2. Zoning and Development By-Law Amendments for Mass Timber Construction - OTHER

Date Received	Time Created	Subject	Position	Content	Name	Organization	Contact Info	Neighbourhood	Attachment
02/09/2021	17:26	PH1 - 2. Zoning and Development By-Law Amendments for Mass Timber Construction	Other	Attached, please find a pdf of email communication I have had with the City regarding suggested recommendations that would meaningfully facilitate and support mass timber construction development in Vancouver. Unfortunately, it is my opinion that the proposed Mass Timber Construction Zoning and Development By-Law Amendments fall short of understanding and responding to the key issues that hamper and discourage mass timber construction and that the proposed by-laws will do little to support, encourage or facilitate tall timber development. Russell Acton, Principal, Acton Ostry Architects Tall and Mass Wood Experience: Russell Acton is recognized as a world leader in tall wood design. He provided review commentary on the Joint AIBC and EGBC Professional Practice Guidelines for Architectural and Engineering Services on Mass Timber Buildings up to 12 Storeys. Russell is a member of the City of Vancouver Mass Timber Advisory Panel and the Vancouver School Board Mass Timber Schools Designer Panel. He served on the Tall Wood Technical Advisory Panel for the Provincial Building & Safety Standards Branch, the Wood Demonstration Projects Evaluation Committee, and as an evaluator for the Tall Wood Demonstration Projects Initiative sponsored by National Resources Canada. Russell received a 2020 Clean50 individual award and was named a 2020 Clean16 honouree for his outstanding contributions to sustainable building design, development, and management. Russell is the architect of UBC Brock Commons Tallwood House that is widely acclaimed as an example of Canadian ingenuity and innovation. Tallwood House is a groundbreaking, LEED Gold-certified, 18-storey tall wood student residence located on the UBC Vancouver campus, which at the time of completion in 2017 was the tallest contemporary mass timber building in the world. The project was part of the 2013 National Resources Canada Tall Wood Building Demonstration Initiative that aimed to demonstrate that mass wood structures are a viable option for high-rise buildings. The wood building stores an impressive 1,753 metric tons of carbon dioxide and avoided production of 679 metric tons of greenhouse gas emissions. Tallwood House aspires to be a model for a future that features extraordinarily ordinary mass wood buildings that are quick, clean, and cost effective to construct and that maximize carbon sequestering and the reduction of greenhouse gas emissions. Currently under design, The Arbour will house the School of Technology for George Brown College and be the future home to Canada's first Tall Wood Research Institute. Located on the Toronto waterfront, the 10-storey, tall wood academic facility will be the first of its kind in the world and a model for 21st century smart and sustainable green building innovation. The Arbour will break new ground with a revolutionary cross laminated timber flat plate structure that is anticipated will pave the way for the widespread use of large span mass timber.	Russell Acton, Principal	Acton Ostry Architects	s. 22(1) Personal and Confidential	Unknown	Appendix A

From: Russell Acton s. 22(1) Personal and Confidential
Subject: Fwd: zon ng barr ers to wood frame and mass t mber construct on
Date: February 9, 2021 at 5:25 PM
To: C ty Counc

Begin forwarded message:

From: Russe Acton s. 22(1) Personal and Confidential
Subject: **Re: zoning barriers to wood frame and mass timber construction**
Date: Apr 25, 2020 at 9:46:58 PM PDT
To: s. 22(1) Personal and Confidential

Hi s. 22(1) Personal an

I would suggest that limiting the focus to removing zoning and policy barriers for projects that are only concerned about concrete/embodied emissions is too narrow.

For decades, overly prescriptive and constrained building heights and zoning envelopes have all too often resulted in illogical and convoluted building forms that do not take into account issues of constructibility, energy-use, cost, affordability, aesthetics, etc. Zoning regulations should provide opportunities and latitude for architects to do their job unfettered in order that they may innovate and arrive at solutions for new types of buildings—without old, out of date, and overly dictatorial and peremptory preconceptions holding them back. The irony is that current zoning guidelines are completely out of alignment regarding City sustainability initiatives related to energy efficiency and low carbon.

At the end of the day it is all about cost and the market. Increased cost will always be passed on to the consumer. Irrational, arbitrarily stepped, and overly articulated building forms will always lead to costly and inefficient structures, energy inefficient building envelopes, and overall economic inefficiency. The market should dictate unit sizes, room sizes, use of internal bedrooms, balconies or no balconies, etc.—not the whims and personal preferences of those writing policy.

Zoning should allow flexibility in height and form for all forms of construction and building types, not only for those directly focused on reducing embodied emissions and use of concrete. When I served on the COV Urban Design Panel I would often point out that it was the use of overly prescriptive "planner-techture" zoning constraints that were resulting in many of the suboptimal, inefficient designs for developments located throughout the city.

If the City truly does want some EMTC built they should consider doing *something*. Relaxing or eliminating regs/policy would be a good place to start, rather than creating regs and policy in a vacuum when no one yet has designed or built a single EMTC building. Not a single one. One of the best things the City can do would be to get out of the way to allow practitioners to take a crack at figuring out an economical, market-driven solution—without a whole host of constraints put in place that will limit possibilities instead of creating potential for innovation regarding constructibility, energy efficiency, affordability and a new aesthetic for a future that looks forward, not backward to the past.

Regards,

Russell Acton ARCHITECT AIBC AAA OAA FRAIC
Principal

ACTON OSTRY ARCHITECTS INC

111 E 8 Avenue Vancouver BC Canada V5T 1R8
t 604 739 3344 f 604 739 3355 actonostry.ca

follow us | instagram twitter facebook linkedin

From s. 22(1) Personal and Confidential
Sent: Wednesday, April 22, 2020 4:11 PM
s. 22(1) Personal and Confidential

s. 22(1) Personal and Confidential

Subject: RE: zoning barriers to wood frame and mass timber construction

Hi all,

If you have a minute to provide a few brief comments by Monday, I'd appreciate it. Again, bullet points/short answers are fine.

Thanks,
s. 22(1) Personal and

From: s. 22(1) Personal and Confidential
Sent: Wednesday, April 15, 2020 12:25 PM
s. 22(1) Personal and Confidential
Subject: zoning barriers to wood frame and mass timber construction

Hi all,

Hoping you can spare a few moments from focusing on your core practice in this strange time to provide some insight. I'm not sure a group e-mail is the best format for what amounts to a brainstorming discussion, but I'm going to start here.

For the last number of years, I've made changes to zoning in Vancouver to remove barriers and create incentive for zero emissions buildings. I'm now exploring possible changes to zoning regulations and policy to better accommodate wood construction over three storeys, including EMTC and stick frame, and try to help level the playing field because of concerns over concrete/embodied emissions.

I have a few initial questions below. You can reply to me or the group – whatever works. Bullet points are great – I don't need fully resolved thoughts, this just gives me somewhere to start. Also, let me know if I should include anyone else - your help in getting the right people in the room is appreciated. Finally, some of the questions seem fairly obvious but I need to hear from industry to validate my initial perceptions.

1. First off - I think I need to scope wood frame and EMTC separately – two different systems. So while I'm asking for your comments generally here, let me know if your thoughts apply to both methods, or just stick or just mass timber.
2. Broadly - what are the primary drivers for choosing to build in wood frame vs concrete?
    a. my perception is that it is a market-based decision (perceived benefits of concrete, building in a market that allows sales pricing for concrete construction, etc) and tied to operational systems (if you build in concrete, you are set up to build in concrete and have established crews on various sites etc).
3. Do we need to look at removing zoning barriers or create zoning "incentives" (height, floor space relaxation) to promote wood-frame construction? My initial impression is that wood-frame gets built on the regular in Vancouver. And if we are able to create some flexibility in zoning – would that be sufficient for even a slight

able to create some flexibility in zoning - would that be sufficient for even a slight shift from concrete to wood frame? Or is this entirely market-driven?

4. I do think we do need to get some regs/policy to work better for EMTC. Correct?
5. This is the big one: what do you see as the primary challenges and opportunities in Vancouver's zoning and guidelines re wood frame and EMTC? Upper level step backs/articulation in the floor plan has been mentioned a few times. Height is another one. Are there any other major regs or policies - big or small - we need to reconsider and look for some flexibility? I'm interested in hearing about both small tweaks as well anything we could do that might add up and help tip the scales from concrete to wood.

I appreciate your thoughts on these initial questions and any other comments you would like to add.

s. 22(1) Personal and C