On December 12, 2017, BSSB put their proposed approach out for public stakeholder review with a closing date of February 28, 2018.

What were the CWC and WW BC recommendations for the 2018 Building Code?

CWC and WW BC made the following recommendations:

- retain the original 2012 BCBC provisions for residential mid-rise buildings only, without modification. Those provisions, which are robust and credible, have been used for the past 7-8 years in B.C. and should continue to be used to allow designers/builders to provide safe and economical housing solutions for the B.C. market. And:
- adopt the 2015 NBC provisions as a separate set of provisions for mid-rise combustible (wood-frame) buildings and, include two additional 'design options' related to access rules for firefighting. These provisions, would allow designs for mid-rise residential, office and mixed-use buildings to choose between providing at least 25%; at least 10%; or less than 10% perimeter access from a street (with compensating measures dependent on the frontage % chosen).

Summary

Despite WW BC / CWC efforts above, there is still uncertainty about how BSSB will resolve the 25% access rule issue in the 2018 BCBC. If not addressed, there is the potential for significant loss of market for BC's wood products in the mid-rise market.

**MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND
RURAL DEVELOPMENT
INFORMATION NOTE**

Date: November 21, 2018

File: [arc/orcs #]

CLIFF: [cliff #]

PREPARED FOR: Honourable Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development (FLNR)

ISSUE: Malahat Nation expanding engineered wood products in the building industry

BACKGROUND:

The Malahat First Nation is a First Nations government located on south eastern Vancouver Island. Malahat Nation is a marine-based Nation that has a number of strong, successful and profitable business relationships with local business and industry. Malahat Nation is looking to connect and work with new businesses, project leads and investors across a variety of industry sectors.

Malahat Nation is currently working to help expand the secondary manufacturing of wood products and the expansion of engineered wood products in the building industry. Among others, this includes areas such as timber framing, CLT construction, and furniture production. Malahat Nation is seeking FLNR's help in further developing these opportunities.

FLNR has been actively guiding the development of clean technologies and innovations to support the forest sector for over a decade. In 2017, Premier John Horgan's mandate included a prioritized focus on expanding the province's innovative wood-products sector by addressing regulatory and capital barriers hampering the growth of engineered wood production. A key objective behind this work is to support the development of a forest bioeconomy and the use of engineered wood-products in BC buildings to create new opportunities for the forest sector and Indigenous communities.

DISCUSSION:

FLNR's Innovation, Bioeconomy and Indigenous Opportunities branch (iBIO) leads the Ministry's initiatives to support the development of a value-added wood products strategy and an Indigenous Opportunities Framework. This includes the support for value-added wood products manufacturing and engineered wood products used in BC buildings, economic development initiatives that provide measurable socio-economic benefits to Indigenous communities, and opportunities to leverage technology development and innovative solutions in Indigenous communities. After Malahat Nation connects with iBIO, FLNR can determine how best to help in this new opportunity.

Malahat Nation should also look into receiving support from the BC Rural Dividend. The Rural Dividend is providing \$25 million a year to assist rural communities with a population of 25,000 or less to reinvigorate and diversify their local economies. Project categories include community capacity building, workforce development, community and economic development, and business sector development. Funding streams range from a maximum of \$10,000 to \$500,000, depending on project size, applicant contribution, and partnership. The next application intake will be during 2019.

As part of the Regional Economic Operations branch, Cheryl McLay, the regional manager for the South Vancouver Island and Coast area, is available to continue to assist the Malahat Nation as they explore this new opportunity.

NEXT STEPS

- Malahat Nation should connect with iBIO to see where FLNR can help.
- Malahat Nation should consider the BC Rural Dividend.
- Malahat Nation should continue to work with Cheryl McLay, regional manager for economic operations in their area.

Attachment(s):

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**MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND
RURAL DEVELOPMENT
INFORMATION NOTE**

Date: January 11, 2018
CLIFF: 235525

PREPARED FOR: Honourable Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development

ISSUE: Meeting to discuss Building Code Changes.

BACKGROUND:

The Ministry of Municipal Affairs and Housing (MAH) is responsible for the British Columbia Building Code (BCBC). Any changes to the National Building Code (NBC) are reflected in future changes to the 2012 BCBC. The NBC was last changed in 2015 and is scheduled for a subsequent change in 2020. Likewise, the Province is also planning for changes to the 2012 BCBC with a completion during Fall 2018. The Office of Housing and Construction Standards (OHCS) of MAH is leading the public engagement process on the development of the next edition of the BCBC, which concludes on February 28, 2018. The BC Council of Forest Industries (COFI) and Wood WORKS! have participated in several discussions with OHCS as ‘targeted’ experts to inform proposed changes.

Susan Yurkovich, President and CEO of COFI has requested a meeting with the Minister of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), now scheduled on January 17, 2018. The purpose of the meeting is to discuss the proposed Code changes to the 2012 BCBC, specifically the 2015 NBC 25% frontage requirement for mid-rise buildings of wood construction. They also plan to discuss this matter with the Honourable Selina Robinson, Minister of Municipal Affairs and Housing. In advance of the meeting with Minister Donaldson, Susan Yurkovich has provided a backgrounder to guide the discussions – see Attachment 1: *Updating of the BC Building Code by the Building and Safety Standards Branch (BSSB) to adopt the 2015 NBC mid-rise requirements*.

The OHSC Building and Safety Standards Branch staff have offered to join the Minister’s meeting on January 17, 2018 by phone if required. Also, Forestry Innovation Investment (FII) drafted a briefing note that outlines their perspective on the 25% frontage requirement of the 2015 NBC - see Attachment 2. As this matter is outside of the scope of FLNR, staff have not responded to either the COFI backgrounder or the FII briefing note.

DISCUSSION:

The topic does relate to the broader work that FLNR has been engaged on. In September 2017, in response to FLNR’s mandate commitment on wood innovation, FLNR established a cross-agency ADM working group, comprised of representatives from ministries and Crown agencies that share the mandate for advancing wood use in BC, either through education, market development, research, training, or capital projects. The working group has identified a framework to advance wood innovation and prioritize wood in public projects. It includes a suite of tactical actions including expanding opportunities for wood use in BC’s Building Code and *Building Act* regulations. Much of this framework is being included in a FLNR cabinet submission to advance BC’s engineered and composite

wood products, which includes a commitment by FLNR, through FPI, to look at fire and seismic testing on wood products to meet BCBC requirements.

OHCS advises the public comment period for changes to the 2012 BCBC is still open. OHCS notes that both the Canadian Wood Council and Wood WORKS! have been involved in the engagement process as experts in a targeted review preceding the public review. OHCS is aware of and actively evaluating the 25% frontage requirement of the 2015 NBC.

MINISTRY RESPONSE:

- FLNR staff recognize the important of this issue; this relates to a broader, cross-government initiative we are leading - “Innovation in Wood: Advancing BC’s Engineering and Composite Wood Products.”
- Updating the BCBC is a timely activity and the period for public engagement and feedback has not yet closed.
- Decisions by the MAH Minister to adopt the next change to the code will happen after the public comment period is closed.
- FLNR staff are not the subject matter experts for building standards, and they support OHCS engaging with industry experts to inform the discussion around proposed changes to the BCBC.
- OHCS and the Province are committed to the health and safety of its citizens while maintaining a fair and innovative environment for construction sector.
- Industry, FII and OHCS are encouraged to continue the dialogue to arrive at a common understanding and solution that fits the needs of industry and developers while maintaining the integrity and intent of the BCBC.
- I would be happy to assist with any discussions on this matter with Minister Robinson.

Attachment (2):

1. Updating of the BC Building Code by the Building and Safety Standards Branch (BSSB) to adopt the 2015 NBC mid-rise requirements
2. Forest Innovation Investment Briefing Note (January 8, 2018)

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Forestry Innovation Investment

Briefing Note

I PREPARED FOR: **Tim Sheldan, Deputy Minister Forests Lands, Natural Resource Operations and Rural Development; and Fazil Mihar, Deputy Minister of Jobs, Trade and Technology -- for INFORMATION**

II ISSUE: **Impacts of British Columbia's adoption of the 2015 National Building Code Provisions**

III BACKGROUND:

- The British Columbia Building Code (B.C. Building Code) is largely based on the National Building Code (NBC). British Columbia typically adopts new editions of the B.C. Building Code following the release of updates to the NBC. The next edition of the B.C. Building Code is under development.
- In 2009, British Columbia led North America in the adoption of 5-6 storey mid-rise wood residential construction. B.C. implemented building code changes at the provincial level, which has since spawned changes in the NBC to embrace mid-rise wood construction.
- The 2015 NBC edition, which B.C. is in the process of adopting, contains a provision that has the potential to negatively impact mid-rise wood construction in B.C. The NBC has a clause that requires a minimum of 25 percent of the perimeter of a mid-rise wood building be located within 15 m of a street for firefighting and emergency rescue purposes.¹ The current B.C. code simply requires that the main entrance of the building be located within 15 m of a street.
- On the positive, other new code provisions would expand mid-rise wood occupancies beyond residential use to offices and mixed-use buildings, include mass timber and heavy timber construction methods, and allow for larger footprints for wood buildings. This has the potential grow the mid-rise segment in B.C., should impediments be overcome.
- Currently under consideration as a compromise, the Building Standards and Safety Branch (BSSB) is proposing a dual compliance method, including maintaining existing code rules for mid-rise residential buildings with no frontage requirement, or the use of new NBC standards with the 25% frontage requirement for larger residential or non-residential or mass timber/heavy timber buildings.
- The forest industry has expressed concerns with this approach. They argue that opportunities to expand wood construction will be lost, opportunities to expand affordability in construction will be hampered, and much needed market expansion in B.C. in the face of the softwood lumber dispute will be quashed.

¹ The new provisions relate fire risk during construction, before fire suppression measures are operational. Once complete, wood buildings meet the same fire performance standards as other building systems.

IV DISCUSSION:

- The B.C. Building Standards and Safety Branch is in the final stages of preparing to adopt the 2015 NBC provisions. The Branch is undertaking a public comment/consultation period, to be completed February 28, 2018. Final recommendations and code adoption legislation will flow to the Legislature thereafter.
- The Canadian Wood Council (CWC) has raised concerns with the 25 percent frontage provisions in the national code, and the impact that this will have in B.C. The benefits in the new code (increased footprint, expanded occupancies, etc.) may not be realized on a range of projects due to the frontage issue.
- The nature of the impact is heavily influenced by the type (shape) of lots where mid-rise construction is common (redevelopment and densification), and the developer's ability to position a building (or often more than one building) to make the projects financially viable. Typically, buildings are rectangular in shape, and positioned on the construction site to maximize buildable area. A 25 percent frontage requirement would necessitate adding new access roads, square buildings, or if rectangular, the longest side of the building facing the street (making the rest of the lot in many cases unavailable for construction). Information from the CWC is attached as further background.
- Mid-rise wood construction now represents the lowest cost building method for residential construction, supporting the Government's affordability objectives. In 2016, 84 percent of mid-rise residential construction used wood – creating an important and growing market segment for the B.C. forest sector and wood builders.
- When Ontario adopted the 2015 NBC, it reduced the frontage requirement to 10 percent from 25 percent, while adjusting other fire performance requirements. The CWC has submitted technical input and several alternative approaches for consideration by BSSB in their review of the new provisions. The forest industry is encouraging a similar approach to that taken in Ontario, applied to all occupancies and building types without a dual compliance path.
- FII has passed along these concerns to the BSSB. FII has also offered financial support to the BSSB to help with the cost of retaining independent technical expertise to analyze alternatives to the 25 percent provision.
- While not yet public, at the time of writing BSSB expressed interest in developing a code change proposal early in 2018 that aims to address the 25 percent frontage issue (ideally taking the best elements of existing and proposed codes and ensuring adequate fire protection measures are in place for course of construction fire risk). FII remains willing to financially support this analysis.

V IMPLICATIONS:

- FII recognizes that building code decisions are based on the best available science; however, it is not clear what analysis supports the inclusion of a 25 percent frontage requirement in the 2015 NBC or if other alternatives are available.
- While FII has no role as it relates to building code changes in B.C., the Company does have a mandate to work with government and industry to increase the use of wood in the

province. As the 25 percent frontage requirement has the potential to negatively impact wood use in B.C., FII wishes to advise ministries most involved with FII/the forest sector of the issue, and the likelihood that forest industry and wood construction stakeholders will increase their opposition to the proposed 25 percent code provisions as the code revision nears adoption.

- Recent indication that the BSSB is interested in pursuing a code change proposal to reconsider/amend the 25 percent provision prior to code implementation has not been publicly communicated. Should discussion with stakeholders take place on this issue, it is recommended that the ADM and/or or Executive Director responsible for the BSSB be engaged/included to provide up-to-date information on proposals/options under consideration.

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January 8, 2017