From:

Anderson, Maryann GCPE:EX

Sent:

Friday, May 6, 2011 5:10 PM

To:

Rotgans, Trudy SG:EX; Vasey, Jeff SG:EX

Subject:

Re: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise

Wood Frame Construction

Got it thx. MO has approved and irs gone.

From: Rotgans, Trudy SG:EX

Sent: Friday, May 06, 2011 04:38 PM

To: Vasey, Jeff SG:EX; Anderson, Maryann PAB:EX

Subject: RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Note yellow highlighted areas.

Otherwise, it looks good.

Thanks,

Trudy

From: Rotgans, Trudy SG:EX Sent: Friday, May 6, 2011 4:37 PM To: Anderson, Maryann PAB:EX

Subject: RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

From: Anderson, Maryann PAB:EX Sent: Friday, May 6, 2011 4:28 PM

To: Vasey, Jeff SG:EX

Cc: Rotgans, Trudy SG:EX; Lam, Roger SG:EX

Subject: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Importance: High

My revisions to the branch response are in blue. If you can please review the attached and let me know if you are okay with this. If there is one or two questions that you want to review further, then please let me know and I will send what we have to the reporter and advise her that the remaining questions will follow — as deadline has already passed and I need to get this to the MO in the next half hour.

**Date/Time:** 06/May/11:17 AM

Deadline @ 4 p.m. today

Media Outlet: Vancouver Sun

Reporter: Laura Kane, 604.605.2165, lkane@vancouversun.com

Topic: Residential Mid-Rise Wood-Frame Construction Code Change

### Questions and Suggested Response:

Why was the building code changed to allow for mid-rise wood frame in residential construction?

• There are a number of benefits to building with wood including lower costs and increased environmental sustainability. Increasing the allowable height of wood buildings is part of the Province's ongoing efforts to encourage innovative building practices and expand domestic markets for B.C. wood products. The new B.C. Building Code provisions allowing higher wood buildings maximize these benefits while maintaining the Province's commitment to public safety.

Who was involved in developing the new provisions?

- The Province led the development of the Mid-Rise Code change project, with advice and assistance from more than 100 construction sector subject experts during 7 technical advisory group meetings on key issues as well as from the code consultants contracted to perform the risk analysis and develop code change recommendations. It was also informed by several research projects.
- Implementation was supported by detailed Guides prepared by the Association of Professional Engineers and Geoscientists (APEG BC)in collaboration with the Architects Institute of BC (AIBC)and the Homeowner Protection Office (HPO) and a new, detailed Building Envelope Guide was also developed through the HPO, all with funding from the government.

When did the process start and how long did it take to complete and introduce the changes?

• Government announced its intention to introduce these changes in the Spring of 2008. The change was effective in April 2009.

What research and testing was completed

- The province had access to an extensive amount of knowledge and expertise -particularly on seismic issues, where we are partnering with Forintek and the international
  NEESWood consortium to conduct research, including a siemic test of a full-scale wood
  frame 6 storey building on the world's largest shake table in Kobe, Japan. (View test at:
  <a href="http://www.hsd.gov.bc.ca/video/wood\_shake.html">http://www.hsd.gov.bc.ca/video/wood\_shake.html</a>)
- An historical analysis of the rationale for size limitations on combustible buildings was conducted by the province (through contract) and confirmed that limitations on height and area for combustible buildings were established a century ago many changes to building safety and standards have taken place in the last century which allow for safer structures due to improvements in building techniques and materials. However, until scientific research based on current building technology is undertaken, British Columbia's code changes maintain a conservative approach and we placed a limit on mid-rise wood frame. The current height to area formula requires that the total building area be maintained at 7200 square metres. Maximum total floor area remains the same as for four storey wood

buildings. This code change was submitted to the Canadian Codes Centre for them to consider for future national code changes.—and no concerns were raised by the National Centre.

- We also looked at environmental issues and the sustainability of building products. The province determined that wood has significant advantages in the areas of renewability, energy consumption in manufacturing of construction materials and reduced greenhouse gas emissions.
- The province's code consultants conducted an extensive risk analysis which was peer reviewed by another code consultant. All of this work contributed to a sound technical understanding of the issues and how to resolve them.

Who needed to sign off on it before it could go through

- The Minister Responsible for Housing has authority, under Section 692 of the Local Government Act, to make changes to the Building Code by Ministerial Order. The Minister draws on the expertise of staff who work with the Building Code as well as technical advice and expertise from across the country and in B.C. before considering a change.
- Through public review of proposed changes to the Building Code, the Minister consults thoroughly with those affected by changes local governments, building and fire officials, builders, architects, engineers and others. For example, as part of the work to allow mid-rise residential wood-frame buildings, the Province held seven technical advisory group meetings and broadly consulted with those in the industry as well as the general public.

Who raised concerns about construction fire safety and how were those concerns addressed?

Need something a little more straightforward. Can we say....

- The Building and Safety Policy Branch (BSPB) held seven Technical Advisory Group (TAG) meetings involving a wide range of residential building sector stakeholders and experts. These meetings were held between Sept. 7 and Nov. 5, 2008 to identify potential issues connected to mid-rise wood-frame residential construction and offer suggestions for managing those issues.
- Fire safety concerns were part of those discussions and were looked at throughout the process of developing the new code provisions. These concerns were reviewed and addressed and included fire safety both during construction as well as in the completed building in order for an occupancy permit to be granted by the municipality.
- Other issues reviewed throughout the process included:
  - 1. Fire Safety
  - 2. Structural/Seismic Safety
  - 3. Wood Shrinkage / Building Envelope Integrity

- 4. Fire Safety second meeting focusing on construction fire issues
- 5. Implementation issues for trades and services
- 6. Implementation issues for local governments
- 7. Education and training requirements

Who were the stakeholders who wished to address construction fire safety?

• Fire Services representatives and some local government building officials were among those who expressed some concerns regarding construction fire safety issues.

In their final report, GHL recommended that the Ministry complete a further study on construction fire safety if the area exceeds 7200 m squared. Did the Ministry then put in a clause stating that no building should exceed this size?

• The Province did limit the total floor area to 7200 m squared.

Was anything additional done to address construction fire safety?

- The Office of the Fire Commissioner has a fact sheet on their website to improve awareness of existing fire related regulations in the BC Fire Code. http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf).
- The total allowable volume of the building was unchanged from the existing Code, and the relatively low incidence of construction fires in Multi-unit wood frame buildings (less than 0.03%) did not appear to indicate a need for more stringent rules but rather better awareness of the existing rules.

Was everyone convinced that construction fire safety did not need to be addressed further?

- A substantial majority of respondents to our online public review supported our code change approach.
- All issues raised by stakeholders at our technical advisory meetings and other stakeholder consultation were considered.
- The cause of the fire at the Remy building in Richmond is still under investigation by the Richmond Fire Department and the Office of the Fire Commissioner. Once the investigation is concluded and we know the cause, we will look at the evidence and determine what, if any further action is required on construction fire safety issues.

Subject:

FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise

Wood Frame Construction

Importance:

High

From: Anderson, Maryann PAB:EX Sent: Friday, May 6, 2011 4:40 PM

To: Vasey, Jeff SG:EX; Rotgans, Trudy SG:EX

Cc: Lam, Roger SG:EX

Subject: FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Importance: High

Below are the final responses that I will send up to the MO for approval. The questions we will need to revisit on Monday are:

Who raised concerns about construction fire safety and how were those concerns addressed?

Need something a little more straightforward. Can we say....

- The Building and Safety Policy Branch (BSPB) held seven Technical Advisory Group (TAG) meetings involving a wide range of residential building sector stakeholders and experts. These meetings were held between Sept. 7 and Nov. 5, 2008 to identify potential issues connected to mid-rise wood-frame residential construction and offer suggestions for managing those issues.
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Date/Time: 19/May/2:22 PM

Deadline @ 4 p.m. today

Media Outlet: Vancouver Sun

Reporter: Laura Kane, 604.605.2165, lkane@vancouversun.com

<u>Topic:</u> Residential Mid-Rise Wood-Frame Construction Code Change

#### **Questions and Suggested Response:**

Why was the building code changed to allow for mid-rise wood frame in residential construction?

 There are a number of benefits to building with wood including lower costs and increased environmental sustainability. Increasing the allowable height of wood buildings is part of the Province's ongoing efforts to encourage innovative building practices and expand domestic markets for B.C. wood products. The new B.C. Building Code provisions allowing higher wood buildings maximize these benefits while maintaining the Province's commitment to public safety.

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- Implementation was supported by detailed Guides prepared by the Association of Professional Engineers and Geoscientists (APEG BC)in collaboration with the Architects Institute of BC (AIBC)and the Homeowner Protection Office (HPO) and a new, detailed Building Envelope Guide was also developed through the HPO, all with funding from the government.

When did the process start and how long did it take to complete and introduce the changes?

• Government announced its intention to introduce these changes in the Spring of 2008. The change was effective in April 2009.

#### What research and testing was completed

The province had access to an extensive amount of knowledge and expertise -particularly on seismic issues, where we partnered with Forintek and the international
NEESWood consortium to conduct research, including a siemic test of a full-scale
wood frame 6 storey building on the world's largest shake table in Kobe, Japan. (View
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- We also looked at environmental issues and the sustainability of building products. The
  province determined that wood has significant advantages in the areas of renewability,
  energy consumption in manufacturing of construction materials and reduced
  greenhouse gas emissions.
- The province contracted with independent industry experts and code consultants to conduct an extensive risk analysis which was peer reviewed by another code consultant. All of this work contributed to a sound technical understanding of the issues and how to resolve them.

Who needed to sign off on it before it could go through

- The Minister Responsible for Housing has authority, under Section 692 of the Local Government Act, to make changes to the Building Code by Ministerial Order. The Minister draws on the expertise of staff who work with the Building Code as well as technical advice and expertise from across the country and in B.C. before considering a change.
- Through public review of proposed changes to the Building Code, the Minister consults
  thoroughly with those affected by changes local governments, building and fire
  officials, builders, architects, engineers and others. For example, as part of the work to
  allow mid-rise residential wood-frame buildings, the Province held seven technical
  advisory group meetings and broadly consulted with those in the industry as well as
  the general public.

In their final report, GHL recommended that the Ministry complete a further study on construction fire safety if the area exceeds 7200 m squared. Did the Ministry then put in a clause stating that no building should exceed this size?

• The Province did limit the total floor area to 7200 m squared.

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• The Office of the Fire Commissioner has a fact sheet on their website to improve awareness of existing fire related regulations in the BC Fire Code. http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf).



Subject:

FW: Thoughts on moving forward on construction fire issue

Importance:

High

From: Vasey, Jeff SG:EX

Sent: Thursday, May 5, 2011 3:45 PM

To: Carr, Steve MEM:EX

Subject: Thoughts on moving forward on construction fire issue

Importance: High

Steve

The ED and staff in the Building and Safety Standards Branch have brainstormed a possible plan of action for the 'course of construction' fire issue.

S13

S13

Thanks

Jeff

#### Background:

- The Remy was the first project designed as mid-rise wood frame when BC developed the code change allowing mid-rise wood frame in 2009, and it was the closest to completion.
- For many, it was a demonstration project and the site of many tours for interested observers in other Canadian and international jurisdictions.
- Because of this, the fire has created a great deal of uncertainty about bigger "combustible" buildings in Ontario and other provinces contemplating a code change similar to BC's as well as jurisdictions in the US and Asia.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

Jeff Vasey Assistant Deputy Minister Office of Housing and Construction Standards Ministry of Energy and Mines

T: 250.387-2001



From: Rotgans, Trudy SG:EX

**Sent:** Thursday, May 5, 2011 2:27 PM

**To:** Vasey, Jeff SG:EX **Cc:** Lam, Roger SG:EX

Subject: Thoughts on moving forward on construction fire issue

Importance: High

Hi Jeff,

Subject:

FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

From: Lam, Roger SG:EX

Sent: Thursday, May 5, 2011 10:46 AM

To: Vasey, Jeff SG:EX

Subject: FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

FYI

From: Rotgans, Trudy SG:EX

Sent: Thursday, May 5, 2011 9:46 AM

To: Lam, Roger SG:EX

Subject: FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Hi Roger, It's largely accurate. Minister Coleman refers to other 6 storey buildings and the Kamloops building. The Kamloops building was built prior to this mid rise code change under an alternate solution and it is actually 5 storeys of wood on top of one storey of non-combustible construction. We have heard that there are other buildings like that in BC that were built under an alternate solution. So, technically, this is the first completely wood six storey building built under the new code provisions. Many others are in the planning/design stage.

Note a reference to Part 9 that is erroneous.

Thanks,

Trudy

From: Lam, Roger SG:EX

Sent: Thursday, May 5, 2011 9:08 AM

To: Rotgans, Trudy SG:EX

Subject: FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Hi Trudy,

Jeff asked whether you could verify the fact of what is being said in this scrum.

Roger

**From:** Anderson, Maryann PAB:EX **Sent:** Wednesday, May 4, 2011 5:11 PM **To:** Vasey, Jeff SG:EX; Rotgans, Trudy SG:EX

Cc: Lam, Roger SG:EX

Subject: FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

fyi - Transcript of Minister's scrum on six-storey

From: tno@gov.bc.ca [tno@gov.bc.ca]

Sent: May 4, 2011 4:23 PM

To: Anderson, Maryann PAB:EX

Subject: TNO: Coleman voicing confidence in wood first policy despite Richmond condo fire

Scrum

Coleman scrum following Richmond condo fire

04-May-2011 13:09

Reporter: I obviously wanted to ask you about this six-storey wood frame building site that burned down last night. As you know, you guys [inaudible] some changes to the Building Code to allow such building, so are you concerned about this development?

Rich Coleman: Not at all. I mean, the reality is this was under construction. We've had four-storey buildings burn down in construction, houses burn down during construction because they're usually not at a stage where all the fire protection's in place, particularly sprinklers, or drywall is not completed, that sort of thing.

The reality is I have to find out more facts about the fire started and what it was. But it doesn't really matter except for the fact that the fires take place sometimes on construction sites. That's unfortunate. This is one of our six-storey constructions. People point to it as being why the fire started, why the fire burned the building down. But I would suspect that it's not the case. We have six-storey construction buildings completed in BC that are functioning fine with their sprinkler systems and what have you. One of the reports was this was the first one; it isn't. We're involved in this one because we have some money invested and through BC Housing because we were putting some seniors housing in there and funding part of the project. So we'll have....

Reporter: Will this be cause for concern over the Wood First policy?

Coleman: No, not at all, not at all for me. I mean, if you look at the history of fires in BC you will find that four-storey condo buildings under construction have burned down in the past during construction. Sometimes it can be arson. Sometimes it could be faulty propane tanks or propane fire things that are [inaudible] to dry drywall and stuff like that. You've got to be vigilant on sites.

So I don't know. There's so many things that are factors in a project like this; I've built them over the years. You've got to watch your sawdust and how you're cleaning up your site at night. Is there somebody on the site when you're actually doing the drywall drying with the propane heaters, that sort of thing? So it could be any factor, and once a fire starts in anything that's only partially constructed it is very difficult to control simply because you've got none of the firewalls in place. Usually you don't have any way to shut off the fire because you don't have the situation where you had a firewall built under part 9 yet because you'd have open flow of air. So if you've ever had a fireplace, if you have more fresh air getting to a fire it's way more difficult to fight than when it was closed up.

Reporter: Over in the UK, though, this is a major issue, fires on construction sites for taller wood frame buildings. I mean, this has been highlighted repeatedly.

Coleman: You know for a fact that the UK's gone a lot higher than us. They've actually gone to nine and 12 storeys with different forms of engineered wood. So it's a totally different issue in the UK.

Reporter: While we're waiting for the Premier can I just ask you a quick question just about that fire? I didn't get to all the questions. What happens in terms of the people that were supposed to live there, affordable housing? What happens to that now? How delayed are [inaudible]?

Coleman: We're way too early in the project to have had any tenants identified.

Reporter: Too early, is it?

Coleman: Yeah. The building wasn't due to open till December, so we wouldn't have had identified tenants yet with the non-profit and with our operator and with BC Housing. So that would have no effect, although we're going to have to obviously rebuild the inventory. So we'll have to get back on the site, clean it up. Obviously our foundation should be fine. And we would start building again.

Reporter: In terms of costs or insurance...?

Coleman: Any time we do a project we build into any money we put into a project, whenever we're dealing with a contract, that there is construction insurance, and my anticipation is this would be insured.

Reporter: And we only spoke briefly about the Wood First policy, a lot of criticism. This was a six-storey building, and it was [caused] by that [inaudible] in the Building Code or exacerbated.

Coleman: I think it's totally irresponsible for anybody to make that comment. First of all, it's a wood frame construction. We've lost four-storey wood frame construction buildings during construction in the past with fire. This is a six-storey. We don't know what floor it started on. If it's open air when a fire gets going and there's lots of oxygen, it doesn't matter what form of construction you have. We recently had a home under construction burn in the riding next door to me in the Fraser Valley. It was just a house.

So during construction is a tough time because there are certain times when you may get a leak on propane for the heaters that they're drying the drywall or whatever equipment happens to be on site. I don't know if that's the cause of the fire or whether this could be.... It could even be arson. But the reality is that when it's at that stage it's critical for fire

simply because it's exposed product and there's not the fire protection and all that stuff that would be built into it with insulation and drywall and that sort of thing.

Reporter: [Inaudible] report that said this was the first one, the first six-storey building.

Coleman: That's not correct. There's actually a six-storey building up and built and constructed in Kamloops. [e&m, forr, jti, pssg, sss]

TNO...
This e-mail is a service provided by Today's News Online and is only intended for the original addressee.

Subject: Attachments: FW: FOR APPROVAL - HSG-IN Remy Fire-Six-Storey Wood Frame

HSG-IN Remy Fire-Six-Storey Wood Frame.docx

From: Anderson, Maryann PAB:EX

Sent: Wednesday, May 4, 2011 11:11 AM

To: Vasey, Jeff SG:EX

Cc: Lam, Roger SG:EX; Rotgans, Trudy SG:EX

Subject: FOR APPROVAL - HSG-IN Remy Fire-Six-Storey Wood Frame

Here is the final IN on the Richmond fire Please note I added three bullets at the end.

If you can please review, I have to get over to the MO by 11:45.

Thanks

### **ADVICE TO MINISTER**

# CONFIDENTIAL ISSUES NOTE

Ministry of Energy and Mines and Minister Responsible for Housing

Date: May 4, 2011

Minister Responsible: Hon. Rich Coleman

## Fire at Remy development Seniors Housing and first 6 storey wood-frame construction

## KEY FACTS REGARDING THE ISSUE:

**UPDATE\_May4\_9:40 a.m.:** It appears the fire started in the 2nd phase that was under construction. The first phase/structure was complete and buttoned up, however the sprinklers may not have been hooked up or charged yet. Embers fell on a neighbouring home but were extinguished.

- A fire destroyed two buildings under construction in Richmond. The Remy projects were the
  first six storey wood frame buildings being built under new B.C. building-code provisions that
  allowed for mid-rise wood frame construction (six-storey wood buildings).
- The fire broke out around 10:30 p.m. PT at the site located at 9388 Cambie near the intersection of Stolberg Road. The building was still under construction and not occupied.
- Richmond Fire Department expressed concerns in 2009, that their ladders were not high
  enough to reach the top of the building. However, at the time, the fire chief had said it was
  not a concern as the building was not yet occupied.

## **Building Code changes**

- The 2006 BC Building Code allowed wood-frame residential buildings of up to four storeys.
- In May 2008, the province announced changes to allow wood-frame residential buildings up to six-storeys. The change was effective in April 2009 and supported the Wood First policy.
- The 2012 edition to the code will contain the following additional fire safety provisions:
  - Higher sprinkler standards (NFPA 13) established, which require sprinkler for concealed spaces such as attics and crawl spaces and balconies deeper than four feet.
  - Total building area maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings.
  - Building height limited to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended.
  - Fire resistance performance standards established for exterior cladding to prevent external fire spread.

## **BC Housing Investment**

- The 188-unit housing development is being built by Oris Development Corporation, and was scheduled for completion in December, and was to include:
  - 33 apartments for seniors and people with disabilities & 48 affordable apartments for lowto moderate-income families and singles - all managed by S.U.C.C.E.S.S.
  - o 37 affordable-homeownership units for sale to qualified buyers
  - o 70 private-market apartments
  - o 50-60 space children's daycare
- The province provided a \$34 million construction loan to Oris to date, \$18.5 million has been advanced. In addition, \$4.5 million in provincial and Federal funding was provided for the 33 seniors apartments. Province also invested \$500 thousand for the daycare.
- Oris is planning to hold a media briefing near the site at 11:30 a.m. (May 4).

## Impact on Wood-Frame Construction in other jurisdictions:

- BC has been in discussions with Ontario and other provinces regarding mid-rise six-storey and a demonstration project was recently announced in Beijing.
- The fire has created some uncertainty about higher wood-frame buildings in other jurisdictions contemplating a code change similar to BC's.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

#### ADVICE AND RECOMMENDED RESPONSE:

- This fire is a terrible delay to a unique development that will provide a number of affordable rental and home ownership options for families, seniors and people with disabilities in the Richmond area.
- The cause of the fire is still under investigation by the Richmond Fire Department and the Office of the Fire Commissioner. Any questions related to the fire should be directed to them.
- The Province was providing construction financing of \$34m to facilitate the project and purchasing 33 apartments under the joint Federal/Provincial Seniors' Rentalt Housing initiative, to be operated by SUCCESS.
- SUCCESS was also purchasing 48 units for rental and was going to be property manager for all 81 rental apartments.

#### **Building Code**

- The changes to the B.C. Building Code allowing six storey wood frame construction include the requirement that sprinklers be extended to balconies and within concealed spaces like attics.
- We understand the fire protection system was not yet activated as the building was still under construction and there were no occupants.
- A building under construction does not have many of its fire safety features in place, such as sprinkler systems and fire separations like doors, which are required for occupancy.
- We are continually updating requirements under the building and fire codes to protect life and safety and the 2012 edition of the BCBC will include additional requirements.
- The province has a wood-first policy with an overall goal that wood be considered as the first choice for construction and interior design.
- B.C. has a high level of competency and knowledge in research, engineering design and construction of wood buildings and we have an established process in place designed to protect life and safety, during construction and after occupancy.
- We will continue to support mid-rise wood frame construction.

Communications Contact: Program Area Contact:

Maryann Anderson Fergus McCann 250 213.1493 778 452.6445

File Location:

Subject:

FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise

Wood Frame Construction

Importance:

High

From: Anderson, Maryann PAB:EX Sent: Friday, May 6, 2011 4:28 PM

To: Vasey, Jeff SG:EX

Cc: Rotgans, Trudy SG:EX; Lam, Roger SG:EX

Subject: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

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Date/Time: 19/May/2:23 PM

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Reporter: Laura Kane, 604.605.2165, lkane@vancouversun.com

**Topic:** Residential Mid-Rise Wood-Frame Construction Code Change

#### **Questions and Suggested Response:**

Why was the building code changed to allow for mid-rise wood frame in residential construction?

• There are a number of benefits to building with wood including lower costs and increased environmental sustainability. Increasing the allowable height of wood buildings is part of the Province's ongoing efforts to encourage innovative building practices and expand domestic markets for B.C. wood products. The new B.C. Building Code provisions allowing higher wood buildings maximize these benefits while maintaining the Province's commitment to public safety.

Who was involved in developing the new provisions?

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1

 Implementation was supported by detailed Guides prepared by the Association of Professional Engineers and Geoscientists (APEG BC)in collaboration with the Architects Institute of BC (AIBC)and the Homeowner Protection Office (HPO) and a new, detailed Building Envelope Guide was also developed through the HPO, all with funding from the government.

When did the process start and how long did it take to complete and introduce the changes?

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 The change was effective in April 2009.

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  full-scale wood frame 6 storey building on the world's largest shake table in Kobe,
  Japan. (View test at: http://www.hsd.gov.bc.ca/video/wood\_shake.html)
- An historical analysis of the rationale for size limitations on combustible buildings was conducted by the province and confirmed that limitations on height and area for combustible buildings were established a century ago many changes to building safety and standards have taken place in the last century which allow for safer structures due to improvements in building techniques and materials. However, until scientific research based on current building technology is undertaken, British Columbia's code changes maintain a conservative approach and we placed a limit on mid-rise wood frame that keeping the current height to area formula which holds that the total building area be maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings. This was submitted to the Canadian Codes Centre for them to consider and no concerns were raised by the National Centre.
- We also looked at environmental issues and the sustainability of building products. The
  province determined that wood has significant advantages in the areas of renewability,
  energy consumption in manufacturing of construction materials and reduced
  greenhouse gas emissions.
- The province's code consultants conducted an extensive risk analysis which was peer reviewed by another code consultant. All of this work contributed to a sound technical understanding of the issues and how to resolve them.

## Who needed to sign off on it before it could go through

- The Minister Responsible for Housing has authority, under Section 692 of the Local Government Act, to make changes to the Building Code by Ministerial Order. The Minister draws on the expertise of staff who work with the Building Code as well as technical advice and expertise from across the country and in B.C. before considering a change.
- Through public review of proposed changes to the Building Code, the Minister consults thoroughly with those affected by changes - local governments, building and fire

officials, builders, architects, engineers and others. For example, as part of the work to allow mid-rise residential wood-frame buildings, the Province held seven technical advisory group meetings and broadly consulted with those in the industry as well as the general public.

Who raised concerns about construction fire safety and how were those concerns addressed?

Need something a little more straightforward. Can we say....

- The Building and Safety Policy Branch (BSPB) held seven Technical Advisory Group (TAG) meetings involving a wide range of residential building sector stakeholders and experts. These meetings were held between Sept. 7 and Nov. 5, 2008 to identify potential issues connected to mid-rise wood-frame residential construction and offer suggestions for managing those issues.
- Fire safety concerns were part of those discussions and were looked at throughout the
  process of developing the new code provisions. These concerns were reviewed and
  addressed and included fire safety both during construction as well as in the completed
  building in order for an occupancy permit to be granted by the municipality.
- Other issues reviewed throughout the process included:
  - 1. Fire Safety
  - 2. Structural/Seismic Safety
  - 3. Wood Shrinkage / Building Envelope Integrity
  - 4. Fire Safety second meeting focusing on construction fire issues
  - 5. Implementation issues for trades and services
  - 6. Implementation issues for local governments
  - 7. Education and training requirements

Who were the stakeholders who wished to address construction fire safety?

 Fire Services representatives and some local government building officials were among those who expressed some concerns regarding construction fire safety issues.

In their final report, GHL recommended that the Ministry complete a further study on construction fire safety if the area exceeds 7200 m squared. Did the Ministry then put in a clause stating that no building should exceed this size?

• The Province did limit the total floor area to 7200 m squared.

Was anything additional done to address construction fire safety?

- The Office of the Fire Commissioner has a fact sheet on their website to improve awareness of existing fire related regulations in the BC Fire Code. http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf).
- The total allowable volume of the building was unchanged from the existing Code, and the relatively low incidence of construction fires in Multi-unit wood frame buildings (less than 0.03%) did not appear to indicate a need for more stringent rules – but rather better awareness of the existing rules.

Was everyone convinced that construction fire safety did not need to be addressed further?

• A substantial majority of respondents to our online public review supported our code change approach.

- All issues raised by stakeholders at our technical advisory meetings and other stakeholder consultation were considered.
- The cause of the fire at the Remy building in Richmond is still under investigation by the Richmond Fire Department and the Office of the Fire Commissioner. Once the investigation is concluded and we know the cause, we will look at the evidence and determine what, if any further action is required on construction fire safety issues.

Subject: Attachments: FW: Remy fire - initial monitoring report and analysis

FII Monitoring - May 9 2011 - Final.doc

----Original Message----From: Rotgans, Trudy SG:EX

Sent: Tuesday, May 10, 2011 8:53 AM To: Vasey, Jeff SG:EX; Lam, Roger SG:EX

Subject: FW: Remy fire - initial monitoring report and analysis

I thought you'd be interested in this summary. I've already sent it to Maryann.

#### Trudy

----Original Message----

From: Michael Loseth [mailto:loseth@bcfii.ca]

Sent: Tuesday, May 10, 2011 8:40 AM

To: Rotgans, Trudy SG:EX Cc: Sonya Zeitler Fletcher

Subject: FW: Remy fire - initial monitoring report and analysis

Trudy,

Thought this might be of interest to you. We're quietly keeping tabs on this.

Mic.

From: Sonya Zeitler Fletcher Sent: May 10, 2011 8:36 AM

To: Brewer, Gail P FLNR:EX; McLaughlin, Katie GCPE:EX

Cc: Michael Loseth

Subject: FW: Remy fire - initial monitoring report and analysis

Gail and Katie,

Attached please find a summary of news coverage to date (not including the JOC article we were referencing yesterday). We will have more today that will include social media. As you can see, there will be a need to have a comprehensive set of messages developed that both government and industry can use to address these and by extension the Wood First policy.

#### Sonya

From: Lilly, Anna [mailto:anna.lilly@fleishman.ca]

Sent: Monday, May 09, 2011 11:42 PM

To: Sonya Zeitler Fletcher

Cc: Reder, Mark; Twigg, Jeremy; Ma, Shijun

Subject: Remy fire - initial monitoring report and analysis

Sonya,

Attached is the initial monitoring report focusing on the Remy fire in Richmond. This includes traditional news media and online media - clips have been found within Canada, and

online-only clips in the U.S. No media coverage has been detected in China, Japan or the UK to date. In a follow up report Tuesday, we will provide social media monitoring.

The following is an analysis based on the results of the monitoring to date:

#### QUANTITY & LOCATION OF COVERAGE:

Greater Vancouver-based media coverage makes up the majority of news items found to date. Syndicated versions of major news stories have also appeared in the Okanagan, Vancouver Island, Alberta and Ontario. Monitoring has not picked up any news coverage in the U.S., China, Japan or the UK.

Online coverage has resulted either from pick ups of traditional media stories, trade coverage such as the Journal of Commerce website (construction industry publication), or newswire releases issued by the Canadian Wood Council and a group of concrete/masonry associations.

To date, the majority of coverage has come from traditional news outlets. With the exception of the Journal of Commerce, no trade/industry coverage has been found. (Note: social media monitoring may uncover additional international and trade media content as of May 10.)

#### TONE:

Where news coverage addresses issues pertaining to wood-frame construction, building codes and the Wood First policy, the tone of coverage was negative. Many reports focus extensively on safety questions pertaining to higher wood-frame structures and the lack of preparedness by community fire departments to deal with fires at six-storey wood buildings under construction. Some news reports refer to the new six-storey wood-frame building code regulations as "controversial." A number of news stories reference a 2009 report by Richmond's fire prevention officer which warned Richmond City Council about approving a six-storey wood-frame building, due to safety concerns.

News stories featuring comments by development industry representatives (e.g. Peter Simpson) or Minister Rich Coleman were more balanced.

The majority of local news coverage emphasizes that unanswered questions remain as to the cause of the fire, potential remedies for fire departments that may be unprepared for similar incidents, and the future status of building code regulations introduced as a result of the Wood First policy. Media coverage in the coming weeks is likely to focus on results of the fire investigation and follow-up by stakeholders seeking regulatory changes pertaining to the above issues.

#### MAJOR THEMES OF COVERAGE:

#### Severity of the fire

Dangerous conditions for emergency responders Wood First policy - Remy project was the first 6-storey wood-frame building in BC General safety of wood as a building material Municipal vs. provincial responsibility for building codes Under-resourced fire departments / fire truck ladders of inadequate height Fire risks on construction sites Status of Remy development Cause of fire / status of fire investigation Potential threat to BC wood exports to China (local Chinese media coverage only)

#### SOURCES:

The following individuals or organizations have been featured prominently in coverage to date. We have summarized their key point(s) and comments:

National Fire Protection Association (Canada) – until sufficient fire extinguishing facilities are available, six-storey wood-frame buildings should not be constructed (however not calling for moratorium)

Richmond Fire Department / fire prevention experts - many fire departments, particularly in suburban, smaller or rural communities, are not adequately equipped and resourced to fight a fire like this; 2009 Richmond Fire Rescue report to city council warned that taller wood buildings "raise several concerns within the fire services community"

Greater Vancouver Home Builders Association - taller wood-frame buildings are safe; similar buildings exist in the US and Europe

Concrete/masonry industry - wood-frame buildings are not as safe as concrete buildings

Ministry of Energy, Mines and Housing - wood-frame construction is safe, including six-storey buildings, and is not unique to B.C.; a building under construction does not have many of its fire safety features in place

City of Richmond — municipality does not have the power to overrule the BC building code; could not disallow six-storey wood-frame buildings

Insurance Corporation of BC - insurance rates for wood-frame buildings in the construction phase reflect the high fire risk

Canadians for Properly Built Homes - no building code should proceed until all safety issues have been dealt with adequately

Although both the wood industry and the concrete/mason industry issued press releases about the Remy fire, news media coverage had largely dissipated by that point. There is little evidence that either industry's release has been quoted in the news media to date.





## Media Report - May 9, 2011

Prepared by Fleishman-Hillard Contact: <a href="mailto:anna.lilly@fleishman.ca">anna.lilly@fleishman.ca</a>

## Contents

(click headers or news outlets to jump to page)

Canadian Media	3
Print Media	3
Richmond Review	3
Vancouver Sun	4
Vancouver Sun	5
Vancouver Sun	6
Metro News	7
Victoria Times-Colonist	8
Vancouver Sun	9
The Province	11
The Province	12
Ottawa Citizen	13
24 Hours	13
Kamloops Daily News	14
The Province	15
Richmond News	16
Calgary Herald	17
Television	19
CTV News – May 5	19
CTV News at Five – May 5	20
Global – May 5	21
Citytv Vancouver - May 5	22
CBC News: Vancouver at Six	23
CTV Vancouver - May 4	
Cityty Vancouver – May 4	Page 24 HOU-2011- <b>0</b> 0 <b>6</b> 06

CDC INCMS INCLUDIN - INIBY 4	
Global BC – May 4	27
Radio	29
News 1130 – May 6	29
CKNW 980	29
News 1130 – May 4	30
CBC Radio One	31
Chinese Language Vancouver Media	32
Sing Tao Daily	32
Du Shi Net	32
Epoch Times	32
West Canada Site	33
Van.Worldjournal.com	33
Van.Worldjournal.com	34
Chinese Media (none)	34
Japan Media (none)	34
UK Media (none)	34
USA Media (none)	34
Online Coverage	35
Digital Journal	35
Vancouver Media Co-op	36
IStock Analyst	37
TMC Net	38
UPI.com	39
Masonry associations press release	40
Journal of Commerce	42
Social Media (to be added May 10, 2011)	43

## Canadian Media

## **Print Media**

#### **Richmond Review**

Investigators pick through Remy remains for clues http://www.bclocalnews.com/richmond\_southdelta/richmondreview/news/121415959.html

Martin Van Den Hemmel May 6, 2011

As firefighters were dousing the last remaining hotspots Thursday at the construction site of The Remy on Cambie Road, there were more questions than answers about Tuesday night's spectacular blaze visible from as far as downtown Vancouver.

Charan Sethi, a local developer, found out about the fire Tuesday evening from his daughter and feared that a personal horror story was in the midst of repeating itself.

It was on the afternoon of Oct. 1, 2008 that Sethi's four-storey residential project in Surrey burned to the ground and to this day, he still doesn't have all the answers.

Despite the best efforts of police, fire and insurance investigators, and even the assistance of polygraph lie detector tests, the cause of that fire remains a mystery. And so there's been no closure for him.

"I'll never forget that date," Sethi told The Richmond Review Friday morning.

While Sethi breathed a bit of a sigh of relief that it wasn't one of his Richmond projects that was burning before his eyes, he empathized with the developers at The Remy and Oris Developments—Dana Westermark and Barry Cavanaugh—who were about to go through the same nightmare he experienced.

"It's shocking for all of us," he said.

The Remy was a six-storey structure—the first woodframe building of its size in the province—and was completely engulfed in flames by the time fire crews were called at 10:50 p.m.

The \$60-million 188-unit condo tower was to include a wide array of affordable housing options. Westermark vows to rebuild it as quickly as possible.

Sethi said he's now looking at steps he can take to reduce the risk of a fire during the most vulnerable part of the construction process.

Among the considerations is getting the sprinkler system activated earlier on, to help stem a fire should one start. A fire doubles in size every minute, Sethi said, and it wouldn't take long for it to get beyond the controllable stage in a building like The Remy that was little more than exposed, tinder-dry wood studs. There are also other ideas being tossed around, but he declined to make them public for security reasons.

City of Richmond spokesperson Ted Townsend said investigators were carefully picking through the remains of The Remy—a \$60 million, six-storey woodframe residential project that was to include affordable housing and a badly-needed daycare—in hopes of not destroying any clues while eliminating any flare-ups.

Townsend said he doesn't expect any potential causes for the fire to be known until next week. And even then, firefighters won't be making that information public until after they've eliminated other possibilities, he said.

Page 26
HOU-2011-00006

According to Jean, investigators will be looking at whether plumping or rooming activity that involves torches, took place on the day of the fire.

Asked what type of construction delay the fire might cause at The Remy, Sethi said he didn't know, but that in his case it was 14 or 15 months. He added, however, that his project in Surrey was smaller.

Townsend said it would be premature to conclude that the height of The Remy had anything to do with the fire. It was scheduled to be the first six-storey woodframe structure of its kind in the province after Victoria changed the rules that had once limited woodframe buildings to four storeys.

He noted that the building was still in the midst of the construction phase, and at a very vulnerable point. Had the planned safety measures been in place, such as drywall and a charged sprinkler system that extended to the balconies, that would have slowed the progress of the fire and perhaps limited the damage to one or perhaps two adjacent units.

#### Vancouver Sun

Fire service still lacks tools to put out blazes at taller wood-frame buildings http://www.vancouversun.com/news/Fire+service+still+lacks+tools+blazes+taller+wood+frame+buildings/4744808/story.html#ixzz1Lv7wBEEn

Tracy Sherlock May 7, 2011

Richmond Fire-Rescue stands behind the 2009 report that said its resources might not be adequate to fight a fire in a sixstorey wood-frame structure, a deputy chief said Friday.

The fire service does not have more staff or higher ladders than when they first expressed concerns, Tim Wilkinson, deputy chief of operations for Richmond Fire-Rescue, told The Vancouver Sun.

The report to the city's community safety committee responded to BC Building Code changes raising the allowable height of wood-frame buildings from four storeys to six. "To fight a fire effectively in such a structure will require new firefighting tactics, which could also require additional firefighting resources, more personnel, and higher-reaching ladder trucks," fire-prevention officer Dave Clou wrote at the time.

When fire broke out at The Remy project on Cambie Road in Richmond last Tuesday, flames could be seen for miles and blowing embers and ashes caused spot fires in 10 nearby buildings. Firefighters fought the intense blaze overnight and well into the next day.

Because Richmond's firefighters were all either battling the massive fire or out on other calls, the city had to call on Vancouver firefighters to combat the spot fires.

Smaller, more isolated communities would not have these resources at their disposal, but the building code allows this type of construction throughout the province.

These buildings should never be built in communities that aren't adequately equipped, said Sean Tracey, Canadian regional director of the National Fire Protection Association.

"What if this had happened in Chilliwack, Hope or Prince George? They wouldn't have those resources to call on," Tracey said, adding that in addition to equipment such as ladders and thermal-imaging cameras, a sufficient number of firefighters and proper training are crucial to successfully fighting large wood fires.

In the case of the fire at The Remy, Wilkinson said, the regular ladder trucks, which extend to 22.5 metres, were sufficient. Because the buildings were not yet occupied, no rescues were required to 2011-00006

2003 report was not a formal request for a taller lauder truck, and such a request has not been made of city council.

"You don't buy a truck like that overnight," Wilkinson said. "They're very, very expensive and it takes two years to get one because they have to be constructed."

The average cost of a ladder truck is about \$1.5 million, and a taller ladder truck would cost \$2.7 million a year to staff, Wilkinson said.

"It would change our deployment model. A truck that size is not easily transported through the city streets, but right now our units are," he explained.

The status of all of Richmond Fire-Rescue's vehicles is under review, and one new multi-purpose truck without a ladder is being purchased this year.

City of Richmond spokesman Ted Townsend said that if a taller ladder were required, Richmond could use Vancouver's.

Townsend said it's not up to the city to decide whether or not they want six-storey wood buildings.

"The building code already permits it and we do not have the authority to supersede the building code," Townsend said.

"At this point, if the developer does come back with the same proposal, the city would support it as it is a permitted use under the BC Building Code.

"My understanding is that we have very limited authority to be able to say no. As long as they fit the rules under the BC Building Code, if we say no, we would likely be open to a court challenge."

Meanwhile, the cause of Tuesday's fire is still under investigation and could take some time to determine, Wilkinson said.

"Investigators are busy digging through the remains of that fire to see if they can locate the origin or the cause of the fire," Wilkinson said. "At some points, you're literally digging by hand, shovel by shovel. It's a big challenge."

It's possible investigators will never know whether the fire was deliberately set.

The Remy, at 9388 Cambie Rd., is a multi-building 188unit condo project that includes 81 affordable-housing units and a daycare.

#### Vancouver Sun

Concerns raised over wood-frame construction

http://www2.canada.com/vancouversun/news/story.html?id=e22e0879-aa57-425b-aeca-28a84e98fe8a

Tracy Sherlock May 6, 2011

Tuesday's fire in Richmond raises concerns about changes to the B.C. Building Code that allow taller wood-frame buildings, a fire prevention engineer says.

These buildings are at their most vulnerable to fire and pose the greatest threat to surrounding buildings when they're in the construction phase, said Sean Tracey, Canadian regional director of the Nagonal Fire Hou-2011-00006 Protection Association.

"This fire happened at the worst possible time," he said.

Tracey isn't calling for a complete moratorium on taller wood-frame buildings, but said these buildings should never be built in communities that don't have adequate tools to fight this type of fire.

Richmond had to call on neighbouring communities, including Vancouver, to fight Tuesday night's fire at The Remy development, plus 10 spot fires that broke out in the neighbourhood surrounding the area.

"What if this had happened in Chilliwack, Hope or Prince George? They wouldn't have those resources to call on," Tracey said, adding that equipment, such as ladders or thermal imaging cameras; the number of firefighters; and proper training are crucial to successfully fighting large wood fires.

He said B.C. should re-evaluate what additional construction and site security practices are needed to ensure these new types of buildings are safe from fires.

Tuesday's fire hit the first project in B.C. to take advantage of building code changes introduced in 2009 allowing wood-frame buildings as high as six storeys.

Previously, wood-frame buildings were limited to four storeys due to fire risk and structural concerns. The code was changed as part of the B.C. Wood First Act, which aimed to stimulate the province's timber industry. The provincial government determined that improved fire prevention techniques such as sprinkler systems that extend to balconies would make the buildings safe.

As long as a project follows the new building code, the resources of the local fire department are not necessarily considered before approval is granted.

"Unfortunately, in the rush to develop these projects, sometimes some communities may not check that the fire department has adequate capability to fight these fires," Tracey said. "If the fire department raises these concerns, their voices can be overcome by the developers that want to proceed."

In 2009, Richmond Fire Rescue did warn that new firefighting tactics would be required to fight these fires effectively, including resources, personnel and higher ladder trucks.

Tracey said B.C. should reevaluate what the additional construction and site security practices should be to ensure these new types of buildings are safe from fires. The NFPA, for which Tracey works, is a nonprofit association that develops and publishes consensus codes and standards to minimize the possibility and effects of fire and other risks.

Peter Simpson, president and CEO of the Greater Vancouver Home Builders Association, said that The Remy's builder is extremely vigilant when it comes to safety rules.

"Whatever was required, I have no doubt that it did occur," Simpson said. "At this point in construction, this building was basically a big pile of kindling.

#### Vancouver Sun

Richmond fire like a rerun of 2008 Surrey blaze
Flames ravaged condominium development still under construction at 107 A Avenue
http://www.vancouversun.com/business/Richmond+fire+like+rerun+2008+Surrey+blaze/4737708/st
ory.html#ixzz1LsBICt6X

Laura Kane May 6, 2011 the recent fire at a menimona construction site recails a plaze that ravaged the Quattro condominant development in Surrey while it was under construction in October 2008.

All of the units in the development had been sold when a blaze ripped through the construction site, destroying one building and partly damaging another. Those who bought units in the partly damaged building had been expecting to move in later that fall. Both were four-storey wood-frame buildings.

The \$625-million Quattro condominium project, billed as Surrey's largest residential and commercial project, is still moving toward completion. The project is complemented by a number of amenities, such as a theatre and a civic plaza, planned by the City of Surrey.

The developer, Charan Sethi, president of the Tien Sher Group of Companies, said Thursday the plans were delayed by the blaze, but not for long.

"Afterwards, you can't sit back and cry about it," Sethi said. "We cleaned up the mess and started rebuilding it."

The partly damaged building, Quattro 1, was further along in the construction phase and already had sprinkler systems in place. Those sprinkler systems saved most of the building, but the \$30-million Quattro 2 was reduced to ash.

At a press conference shortly after the Quattro fire, buyers criticized Sethi about the delay. One woman complained that she had nowhere to go.

Sethi said that the woman was renting at the time and was not homeless. He said that buyers were not compensated for their wait because they had not yet received notice that their homes were ready to move into.

In the end, every buyer held on to their property, Sethi said. The damage to Quattro 1 was repaired and homeowners were able to move in March 2009, four months later than expected.

The destroyed Quattro 2 was rebuilt entirely and opened in January 2010. A third woodframe building is now under construction and is set to open in May 2012.

Whether or not a buyer can leave depends on their contract. A developer could include a clause that states if the building burns down while it is being constructed, the buyer's completion date will be pushed back, according to B.C. contract law.

Sethi said that security measures and fire prevention efforts were stepped up after the blaze.

"Any other developer would do the same thing, which is to be extra cautious," he said.

Sethi also assured the public that wood-frame buildings are safe provided the right safety measures are in place.

"Wood buildings are very safe once they're finished, because they have all the safety measures built into them. It's only when they're in the construction stage that the sprinkler systems aren't in place, and the drywall isn't in place, they're in the vulnerable stage."

Insurance rates for woodframe buildings in the construction phase reflect the high fire risk. They are charged higher rates than many other building types while under construction, said Lindsay Olson, vice-president of the Insurance Bureau of Canada for B.C., Saskatchewan and Manitoba.

#### **Metro News**

Matt Kieltyka May 6, 2011

The operator of a social housing project in Richmond says he was left devastated to learn the almost-completed development had burned to the ground yesterday morning.

A massive blaze engulfed The Remy — near Cambie and Garden City roads in Richmond — late Tuesday night and burned fiercely throughout the night.

By daylight, the two six-storey wooden buildings had been completely levelled and it became clear the entire project — which featured 81 units of social housing and a daycare — would have to be rebuilt from the ground up.

"I was very upset and saddened for families that were looking to move in September," said SUCCESS CEO Thomas Tam, whose organization was to operate the housing units. "There is such a need for affordable housing, a delay like this hurts."

Tam said 48 of the units are for low-income individuals and families, while the rest are for seniors.

SUCCESS had yet to choose candidates for the project, so Tam said at least no families had to be told the bad news.

Oris Development Corporation's Dana Westermark said his company will rebuild but offered no timeline.

"We're still committed to this project. It's fully insured. We will rebuild," he said. No one was injured in the fire and the cause still being investigated.

#### Victoria Times-Colonist

Richmond blaze reignites building code debate

http://www.timescolonist.com/news/Richmond+blaze+reignites+building+code+debate/4738266/story.html

May 6, 2011

Two of the first six-storey wood-frame buildings approved under a revised B.C. building code allowing taller wood construction burnt to the ground in a massive fire in Richmond late Tuesday.

The development, called The Remy, at 9388 Cambie Rd., is a 188-unit condo project.

Taking advantage of building code changes introduced in 2009, The Remy was to have been the first development in B.C. to go above four storeys using wood, rather than concrete.

Previously, wood-frame buildings were limited to four storeys due to fire risk and structural concerns. The code was changed as part of the B.C. Wood First Act that aimed to stimulate the province's timber industry. The provincial government was persuaded that improved fire prevention techniques would make the buildings safe.

Still, the revised building code met with some criticism from fire officials who worried their equipment would not be able to handle fires in wood buildings that height.

In 2009, Richmond Fire Rescue fire prevention officer Dave Clou wrote a report to city council warning that taller wood buildings "raise several concerns within the fire services community."

Page 31
HOU-2011-00006

under the new code, given that parking lots are built above street grade because the city is at sea level.

Tim Wilkinson, deputy chief of operations for Richmond Fire Rescue, said the firefighters had the appropriate ladders necessary to fight this fire.

"I can assure the public that wood-frame construction is safe, even with sixstorey buildings, and this kind of building isn't unique to B.C.," said an email from the Ministry of Energy. "A building that's under construction does not have many of its fire safety features."

Wilkinson conceded that the wood contributed to the severity of the fire.

The developer, Dana Westermark of Oris Development Corp., said he intends to rebuild.

The investigation into the cause of the fire continues.

#### Vancouver Sun

B.C.'s first six-storey wood-frame construction goes up in flames
Wooden buildings previously limited to four floors due in part to fire risk
http://www.vancouversun.com/entertainment/first+storey+wood+frame+construction+goes+flames
/4730254/story.html

By Tracy Sherlock and Laura Kane; With Files From Gillian Burnett May 5, 2011

Two of the first six-storey wood-frame buildings approved under a revised B.C. building code allowing higher wood construction burnt to the ground in a massive fire in Richmond late Tuesday.

The development, called The Remy, at 9388 Cambie Rd., is a 188-unit condo project that includes 81 affordable-housing units and a daycare.

Taking advantage of building code changes introduced in 2009, The Remy was to have been the first development in B.C. to go above four storeys using wood, rather than concrete.

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Still, the revised building code met with some criticism from fire officials who worried their equipment would not be able to handle fires in wood buildings that height.

In 2009, Richmond Fire Rescue fire prevention officer Dave Clou wrote a report to city council warning that taller wood buildings "raise several concerns within the fire services community."

The report says Richmond's 75-foot ladder trucks would not be able to reach the heights of buildings allowed under the new code, especially given that parking lots are built above street grade because the city is at sea level.

"To fight a fire effectively in such a structure will require new firefighting tactics, which could also require additional firefighting resources, more personnel and higher reaching ladder trucks," the report warned.

Tim Wilkinson, deputy chief of operations for Richmond Fire Rescue, said the firefighters had the firefighters had appropriate ladders necessary to fight this fire.

HOU-2011-00006

The report referred to McIllhond's need for higher ladders for rescue operations, he said, but it was not a concern in this case because the building was uninhabited.

On Wednesday, as the building still smouldered, city, fire and provincial government officials rushed to reassure the public that wood-frame buildings are safe. Because the building was under construction, sprinkler systems and fire retardant materials had not yet been installed.

"I can assure the public that woodframe construction is safe, even with six-storey buildings and this kind of building isn't unique to B.C.," said an email from the Ministry of Energy. "A building that's under construction does not have many of its fire safety features that slow the spread of a fire in place, like sprinkler systems, fire doors, and windows."

Wilkinson conceded that the wood contributed to the severity of the fire. "Wood obviously is going to add to the fire because it's a product that burns ...," Wilkinson said, adding that fires at construction sites are difficult to extinguish because the sprinkler systems and other fire protection measures aren't complete.

"It's just simply that it's a very big building that's under construction."

City of Richmond spokesman Ted Townsend said the city had addressed some of the fire rescue concerns.

"There were some improvements made to address safety concerns, within the building code; one was requiring sprinklers on balconies."

However, Townsend said the city has not made any specific purchases related to fighting fires in taller buildings.

The developer, Dana Westermark, owner and president of Oris Development Corporation, said he intends to rebuild.

"This is a difficult time, not only for us as a developer but for the buyers and partners who have been involved with us throughout the process," Westermark said. "We ask for everyone's patience and vow that we will move ahead and deliver on our promise to bring a new, vibrant community to Richmond centre."

One of the buildings that burned was entirely slated for affordable housing and was to open later this year.

The second building, scheduled to open in 2012, included 107 units of market housing, 85 per cent of which had already been sold.

The intense fire, visible from kilometres away, broke out at around 11 p.m. No one was injured, but the blaze left Richmond streets smoke-filled and smelling of burning wood well into Wednesday.

The investigation into the cause of the fire is in the early stages, and investigators don't yet know how and where it started or if it is suspicious, said Wilkinson. He said investigators are using social media to find information, including videos posted on YouTube.

The two buildings were fully engulfed by flames when firefighters arrived. An abandoned home beside the site was also destroyed.

Wilkinson said investigators may be able to get a closer look in a day or so. Brianna Schofield was at a friend's place near the fire when they smelled smoke.

"We were there before the fire trucks or anything," Schofield said. "There was tons of smoke and ambers in the sky. I've never seen anything like this.

we were standing on Outin road and the heat was unbelievable. Thad to get back into my carett looked like a wall of fire."

Shortly after she arrived at the scene, Schofield heard a large boom and the power went out.

"It was pitch black. We thought it was raining, but really it was all the soot coming down on us. We were covered in it," she said. "The ashes falling from the sky were so big and still in flames that it caught two homes on fire."

Falling ashes and embers blowing off the fire caused spot fires throughout the city, Townsend said. All available Richmond firefighters were at the main fire, so firefighters were called in from Vancouver.

Ten other homes were damaged by the blowing embers, Wilkinson said.

Schofield saw the large building colpse as it burned.

"It was unbelievable to see. The entire building was in flames," she said. "We saw all the people getting evacuated on Odlin Road -it's all brand-new apartments there -and we saw them closing the gas station beside the fire."

Desmond Mok heard about the fire on Facebook and rushed as close as he could get to the fire, on Stolberg Street and Capstan Way.

"There were more than 200 people watching. Cars were everywhere and everyone was taking pictures and talking about the fire," Mok said. "The ashes were blowing ... and you could see explosions in the air and hear loud crackling sounds of the fire in the building."

Edward Mak, who was standing at the corner of Cambie and Garden City at 12: 30 a.m., reported that he could feel the heat from the flames on his face. "The sky is covered with ashes. The two [construction] cranes are still standing but the actual building that is burning is starting to collapse on to Cambie street."

The federal and provincial governments contributed \$4.7 million for the affordable housing, the province gave \$500,000 for the daycare and the City of Richmond gave \$900,000 for the daycare. The daycare centre did not burn down, but was damaged in the fire. Construction had not yet begun on a third building planned for the site.

#### The Province

Social-housing hope razed in building fire
Only a delay, Richmond mayor says; developer plans to start rebuilding after probe
http://www.theprovince.com/news/Social+housing+hope+razed+building+fire/4730108/story.html#i
xzz1LvFIJh6b

Sarah Douziech May 5, 2011

The destruction of a unique complex under construction in Richmond by a massive overnight fire dealt a devastating blow to people desperate for affordable housing.

Fire erupted at the Remy in two sixstorey wood-frame buildings on the 9300-block of Cambie Road in central Richmond late Tuesday night, leaving it a smouldering pile of rubble by Wednesday afternoon.

One of the two buildings contained 81 units intended as social housing for seniors, families and singles, and was slated for completion in September.

when the 30.1-million project broke ground in June 2010, it was seen as meeting a need for social housing.

Richmond city spokesman Ted Townsend said the destruction was "very disappointing" and he hoped it would simply mean a delay in delivering the housing.

The non-profit SUCCESS was to manage the 81 units. SUCCESS chief executive officer Thomas Tam said he was getting 10 to 20 inquiries about them per month.

Tam said he was shocked and upset when he heard about the fire.

"Now about 100 people may not have service . . . in September."

Richmond Mayor Malcolm Brodie said the loss of the units so close to completion was "very unfortunate," but added he had no doubt the fire had simply postponed the project.

At the site Wednesday afternoon, Oris Development Corporation president Dana Westermark said that once the investigation into the cause of the fire is was completed, the company will begin rebuilding.

He couldn't estimate the time it would take or the cost.

Richmond's deputy fire chief, Tim Wilkinson, said construction was at a "vulnerable" stage because prevention systems such as sprinklers and fire doors weren't yet installed.

No injuries were reported.

#### The Province

Editorial: Fire should serve as cautionary tale http://www.bclocalnews.com/richmond\_southdelta/richmondreview/opinion/121285539.html

May 5, 2011

A fire that destroyed the six-storey Remy apartment complex Tuesday night should serve as a cautionary tale.

Fires at construction sites happen. Some more serious than others.

In this case, fortunately no one was significantly injured or killed.

The building was under construction and yet to be occupied. The fact no other apartment buildings immediately surround this one served as a further measure of fortune.

But this fire is much more than an inconvenience for a developer. It's a wake-up call for city and provincial government officials to give a more careful analysis to the shift to six-storey wood frame apartment buildings.

Firstly, the amount of fuel a six-storey building provides to a fire is significant.

In finished buildings, sprinklers and drywall help prevent fires, but at the Remy, sprinklers had yet to be activated and drywall yet to be installed. Imagine the damage this fire could have caused if the Remy was surrounded by traditional three- or four-storey wood apartment complexes.

These construction sites need round-the-clock monitoring by trained security to help prevent fires from spreading—or starting in the first place.

HOU-2011-00006

Secondly, a warning from Richmond Fire-Rescue in February 2009 should be heeded by city and provincial officials.

City hall has clearly supported the change to the B.C. Building Code to allow six-storey wood frame buildings.

But the city's chief fire prevention officer suggested the local department was ill-equipped to fight fires in the taller buildings, noting the city's ladder trucks can only reach 18 metres under ideal conditions—about 12 metres too short for a six-storey structure.

The department said to fight a fire in such a building would require new firefighting tactics, more firefighters and higher-reaching ladder trucks.

But no new resources have been allocated to the department since.

Instead, the city has simply pledged to look into equipment and staff needs in a strategic plan that is being developed for the department.

No lives were lost this week due to this fire, but if more tall wood-frame buildings are going to be built in Richmond—as plans call for—a closer examination of their safety is needed now.

#### Ottawa Citizen

Huge fire reignites building code controversy http://www.ottawacitizen.com/news/British+Columbia/4729223/story.html

May 5, 2011

A massive blaze destroyed a six-storey building in Richmond that was to have been the first development to take advantage of controversial provincial building-code changes allowing higher wood construction. The fire broke out at the site around 11 p.m. Tuesday, with flames shooting to twice the height of the structure, according to one witness. The development, "The Remy," was to have been a 188-unit condo development that included varied affordable-housing options. Taking advantage of building code changes introduced in 2009, The Remy was to have been one of the first developments in B.C. to go more than four storeys high using wood, rather than concrete.

#### 24 Hours

Finger pointing in fire aftermath http://vancouver.24hrs.ca/News/local/2011/05/05/18110056.html

Stephanie Ip May 5, 2011

A former high-ranking fire marshal said a rushed consultation process resulted in Tuesday's fire that destroyed a six-storey, wood-frame residential complex in Richmond.

"Unfortunately, it was the decision of the B.C. government that said (the building code changes) posed 'no additional risk," said Sean Tracey, National Fire Protection Association director.

Changes in 2009 allowed wooden structures to extend their height to six storeys from four.

Others disagree.

standards bureaucrat.

He added if there had been inadequate consultation, they wouldn't have continued.

Kuhnert believes any revisions made should come under fire, not building codes.

Building codes deal with fire safety after construction is completed, while fire codes deal with safety issues during construction.

Investigators still have no leads on the fire's cause, but Tracey said construction is a building's most vulnerable stage and something as small as a cigarette could be the cause.

Arson has not been ruled out.

### Kamloops Daily News

Wood building fire a learning experience

http://www.kamloopsnews.ca/article/20110505/KAMLOOPS0101/110509842/-1/kamloops01/woodbuilding-fire-a-learning-experience

Cam Fortems May 5, 2011

A fire late Tuesday in Richmond that destroyed two of the only six-storey wood-frame buildings in B.C. brought the past and the present to mind for Tri-City Contracting Ltd. owner Casey VanDongen.

VanDongen's Library Square building on the North Shore is the only six-storey wood-frame building (it has a concrete lower floor) that's been completed in B.C. since the building code was changed two years ago.

The successful Kamloops builder suffered a fire to a smaller, four-storey wood-frame building in Penticton in 2008.

"When you're doing any kind of wood-frame building, it's (fire) a big fear. The fact it's six storeys doesn't change anything. Three- to four-storeys have gone up in the past. That's one of the hazards of wood construction."

In Richmond, the 188-condo unit on Cambie Street burned to the ground.

VanDongen calls the Penticton blaze, an arson fire at a building only six weeks from completion, "one of the biggest learning experiences of my life.

"We were lucky because we just got the fire doors on. We saved two-and-a-half floors of the building. The Penticton Fire Department was brilliant."

That experience caused VanDongen to install sprinkler systems and fire doors very early in the construction process from then on, something he did at Library Square.

Kevin Hall, a captain at Kamloops Fire and Rescue, said there is no specialized equipment needed to fight fire for a six-storey wood building. But the department knows the building and its layout.

"There are extra regulations for sprinklers and fire separation. From a fire department point of view, aside from building knowledge, there's not a lot of things we do differently."

HOU-2011-00006

rather than the standard 16-inch centres. That makes extraction through walls difficult.

"In some ways, it's more like a concrete building because it's so solid."

Phase 1 of Library Square, which includes the North Kamloops public library, is occupied and complete. The Phase 2, 45 units, is under construction.

The developer said one of the reasons there haven't been more mid-rise wood buildings is they require outside parking, something typically in short supply in the Lower Mainland and many urban locations

### The Province

Controversial housing project destroyed in massive Richmond blaze

http://www.theprovince.com/news/Controversial+housing+project+destroyed+massive+Richmond+b laze/4726549/story.html#ixzz1LsC5g6K3

Sarah Douziech May 4, 2011

A controversial building under construction in Richmond has been completely destroyed by a massive fire that burned through the night and continued to smoulder Wednesday morning.

The fire erupted late Tuesday night in a six-storey wood frame complex called The Remy at Cambie Road and Garden City Way. Flames and black smoke could be seen from several kilometres away.

Ash and embers from the intense fire were blown to other spots in the community through the night and other fire crews from nearby communities were called in to help with those fires as well.

Firefighters had contained the blaze by Wednesday morning, but continued to douse hot spots. The cause of the fire is still under investigation.

Building code changes in 2009 allowed the six-storey development to be built more than four storeys high, using wood instead of concrete.

But in June 2010 when the project started, Richmond Fire Department expressed concern they didn't have the equipment to deal with a fire in a large wooden building.

Ted Townsend, spokesman for Richmond, said, however, that the city had been satisfied with the newly-approved provincial building code standards and went ahead with construction.

The economic, social and environmental impact of loss of the building is devastating to Richmond, he added.

The unique project included a significant social housing component, a large childcare facility and a geothermal energy utility that would reduce greenhouse gas emissions in the community.

"We hope that [the fire] just means a delay in the delivery of all of that," Townsend said. "All the partners that are involved will have to re-group and hopefully the financing will still be in place to make all of this happen."

Federal, provincial and municipal funding contributions to the project, slated for completion in September, totalled \$6.1 million.

rownsend said life crews would likely be on scene the rest of the day to pail apart rubble and continue putting out remaining embers.

Nearby residents experienced a power outage for about two hours Tuesday night because of the fire, but no injuries were reported.

Richmond RCMP also assisted in evacuating nearby homes and managing traffic affected by road closures due to the blaze.

Cambie Road between Garden City Way and Number 4 Road are expected to remain closed for the rest of the day.

### **Richmond News**

Richmond developer vows that Remy will rise from the ashes

http://www.richmond-

news.com/Video+PHOTOS+Richmond+developer+vows+that+Remy+will+rise+from+ashes/4726023/s tory.html#ixzz1LvGOyTpG

Alan Campbell May 4, 2011

The developer behind the project that burned to the ground in a massive fire Tuesday night has vowed to rebuild it from the ruins.

Dana Westermark, of Oris Development Corporation, said he was undeterred by the inferno that ripped through the Remy development in the Cambie district and will begin rebuilding it as soon as the insurance details are completed.

Westermark said he remains firm on the project, despite fears expressed two years ago by Richmond's fire department about its ability to deal with a blaze on what is the province's only six-storey woodenframed building.

"We're going through the process with our insurers and then we'll build it again and fulfill the expectations of our clients," Westermark told the News.

"We're still fully committed to the six-storey wooden framed building. When a building is under construction, very few of the systems are in place that would provide safety that would be in place if it were occupied. We're still confident of the safety of such a building."

Westermark estimated the fire started between 9:30 and 10:30 p.m., the time between the last visit from his security team and the first report of the fire.

He said he had no reason to suspect anything suspicious had happened. No one was injured by the fire.

City of Richmond spokesman Ted Townsend said it was too early to come to any conclusions about the cause of the fire at the site on Cambie between Garden City and No. 4 roads.

And he said it was also premature to suggest the city should take another look at the safety of a building design that caused concern for Richmond's own fire department.

"This is a construction site and there are lots of combustible materials around," Townsend said.

"And there were no sprinkler systems or fire prevention systems in place that would have been in place if the building was occupied.

The the spread very quickly and was runy involved when the the crews arrived, by then, it was a containment operation."

Townsend confirmed there are several other similar projects planned in the city, but wasn't sure at what stage of the process they were at.

Several homes surrounding the blaze were evacuated Tuesday night and people living nearby were warned Wednesday lunchtime to close their windows to keep out the thick smoke that was still billowing from the ashes that used to be the Remy building.

The Remy project, two buildings containing 188 suites — some of which were to be handed over to BC Housing for seniors rentals — got off to a controversial start at the planning stage two years ago when the city's fire-rescue department expressed concern over its ability to deal with a fire in a six-storey wooden building.

They said their ladder trucks would not be able to reach into the fire properly.

Richmond's chief fire prevention officer, Dave Clou, told city council two years ago that he didn't know anywhere else in North America that has allowed the construction of six-storey wooden apartment buildings.

"This hasn't happened anywhere else that I know of, and there's a reason for that," Clou told the News after the council meeting.

"We have lots of buildings in Richmond higher than six storeys. But they're made of concrete, and if there's a fire, it's generally contained to that floor.

"If, however, there's a fire near the top floor of a six storey combustible construction building, we have no way to get that high and tackle it and stop it from spreading."

The province changed the regulations more than two years ago to allow such a building to be constructed in a bid to boost the B.C. lumber industry during the recession.

The former premier, Gordon Campbell, carried out the project's official ground-breaking last summer, enthusing how safe the building was, despite the concerns

"I'm confident the buildings will be safe and secure and will expand the use of wood materials in B.C," Campbell said at the time.

The provincial and federal governments chipped in \$4.75 million between them for the project, with the City of Richmond contributing \$900,000.

The development was due to be completed in December and was set to include a daycare for 50 to 60 children.

### **Calgary Herald**

Flames engulf 6-storey construction site in Richmond, B.C

http://www.calgaryherald.com/news/Flames+engulf+storey+construction+site+Richmond/4723984/s tory.html

Gillian Burnett May 4, 2011

A massive blaze destroyed a six-storey building in Richmond Tuesday night that was to have been the first development to take advantage of controversial B.C. building-code changes allowing higher wood construction.

Page 40
HOU-2011-00006

fire was unknown, and early reports of an explosion had not been confirmed.

The building, which was under construction, was fully engulfed at 11:30 p.m., with flames shooting to a height of at least double that, according to one witness. The neighbourhood is highly residential, with condos and apartment buildings surrounding the site of the fire.

Police had blocked off the area to traffic between Garden City and Shell.

By midnight, according to emergency reports, all Richmond fire fighters were on the scene. Vancouver fire and rescue services had been called in to respond to multiple small fires that had been sparked from burning ash.

Edward Mak, who was standing at the corner of Cambie and Garden City at 12:30 a.m., reported that he could feel the heat from the flames on his face. "The sky is covered with ashes. The two [construction] cranes are still standing but the actual building that is burning is starting to collapse on to Cambie street."

Fire fighters were attacking the flames from Cambie, he said.

According to BC Hydro, 1,221 area customers in Richmond were without electricity Tuesday night due to the fire. The power went out at 11:46 pm and was expected to be restored by 1 a.m.

The development, "The Remy," at 9388 Cambie, was to have been a 188-unit condo development that included varied affordable-housing options.

Premier Gordon Campbell was on hand to mark its groundbreaking in June of 2010. Taking advantage of building-code changes introduced in 2009, The Remy was to have been one of the first developments in B.C. to go more than four storeys high using wood, rather than concrete.

But in 2009, according to news reports, Richmond Fire Rescue warned the taller wood buildings could be a fire hazard, as the city's ladder trucks could only reach 18 metres — around 12 metres short of a six-storey building.

Speaking to the Richmond Review in 2010 about those concerns, Campbell noted that the building-code changes had come with new fire safety standards, including a requirement for sprinklers that extended to balconies.

"This is done up to the most modern standards... It's safe and secure housing for everyone," he said. He noted that some cities build wood-framed building of up to nine storeys.

Built by Oris Developments, The Remy was expected to be completed by December.

### **lelevision**



# CTV News – May 5

Broadcast Date: Thursday May 5 2011

Clip Start: 2:40am ET



"24 hours ago we were transfixed on a massive fire in Richmond. It destroyed two buildings under construction. The local fire department is trying to find out exactly what caused the blaze and will be looking at surveillance video and any images posted on YouTube.

- >> Reporter: flames lit up the night sky on candy road in Richmond devouring two residential buildings under construction. a fire so massive, it could be seen from neighboring cities.
- >>Witness: There were flames probably more than 250 feet high. i mean, you would look straight up in the air and see the flames coming right out of the sky.
- >>Witness: looked like my place was on fire. It looked like my place was on fire when I was driving home so it was pretty scary.
- >> Reporter: The scaffolding proved no match for the flames. Some nearby homes had to be evacuated. Others were visited by fire fighters after flying embers caused about 10 other spot fires in the area.
- >> Witness: There were ashes, there were ashes coming down and they weren't quite on us but our neighbours were spraying their cedar roofs with water just in case.
- >> Witness: You could feel the heat. It was really hot.
- >> Reporter: when the sun rose crews were still at work dousing hot spots.
- >> Witness: from my understanding I was not here when I first began but it was a write-off when they got here so far involved.
- >> Reporter: construction crews arriving for work couldn't believe their eyes.
- >> Construction worker: we didn't know what to think.
- >>Reporter: The running development is a mix of market housing and rental units including low income suites for families and seniors. A day-care is planned for the site. The developer is vowing to rebuild.
- >> Dana Westermark: I'm confident we'll overcome these problems and we'll be able to deliver what we promised to all our purchasers and to our community partners as soon as possible.

have to wait until the investigation is over. And according to the fire department it is expected to be a difficult one.

>> Reporter: the blaze raised questions about a plan by the BC government to use wood in higher buildings. Last year the government passed the wood first act which allowed six storey buildings to have wood frames. and also required all provincial buildings to use wood. Critics say that the law may help BC's forest industry but makes buildings less safe.

>>Bill McEwen, Masonry Institute of BC: I think we wouldn't be here if it was a normal concrete high raise with stairwells, elevator shafts. Those types of buildings have the inherent fire resistance these don't.

>>Dana Westermark: The problem is the building was under construction. It was not complete. All the fire safety systems were not installed. That are active once the building is complete, so you know, the building is vulnerable during that period of construction. Once the building is complete these are extremely safe buildings.

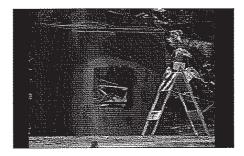
>> Norma: the BC government says it stands by the wood first act and says there's a six storey wood building in Kamloops that is completely safe. And can you believe it Michael. That fire was unbelievable. It is remarkable nobody was hurt.



# CTV News at Five – May 5

Broadcast Date: Thursday May 5 2011

Clip Start: 8:08pm ET



"Crews are still clearing rubble from what's left of the Richmond condominium that went up in flames on Tuesday night. The design of the project had raised concerns about fire safety as Jon Woodward reports, investigators are now looking at how to make construction sites more fire resistant.

>> Reporter: early this afternoon, demolition crews knocked down the only part of the building that didn't burn to the ground Tuesday night, its elevator shaft. What was left of the building was still smoldering. Rubble was cleared away so fire crews could douse the hot spots that remained.

>> Witness: They could sit here for days pounding water at it, but it's not going to go through a roof or whatever, so we just open it up, mix it around a bit.

>> Reporter: they specifically remember the spectacular blaze that consumed the six-storey building, one of the first of kites its kind.

>>Witness: You could heal feel the heat through the windows and my dad was pouring water aget he roof because, like, the fireballs were coming down.

- Thomas Tam says his clients will have to wait at least a year to rebuild.
- >> Thomas Tam: That made people quite sad because that's 81 units is for people in need of housing.
- >> Reporter: the Richmond fire department the fire wasn't started because of any inherent risk in building a wood structure to six storeys in height. They did say there was a lot of exposed wood at the construction site, that's why the investigations are going to take a hard look at construction site safety.
- >> This was a concrete frame condominium that went up in flames in surrey in 2008. Richmond investigators say one unavoidable factor is that construction sites are more vulnerable.
- >> Ted Townsend, City of Richmond: We're just now sort of starting to be able to get into the site because of the remaining hot spots that we have to deal with so we're able to determine.
- >> Fire fighters say no one has figured out the key to making a construction site fire proof. "



# Global - May 5

Broadcast Date: Thursday May 5 2011

Clip Start: 2:00am ET



"It was to have been the tallest wood frame building in the province, but tonight it is a pile of rubble, burned to the ground in a massive blaze that we showed you live last night here on "news hour final." flames lit up the sky over Richmond and parts of the lower mainland. This fire was visible from as far away as downtown Vancouver, Burnaby, and Surrey.

Two buildings under construction destroyed, and with them homes for more than 200 people, including units for low-income people and seniors. The buildings were under construction, not yet occupied. Tonight the property developer is vowing to rebuild. Now, it was going to be the first six-storey wood frame building in BC. Until 2009, the maximum height of a wood frame building was four storeys, however, the province brought in new rules to increase the maximum height. When the Remy was first proposed, the Richmond fire department warned it didn't have ladders long enough to rescue people on the top floor. Well, despite those objections, Richmond city council gave the project the green light and vows to allow similar developments in the future.

>> Reporter: Two years ago BC launched a wood first policy to help the struggling forest sector, then the upper limit of wood frame buildings was increased from 4 to 6 floors. It was a decision that those with a vested interested in keeping high-rises all concrete and steel suggested could be dangerous. Page 44

Page 44 HOU-2011-00006 system. We think firewalls are the first step, smoke alarms, firewalls, and sprinklers can help. but sprinklers don't always work. If we have a earthquake, we don't have water supply, but we have fires, what's going to happen then? Or if any kind of situation happens where sprinklers aren't working, you have this kind of result. There's no firewalls to back up a sprinkler first response.

- >> Reporter: but supporters of wood say this building was still under construction where fire suppression measures had yet to be installed.
- >> Rich Coleman, Minister responsible for Building Codes: It's unfortunate this is one of our six-story constructions and people will try to point to it to say that's why the fire burned the building down. I suspect that's not the case we have six-storey buildings in BC doing fine.
- >> Reporter: There is a nine-storey all-wood building in London, England. There's even a 20-storey all-wood tower planned for Austria. Berlin has one that's seven storeys high where developers used cross laminated beams for strengths. BC is considering up to nine storeys, but they have also caught the attention of firefighters.
- >> Tim Wilkinson: The concerns were about that were raised were around ladder companies, that's mostly about rescue. Again, with this particular fire we had no rescue to accomplish, and as such all our resources were appropriate.
- >>Reporter: So if it province is to continue to allow six-storey wood frame buildings, you don't have a problem with it?
- >> Tim Wilkinson: Well, I'm just talked about this particular fire.
- >> Reporter: BC's report on the feasibility of going even higher was supposed to be produced by march, but it's pushed back to the fall.

# **Cityty**

# Cityty Vancouver - May 5

Broadcast Date: Thursday May 5 2011

Clip Start: 9:00am ET



"The cause of that massive fire at the Richmond construction site is a mystery, but the developer says it will be rebuilt.

entire project destroyed but developer says they could have this rebuilt in nine months to a year. The condo was almost done with completion set for September. Almost half the building was allocated for social housing, with the remaining units on the verge of selling out.

- >> Dana Westermark: Once the fire investigations are complete, and the insurance is dealt with we will clear the debris and get back to construction of the two buildings to deliver on our promise of creating a new and vibrant community for centre Richmond.
- >> Mark: the Remy's frame was built out of wood BC building codes in 2009 allowed developments more than four storeys to use wood instead of concrete. The developer and fire department insist that wasn't the cause.
- >> Dana Westermark: We took extensive fire protection measures, including having a building monitored 24/7. Having systems in place to deliver water through pipes to upper floors of the building. So we took all the measures we took, we consulted with the Richmond fire department on what we could do and did them.
- >> Reporter: how did this start?
- >> Dana Westermark: We have no idea.
- >> Mark: the blaze sparked fires at ten other locations in the area because of the flying embers. Fortunately no one was hurt.

# **ICHEK**

# **CBC News: Vancouver at Six**

Broadcast Date: Wednesday May 4 2011

Clip Start: 9:00pm ET



"Gloria: A controversial housing project in Richmond is a pile of rubble tonight. The development the scene of a spectacular fire lighting up the night sky. It could be seen across the lower mainland and the intense flames leaping hundreds of metres in the air, shooting off embers that started other spot fires and the cause of the fire remains under investigation.

>> Reporter: In a matter of minutes, the c the night sky was full of flames and smoke, late last night a Richmond housing complex under construction caught fire and two buildings caught fire and burned to the ground.

Page 46

HOU-2011-00006

- >> vviuless. Houseu up aliu ule sky was reu.
- >> Witness: It's hard to believe, what we see.
- >> Reporter: Worried neighbours gathered outside, as the fire crew, power went out, homes evacuated, people grabbed what they could and left.
- >> Witness: looking to get the important stuff out of my home.
- >> Reporter: no one was injured but fire officials say that another ten house fires were started because of the wind carrying the embers. None were seriously damaged but vancouver crews were called in to help.
- >>Tim Wilkinson: it was under construction and as such all building systems are not in place and when they are not in place the fire builds quickly.
- >> Reporter: the structure was constructed entirely of wood, to be the first of its kind built in the province under new rules allowing six storey wood frame buildings. Today crews were still on-scene putting out hot spots and the developer says that toes who bought pre-sales should not worry.
- >>Dana Westermark: We are a stable, successful company and have the resources to complete it.
- >>Reporter: The developer says that despite the setback it does plan to rebuild and as for a time line they say that as soon as they can start, they will.
- >> Tony: as you heard in the story from Aarti, this wood construction building was to be the first after changes to the code. The decision to build a six-storey wood frame constructed building was controversial.
- >> Reporter: What was supposed to be a building for the province to brag about is now a smoldering heap. The code was changed to allow wood frame buildings to be constructed up storeys and the fire department was concerned then and is now.
- >>Doug Angrove, Fire Chief's Association of BC: It certainly increases the fuel load, it is about a 50% increase.
- >> Reporter: this individual criticized the change and says that construction should halt until more research is done.
- >> John Gratsy, Canadians for Properly Built Homes: I do not think that any building code should proceed until all safety issues have been dealt with, and dealt with adequately. You know, we should not be gambling with the lives of people, period.
- >> Reporter: wood frame construction is more common in places like Seattle and Europe. BC liked it because it's greener, cheaper and promotes the timber industry and the housing minister doesn't regret that decision says that anything under construction is a fire risk.
- >>Rich Coleman BC Housing Ministry: At that stage it is critical for fire because it is simply exposed product and there isn't the fire protection that would be built in with insulation, sprinklers, et cetera.
- >> Could we not sprinkler as we go?
- >> Reporter: the province says that it will wait until the fire report comes back and says that it doubts that the fire had anything to do with the building being wood."



# CTV Vancouver - May 4

Broadcast Date: Wednesday May 4 2011

Clip Start: 8:00pm ET



"A massive fire lit up the sky in Richmond last night as two residential buildings under construction went up in flames. CTV's Maria Weisgarber joins us live from the scene of the fire on cambie road. the fire could be seen from neighbouring cities. is there any word yet on what might have sparked it?

>> Reporter: Coleen, the fire department has yet to determine how this happened. In fact, right now they're still working on putting out hot spots, making sure they're still out, still pouring water on the fire as they have been all day long and since last night but the investigation into this fire is expected to be a difficult one. When crews arrived here at the scene around 11:00 last night, the buildings were already engulfed in flames. Parts of the scaffolding eventually collapsed. Some nearby homes had to be evacuated. Others were visited by firefighters after flying embers caused about ten spot fires in the area. Crowds gathered on the streets to watch the blaze, including neighbours who were shocked at the intensity of the fire.

>>Witness: there were flames probably more than 250 feet high. I mean, you'd like straight up in the air and you'd see the flames coming right out of the sky. it was unbelievable.

>>Witness: there were ashes coming down, and they weren't quite on us, but our neighbours were spraying their cedar roofs with water just in case.

>>Witness: It looked like my place was on fire when I was driving home. It was pretty scary.

>> Reporter: no homes in the area suffered serious damage as a result of this fire. Other than an abandoned house which was right next to the construction site and no one was injured, Coleen.

>> Coleen: what do we know about this development?

>> Reporter: the buildings that caught fire were part of the Remy development which includes a mix of market housing and low-income rental suites. A daycare was also planned for this site. We have spoken to the developer and he is vowing to rebuild, although at this point, he's not able to say what kind of delay the project may be facing.

>> Coleen: thanks, Maria. That fire has raised questions about a plan by the BC government to use wood in higher buildings. Now last year, the government passed the wood first act which changed the building code to allow six-storey buildings to have wood frames. It all required all provincially funded buildings to use wood. Critics say the law may help BC's forest industry, but it's making buildings less safe.

with concrete-blocked firewalls and stairwells, elevator shafts. Those buildings had the inherent fire resistance that these ones don't.

>>Dana Westermark: the problem here is that the building was under construction. It was not complete. All the fire safety systems were not installed that are active once the building is complete. So the building is vulnerable during that period of construction. Once the building is complete, these are extremely safe buildings.

>> Coleen: the BC government says it stands by the wood first act and says there's a six-storey wood building in Kamloops that is completely safe.

# **Cityty**

# Citytv Vancouver - May 4

Broadcast Date: Wednesday May 4 2011 Clip Start: 9:30am ET



"Mark: good morning. A live shot in the skies over Richmond. What you see there to the left is a huge amount of smoke coming from a fire and that is parts of our top story this morning. Let's bring you upto-date on what happened there. Red sky over Richmond fire engulfed a controversial wood frame six storey building at Cambie road and garden city way. The project was still under construction. The first of its kind after a change in building code. There's a lot of smoke in the area. Several roads in the area still closed off. Also reports of a lot of people evacuated last night. Reports of power outages in that area. We'll have more throughout the morning for you. "

# CBC network

# **CBC News Network - May 4**

Broadcast Date: Wednesday May 4 2011

Clip Start: 6:00am ET

"A burning controversy near Vancouver this morning, a 6 storey wood frame construction project the very first of its kind in BC is going up in flames as we speak in Richmond.

 morning. CBC's Chris Anoka is on the scene. Chris what can you tell us this morning?

Reporter: crews are still here working hard to maintain the fire from spreading to adjacent homes. All but a glow in the sky remains from what was a massive fire right in the centre of a residential neighborhood here in Richmond.

- >> Heather: so they're still on the scene. You took the amazing pictures Chris you've been there through the night, can you tell us what it was like at its worst?
- >> Well when I arrived shortly about half an hour after the incident began there were hundreds of neighborhood residents standing around taking pictures and massive flames, 200 feet into the air, thick black smoke and lots of ash.
- >> Heather: and the concerns for the people this is a very residential area. There was talk of evacuation, what about people who live nearby?
- >> Reporter: they were evacuating RCMP was on scene pulling people from their homes that were close and a lot of residents were also trying to move their cars off the street there was a little bit of a traffic jam but calm prevailed.
- >> Heather: okay and also from what I understand of this neighborhood there is a chevron gas station nearby has that been compromised at all?
- >> Reporter: No that's a good block away they've really done a good job of trying to maintain a perimeter around the site and not a risk at this time.
- >> Heather: okay the controversy that I mentioned, Chris, that Richmond firefighters had warned they just wouldn't have the equipment if a building this high ever caught fire they can only go up to 18 metres under ideal conditions so they warned this back a year ago. So they had to call in as I understand it Vancouver fire can you give me a sense of sort of what you saw on that and whether, you know, the fact that Richmond just didn't have the equipment played a role here?
- >>Reporter: it seemed from the beginning the fire spread so fast they almost didn't have a chance. They had 40 plus firefighters here virtually all of the entire Richmond fire fighting department that was available plus support from Vancouver and surrounding municipalities.
- >> Heather: Okay. Chris thank you. I'll leave it at that for now. Thanks very much for your amazing video work here the pictures we're looking at and information you brought to us live this morning"



Global BC - May 4

Broadcast Date: Wednesday May 4 2011

Clip Start: 2:30am ET



"Now, to the breaking news out of Richmond. a fire burning destroying what we are told was a five storey building under construction now, this is actually right on Cambie. Traffic is now closed on Cambie between garden city and shell road. We are told this is a residential area to the north, there are fields to the south of this building. This is from our towercam on top of the wall centre in downtown Vancouver, and you can see in the dead centre high top of your screen you can see the flames -- the smoke, rather, and you can even see they are illuminated by the flames. now if we go back to the tight shot, this is the fire at this hour. It's actually much smaller now than it was just 10 minutes ago. This fire has been burning for about 45 minutes. The call went out at about 10:45 tonight. We assume the entire Richmond fire department is there.

We were told the Vancouver fire department was responding. People across metro Vancouver tweeting about this, most people are concerned about whether people in the area are safe, and we can tell you that we are expecting that most people are. This is a building under construction, so there was nobody living in this building. We do not know who spotted the fire or who called it in. We would also hope that the firefighters there are safe. They would not have been trying to enter any kind of the structures there. They are simply now trying to contain those flames. This fire was quite massive at one point with smoke several storeys into the air. The flames, in fact, were several storeys into the air. And now firefighters I'm told are pushing everybody back. People obviously pulling up to have a look at this it's quite a spectacle but they are being asked to stay away from the area and being pushed back. I would assume the heat from that fire would have been fairly intense at one point as well now, we do have a crew just arriving there now. We will have a full report on this fire for your tomorrow morning."

### Kadio



# News 1130 - May 6

Broadcast Date: Thursday May 5 2011

Clip Start: 12:00am ET

"We have an update for you on a story you heard first here on News 1130 last night - the Richmond wood frame housing complex that went up in mysterious fire will be rebuilt.

Reporter Dan Burritt: The developer claims it has worked with the fire department to address any safety issues. Dana Westermark with Oris says after the Richmond fire department raised worries about six story wood frame buildings they worked with them to make sure the Remy complex near Cambie and garden city was as safe as possible but since it wasn't finished when it burned down not all of its fire suppression systems were installed Westermark says now they work to rebuild

"We were approximately a year in construction could this point a certain portion of the work wouldn't have to be repeated. The expectation would be somewhere between nine months and a year to be done and rebuilt.

The complex was to have forty eight affordable homes for rent on with seniors units and over one hundred market homes.

News 1130's Shane Biggam continues coverage and is reporting this fire has not change the opinion in the construction industry about using wooden frames and taller buildings.

"At this particular stage was just like a big open chamber and what's it caught on fire just went out."

That's Peter Simpson with the Greater Vancouver homebuilders association, he insists wood frame construction for taller buildings is safe.

"Wood frame construction is long overdue here is done in other jurisdictions to great success in the United States, in Europe."

Simpson calls the Richmond fire an accident.



## **CKNW 980**

Broadcast Date: Wednesday May 4 2011

Clip Start: 6:00am ET

Crews continue to work on getting a fire in Richmond under control. Deputy chief of operations with Richmond fire rescue Tim Wilkinson says it's now a two alarm fire with mutual aid assistance from Vancouver.

Page 52

HOU-2011-00006

beside it that's also on fire. The main fire is a building under construction which makes the fire very difficult to control."

Wilkinson says the house beside the main site is an abandoned home there's also four or five other fires in the neighborhood from fly ash and he says the main six storey structure is likely a complete loss.



# News 1130 - May 4

Broadcast Date: Wednesday May 4 2011 5:30pm ET

Story ran 14 times during May 4, 2011

"The developer of a big wood frame housing complex that burned in a huge fire in Richmond last night said they did their best to make sure it was safe as possible

News 1130's Dan Burritt reporting.

The builder has vowed to rebuild. How long it will take is another matter. Dana Westermark with Oris Development says the Richmond fire department did raise concern some time ago above six storey wood frame buildings but the company worked with them to ensure the Remy was as safe as possible:

"They were sufficiently confident in the building and we're very confident in the building in terms of its performance on completion. Unfortunately buildings that are under construction aren't complete and don't have all the fire suppression systems installed."

The complex was to include units for seniors and low income people along with market rate homes

Dan Burritt, News 1130.

There's no word yet on what caused that blaze.

Now News 1130's Shane Beacon continues team coverage talking to the greater Vancouver home builders association about the safety of taller wood frame buildings

Peter Simpson of the association says wood frame construction is safe - even at six stories or more this kind of building is not unique to BC:

"We have other examples in Seattle, lots of them in Europe, it's done as a rule. This is just an unfortunate accident that could have happened with a building that was only three or four storeys."

He says the project in Richmond was like big open chamber still and the fire spread easily but he says it would not have been able to spread like that in a completed building.



## **CBC** Radio One

Broadcast Date: Wednesday May 4 2011

Clip Start: 6:00pm ET

Fire crews are still at the scene of a massive fire that broke out last night in Richmond. An apartment complex still under construction burned to the ground. While the flames have been contained there is still heavy smoke in the area surrounding the building. The cause of the fire has not yet been determined but investigators say social media will be used to aid the investigation. Tim Wilkinson is with the Richmond fire department:

"Using YouTube and pictures people put in, also any kind of video surveillance that the people actually had on scene here so we'll be taking a multi pronged approach."

The complex was to be the first of its kind - a wood frame six storeys high.

# Chinese Language vancouver Media

Sing Tao Daily (web version)

May 6, 2011

http://news.singtao.ca/vancouver/2011-05-06/headline1304677019d3170643.html

IN BRIEF — The recent fire of the 6-storey wood framed apartment in Richmond is hitting the sensitive point of Canada-China wood business. Provincial councilor questioned the fire code of wood frame constructions, and asked if it would become a subject (regarding the wood export from BC to China). The provincial government tried all efforts to endorse the safety of 6-storey wood framed construction.

The Deputy Minister of China's Construction Ministry visited Richmond and the 6-storey building under construction on April 21. The trip aimed at providing reference to China to determine the portion of wood framed buildings within the 36 million affordable units to be constructed in the next five years. The fire on Tuesday caused Canadians to worry about their influence in the wood exporting business to China, which might amount to hundreds of million dollars.

### **Du Shi Net**



http://www.dushi.ca/van/news/bencandy.php?fid=11&id=40671

(This clipping is a pick-up of Singtao News, which contained the same content but added a photo.)

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**Epoch Times** (Print media, web version)



http://www.epochtimes.com/gb/11/5/5/n3247993p.htm

Remy, the 6-storey wood frame apartment in Richmond, was burned down on Tuesday due to a fire. The cause of the fire was not identified yet. Before the fire, 85% of the project was sold already. This building was the first 6-storey wood frame constructed after the province of BC approved the increase of wood frame construction from 4 storeys to 6. The Richmond firehouse once warned this height of building will cause difficulty for fire extinguishing, but the province approved the Act by considering the positive effect on environment protection, lower cost, and more usage of wood in BC.

### West Canada Site



http://search.westca.com/News/view/id=34004/lang=schinese.html

On the night of May 3, a 6-storey wood frame apartment in Richmond got a level-3 fire. The building was the first project by the province (after the 6-storey wood construction approval). This caused public concern on the safety of wood-frame construction. Recently, the Richmond firehouse said that they have not sufficient equipment and staff to cover 6-storey building fire alarms. To extinguish the fire on Tuesday night, fire teams from other regions joined the Richmond fire team to support. Richmond city government doesn't have a plan to purchase equipment such as a high-rise ladder. National Fire Protection Association (Canada) claimed that until sufficient fire extinguishing facilities are installed in the region, these buildings should not be constructed.

# Van.Worldjournal.com



http://search.westca.com/News/view/id=33733/lang=schinese.html

The fire of a 6-storey wood frame apartment being constructed in Richmond caused public concern about the safety of wood-frame construction. However, Michael Green, a famous architect of Vancouver, claimed that wood-frame high level constructions are even safer than the steel and concrete ones, as long as right and suitable wood materials are used.

Page 56

HOU-2011-00006

# Van.Worldjournal.com



http://search.westca.com/News/view/id=34288/lang=schinese.html

A 3-storey wood framed apartment got a fire in the morning of May 7. A woman was slightly injured due to the accident. The cause of the fire wasn't determined. Within just a few days, two wood framed buildings (one in Richmond and one in Burnaby) got fire, which have caused public concern about wood construction safety against fire.

# **Chinese Media**

No clips found yet

# Japan Media

No clips found yet

# **UK Media**

No clips found yet

## **USA Media**

No clips found yet

# **Unline Coverage**

# ■ DIGITAL JOURNAL

# **Digital Journal**

Richmond, B.C. fire highlights concern over building code http://www.digitaljournal.com/article/306407 KJ Mullins May 6, 2011

On Wednesday a fire in Richmond, B.C. broke out at 10:30 p.m. at a 251-unit condominium and social housing project. Luckily no one died in the blaze that took over five hours to put out. The fact that the all wood structure burnt is having some question proposed changes to the building code.

Flames lit up the night as fire fighters fought the flames. The fire required so much of the city's fire service resources that Vancouver firefighters were called upon to fight other fires that broke out in the city.

### The Vancouver Sun reports:

"What if this had happened in Chilliwack, Hope or Prince George? They wouldn't have those resources to call on," Sean Tracey, Canadian regional director of the National Fire Protection Association said, adding that equipment, such as ladders or thermal imaging cameras; the number of firefighters; and proper training are crucial to successfully fighting large wood fires.

When wood structures face a fire there is little resistance to the high temperatures. In Ontario the proposed changes would allow for all wood buildings to be limited to 18 meters in height. That measurement is based on the maximum ladder height available from fire rescue services. At this time wood structures must be under 4-stories. Those ladder trucks aren't cheap, each one costs in the \$1.5 million range with taller ladder trucks averaging \$2.7 million.

"Human life and the safety of our neighbourhoods are at question here," says Bill McEwen, Executive Director of the Masonry Institute of B.C. in a press release, "Engineered wood products, which are used extensively in these types of buildings, are fabricated with glue, and can burn faster than regular wood products. The firewalls in the Richmond project were made of wood and drywall. Normal concrete block firewalls were not used, apparently due to concerns about the large amount of wood shrinkage expected in 6-storey wood construction. Concrete block walls could have protected these buildings, both during construction and more importantly during occupancy."

Said McEwen on the scene of the fire, "If these buildings had been constructed with concrete block, we would not be here today."

The Vancouver Sun reports that the government has fired back at those questioning the proposals. The Ministry of Public Safety and Solicitor General responded saying, "The Province believes additional qualifications for professionals, trades and building contractors are not required for the construction of six-storey wood-frame residential buildings.

"Amendments to the BC Building Code were drafted based on a detailed technical analysis and assessment of the role of each of the players involved in designing and construction. Analysis has concluded that design professionals play the key role in both design and review of these buildings. "The province worked closely with the Association of Professional Engineers and Geoscientists of BC (APEGBC) on addressing specific design considerations for design professionals around fire protection, Page 58

HOU-2011-00006

guidelines published by APEGBC."

### Vancouver Media Co-op

### Flameout in Richmond

http://vancouver.mediacoop.ca/blog/joseph-jones/7198

BLOG POST posted on MAY 6, 2011 by JOSEPH JONES

### Trying to Do It Cheap Costs Big and Could Kill

For two days running, the Vancouver Sun has rightly given a front-page lead story to the inferno that engulfed the Remy at 9388 Cambie Road in Richmond on May 3.

As the first story reports, "The [building] code was changed as part of the *B.C. Wood First Act* that aimed to stimulate the province's timber industry."

Irresistable aside: Isn't "B.C. Wood First Act" an impressive title for a piece of legislation? Three more zinger possibilities:

- B.C. Increase Developer Margins Act
- · B.C. Clearcut Forest Faster Act
- . B.C. Rebuild It All Next Generation Act

Consider the following five points:

One. This first use of the new provision for taller wooden buildings has set out to produce a lot of "affordable housing" units. (Rich Coleman won't be living in one; Bob Rennie won't be selling one; offshore investors won't be parking money in one.)

*Two.* Richmond jumped at being first with this type of construction — but without specifically equipping its fire department to handle tall fires!

Three. Officials put many other smaller wood dwellings at risk by this facilitation of developer and forest industry greed. — Falling ashes and embers blowing off the fire caused spot fires throughout the city ...

Ten other homes were damaged by the blowing embers. (May 5, Vancouver Sun)

Four. As provincial and municipal policies in British Columbia continue to widen the gap between housing haves and have-nots, and to exacerbate a growing class divide, motivations for revenge and vandalism may increase. Taller wooden construction poses heightened risks, which insurance companies may not be willing to bear at acceptable premiums. — The UK Timber Frame Association estimates that two out of three fires on construction sites are started deliberately with motives ranging from revenge, fraud, crime concealment and vandalism. (para. 3.5, p. 28 of December 2010 report on fire safety in London, England)

Five. On the environmental front (see below), it would be interesting to have a quantification on the carbon release generated by that massive combustion.

Page 59
HOU-2011-00006

MHU III VAIICUUVEI ...

The City of Vancouver jumped on the "tall wood" bandwagon on 21 July 2009 (see Policy Report 3).

After all, what councillor could resist a report saying that developers might be able to boost their profits? Council minutes state: ADOPTED ON CONSENT. (See: Amending By-law No. 9905 to Building By-law No. 9419)

### Appendix:

Buildings

Following is the body of a letter that I sent to Vancouver Mayor and Council on 20 July 2009:

Unstated Assumption in Policy Report on Residential Wood Frame Buildings

At the afternoon Council meeting of July 21, 2009 you will be considering this policy report:

Building By-law Amendments to Enable Construction of Five and Six Storey Residential Wood Frame

Page 3 claims that wood construction has a lower environmental impact than light steel frame or concrete construction.

Page 5 outlines what seems to be the main agenda, cutting per square foot construction costs by 10%. Please consider the environmental impacts of buildings that are designed to be demolished in one to two generations. The green claims made for wood construction assume that the lifespan of buildings constructed with the three materials are the same. Is this a reasonable assumption?

### **Further Reading**

Fire safety in London (17 December 2010)

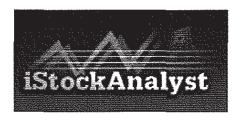
Tracy Sherlock / Laura Kane. B.C.'s first six-storey wood-frame construction goes up in flames.

Vancouver Sun (5 May 2011) A1, A7

Tracy Sherlock. Concerns raised over wood-frame construction. Vancouver Sun (6 May 2011) A1, A4

Tracy Sherlock. Fire service still lacks tools to put out blazes at taller wood-frame buildings. Vancouver

Sun (7 May 2011) A8



# **IStock Analyst**

to-question-building-design

[This article is a reprint of the Canadian Wood Council press release]

Canadian Newswire May 6, 2011

VANCOUVER, May 6 /CNW/ - On May 3, there was a fire at the construction site of the Remy housing project in Richmond, British Columbia. The fire destroyed one of the first 6-storey wood-frame buildings constructed under B.C.'s revised building codes for mid-rise residential construction. An investigation has been launched by the City of Richmond Fire-Rescue Department and the Office of the Fire Commissioner of B.C. to determine the cause of the fire. There was no loss of life or injury to the public or to the emergency responders.

The vulnerability of any building in a fire is usually higher during the construction phase, when compared to the susceptibility of the building after it has been completed and occupied. This was a construction site fire, and as such, the project had not yet reached the point in time when the fire prevention and protection elements are all in place that would have otherwise been required in the completed building.

This fire is an unfortunate delay to a unique development, which will provide not only a number of affordable rental and home ownership options for residents of Richmond, B.C. but also place wood construction at the forefront of safe, innovative and cost-effective mid-rise building in Canada.

It is this desire for innovation that will continue to help drive the emergence of mid-rise wood buildings, as partners come together to educate and advocate for the benefits of wood use in construction based on facts supported by research and technical expertise. The Canadian Wood Council remains committed to the core health, safety and property protection objectives of the National Building Code of Canada and the various provincial building codes.

"The fire on the Remy project construction site, although devastating, should not take away from this innovative B.C. initiative, which has already set the stage for a pan-Canadian approach to mid-rise wood construction. The Canadian Wood Council, through its network of research and technical expertise, will continue to provide support to those involved in design and construction with respect to safe and effective building practices."

- Michael Giroux, President of the Canadian Wood Council

"As with any building innovation, education of all stakeholders remains vital so that projects such as Remy can continue to foster advances in the design of wood construction."

- Mary Tracey, Executive Director Wood WORKS! British Columbia

"The safety level of buildings such as the Remy project, once completed and equipped with the required protection systems under the building code would be equivalent to that of any similar building constructed with other materials."

- Dr. George Hadjisophocleous, Industrial Research Chair in Fire-Safety Engineering, Carleton University



TMC Net

http://www.tmcnet.com/usubmit/2011/05/06/5493776.htm

[This article is a reprint of the Canadian Wood Council press release]

Canadian Newswire May 6, 2011

VANCOUVER, May 6, 2011 (Canada NewsWire via COMTEX) -- Remy Construction Site Fire in Richmond, British Columbia On May 3, there was a fire at the construction site of the Remy housing project in Richmond, British Columbia. The fire destroyed one of the first 6-storey wood-frame buildings constructed under B.C.'s revised building codes for mid-rise residential construction. An investigation has been launched by the City of Richmond Fire-Rescue Department and the Office of the Fire Commissioner of B.C. to determine the cause of the fire. There was no loss of life or injury to the public or to the emergency responders.

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### **UPI**

RICHMOND, British Columbia, May 5 (UPI) — The trophy housing construction project of British Columbia's timber industry burned to the ground in Richmond, firefighters said.

Fire broke out in two all-wood buildings under construction late Tuesday and burned into Wednesday, damaging several other houses in the vicinity, the Vancouver Sun reported.

The larger of the two buildings that burned was a 6-story, 188-unit condominium and the second was to house 107 units.

The 6-story building was the first to be allowed since the provincial government enacted the Wood First Act in 2009 under intense lobbying by Canadian timber lobby groups to help British Columbia's lagging forestry industry. Prior to that, any building higher than four stories had to be built from concrete.

There were no injuries in the fire and damage estimates hadn't been released by mid-Thursday.

Firefighters in Richmond battled the allowance of wood buildings higher than four stories because the city's aerial trucks couldn't reach anything higher.

However, after the fire, an unidentified official with the Ministry of Energy told the newspaper the fact the burned buildings were made of wood wasn't significant.

"A building that's under construction does not have many of its fire safety features that slow the spread of a fire in place, like sprinkler systems, fire doors, and windows," the e-mail said.

### Masonry associations press release

Massive BC fire highlights concern over proposed changes to the building code http://www.newswire.ca/en/releases/archive/May2011/06/c2284.html

TORONTO, May 6 /CNW/ - Recent fires in homes with mid-rise wood frame buildings have brought into focus the issue of fire safety in residential neighbourhoods. The Richmond, B.C. fire on Wednesday, May 4, 2011 is a case in point.

The blaze broke out at about 10:30 p.m., quickly burning down the two six-storey buildings that were still under construction, and imperilling the neighbourhood. According to news stories, the massive fire at the 251-unit condominium and social housing project burned for more than five hours before being brought under control. No lives were lost, but the danger underscores the need to re-examine the recent decision in B.C. to allow mid-rise wood frame construction, instead of the long-required fire resistant masonry materials such as concrete block.

Recent proposed changes to the Ontario Building Code and to the National Building Code, that would allow wood frame buildings over 4-storeys in other regions of Canada, are being strongly opposed by the masonry industry as dangerous to human life.

The Richmond, B.C. project was to be the first example of a 6-storey all-wood structure, as allowed under the changes to the B.C. Building Code, which came into effect in 2009. The Masonry Institute in B.C. has issued a statement of concern over these changes to the Building Code.

"Human life and the safety of our neighbourhoods are at question here," says **Bill McEwen, Executive Director of the Masonry Institute of B.C.** "Engineered wood products, which are used extensively in these types of buildings, are fabricated with glue, and can burn faster than regular wood products. The firewalls in the Richmond project were made of wood and drywall. Normal concrete block firewalls were not used, apparently due to concerns about the large amount of wood shrinkage expected in 6-Page 63

HOU-2011-00006

construction and more importantly during occupancy."

Said McEwen on the scene of the fire, "If these buildings had been constructed with concrete block, we would not be here today."

MasonryWorx reports that the **deputy fire marshal for Ontario, Doug Crawford,** has expressed concern in the past about fighting fires from within a 6-storey all-wood structure, as they incorporate engineered wood products that provide little fire resistance when exposed to high temperatures.

The 18m height limit in these 6-storey wood frame buildings was set in B.C. on the basis of the maximum ladder height available from fire rescue services. The expectation is that these fires will have to be fought from outside the structure and rescue operations would also be conducted from outside the structure.

Paul Hargest, President of Canadian Concrete Masonry Producers Association, notes that wood composite elements, such as oriented strand board (OSB) give off fumes when they burn, increasing risk to firefighters on the scene and to occupants in the building, who may choke on the chemical fumes before they even realize there is a fire on the premises. Composite wood I-joists, now common in wood frame construction, are known to collapse under fire conditions far sooner than traditional dimension lumber joists.

MasonryWorx, an industry association dedicated to maintaining construction standards, and protecting public health and safety in construction and building, have issued a concern about the proposed changes to the Ontario Building Codes to allow 6-Storey wood frame housing. In a letter to Ontario MPP's, **President of MasonryWorx, Dante Di Giovanni** writes, "By the very nature of this change, it is unquestionable that the fundamental objectives of the Ontario Building Code (OBC) and the needed levels of structural and fire safety and performance will be compromised."

Di Giovanni also states, "While we would all like to examine ways of lowering the cost of construction, compromising the safety and quality of building materials is not in the best interests of occupants."

The position of MasonryWorx against wood frame mid-rise construction is as follows:

### **Adequacy of Fire Fighting Resources:**

- The proposed OBC mid-rise changes will serve to increase the combustible building density in all regions of Ontario, not just the major centres.
- The fire services industry has expressed concern about the fire fighting capabilities in smaller municipalities, many with only volunteer fire services.
- The personnel and equipment necessary to fight such fires will, it is felt, quickly overwhelm the fire resources in these centres.
- There is no internal rescue in these buildings. Adequate ladders are only available in some centres. Equipment and personnel in many rural centres are deficient in this regard.
- With no internal rescue possible, will fire drills be mandatory in such buildings?

### **Fires During Construction Phase:**

- This is a major concern of the Fire Marshall's office and the Fire Fighters Association.
- Studies report that up to 70% of fires during construction are arson.
- Additional security and fire protection during construction was requested by the fire services sector in BC when these changes were adopted there, but the BC government rejected these requests.
- Ontario makes no mention of additional protection during the construction phase, simply suggesting that the sprinkler system be installed in parallel with construction of the building.

demand high standards in building codes and a safety first policy in all our building practises. We urge Ontario residents to write to their local MPP and ask that our standards for safe building materials be maintained, not allowing mid-rise wood frame housing."

Hargest adds, "It is critical that communities demand safe housing. Durable, reliable building materials, such as block and concrete, are proven to be effectively fire resistant, and should be demanded in all our buildings as essential to protecting human life. With changes to the Building Code being proposed that would allow 6-storey wood frame construction, all Canadian residents should contact their Member of Parliament and Provincial Members of Parliament and voice their concern."

### **About MasonryWorx**

MasonryWorx is an association of industry professionals working in brick, block and stone masonry. Its membership includes product manufacturers, suppliers and skilled professionals from across Ontario and it is committed to providing homebuyers, homeowners, architects, engineers, and builders with accurate information about the use and benefits of brick, block and stone products.

For more on the benefits of masonry, please visit www.masonryworx.ca

### Journal of Commerce

(Western Canada's Construction Newspaper)

Fire ravages Richmond, British Columbia condo construction site http://www.joconl.com/article/id44229/

May 4, 2011

A massive fire ripped through the construction site for "The Remy", a condominium project under construction in Richmond, British Columbia.

The fire began around 11:00 p.m. and by 11:30 p.m. the building was completely engulfed in flames. The fire also caused a power outage, leaving over 1,000 Richmond residents without power overnight.

The Remy was to be one of the first projects to build higher than four storeys using wood rather than concrete, thanks to changes in the building code introduced in 2009. The Remy was to have been 188-unit condo development with some affordable housing.

PHOTO GALLERY: Fire destroys Remy construction site in Richmond http://www.journalofcommerce.com/article/id44265

# Social Media

First report to be generated May 10, 2011

### Meuser, Teegan SG:EX

Subject:

FW: MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

**From:** Anderson, Maryann PAB:EX **Sent:** Tuesday, May 10, 2011 9:27 AM

**To:** Anderson, Maryann PAB:EX; Vasey, Jeff SG:EX **Cc:** Rotgans, Trudy SG:EX; Lam, Roger SG:EX

Subject: RE: MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Hi Jeff.

Just following up on this media request. Are you okay with these responses below?

From: Anderson, Maryann PAB:EX Sent: Monday, May 9, 2011 4:08 PM

To: Vasey, Jeff SG:EX

Cc: Rotgans, Trudy SG:EX; Lam, Roger SG:EX

Subject: FW: MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Hi Jeff,

These are the three questions that were removed from the media request last week – to develop a stronger response. The original media response is also attached. If you can review and advise if you have any concerns/changes.

Thanks

<< Message: Re: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame

Construction >>

Date/Time: 19/May/2:25 PM

Deadline @ 4 p.m. today

Media Outlet: Vancouver Sun

Reporter: Laura Kane, 604.605.2165, <a href="mailto:lkane@vancouversun.com">lkane@vancouversun.com</a>

Topic: Residential Mid-Rise Wood-Frame Construction Code Change

### **Questions and Suggested Response:**

Who raised concerns about construction fire safety and how were those concerns addressed?

The Province held seven Technical Advisory Group meetings involving more than 100 residential building sector stakeholders and experts. These meetings were held between Sept. 7 and Nov. 5, 2008 to identify potential issues connected to mid-rise wood-frame residential construction and solicit suggestions for managing those issues.

- Fire safety concerns were part of those discussions and were looked at throughout the
  process of developing the new code provisions. These concerns were reviewed and
  addressed and included fire safety both during construction as well as in the completed
  building
- Issues reviewed throughout the process included:
  - 1. Fire Safety
  - 2. Structural/Seismic Safety
  - 3. Wood Shrinkage / Building Envelope Integrity
  - 4. Fire Safety second meeting focusing on construction fire issues
  - 5. Implementation issues for trades and services
  - 6. Implementation issues for local governments
  - 7. Education and training requirements

Who were the stakeholders who wished to address construction fire safety?

- Fire Services representatives, local government building officials and industry representatives and groups expressed some concerns regarding construction fire safety issues.
- Our Code consultants concluded that construction fire risks for buildings up to 6 storeys was no greater than for 4 storeys (previously allowed in the Code) since the total maximum building volume was the same.

Was everyone convinced that construction fire safety did not need to be addressed further?

- We knew from our research that there was a relatively low incidence of construction fires in multi-wood frame buildings – already built in the province. The relative size of wood-frame buildings, in square footage, was not being changed. It was just the building height.
- A substantial majority of respondents to our online public review supported our code change approach.
- All issues raised by stakeholders at our technical advisory meetings and other stakeholder consultation were considered and the code change and implementation plan addressed all issues that were deemed relevant to safety in the risk areas identified.
- The Office of the Fire Commissioner was asked to issue a bulletin clarifying sound fire risk management regulations and practices on construction sites to increase awareness. <a href="http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf">http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf</a>
- It is important to differentiate between fire safety during construction and fire safety for occupancy. A building under construction does not have many of its fire safety features in place, such as sprinkler systems and fire separations like doors, which are required for occupancy.
- In addition, each building site will have different safety concerns during construction –
  for example, the proximity to other buildings. For this reason the BC Fire Code requires
  a fire safety plan for each construction/demolition site. The owner or owner's
  authorized agent is responsible for carrying out the provisions of the BCFC, which
  includes establishing a work site fire safety plan
- The cause of the fire at the Remy building in Richmond is still under investigation by the Richmond Fire Department and the Office of the Fire Commissioner. Once the investigation is concluded and we know the cause, we will look at the evidence and determine what, if any further action may be required on construction fire safety issues.

### Lam, Roger SG:EX

From:

Rotgans, Trudy SG:EX

Sent:

Wednesday, May 4, 2011 9:18 AM

To: Cc: Vasey, Jeff SG:EX; Lam, Roger SG:EX

Subject:

Anderson, Maryann PAB:EX; Nicol, John SG:EX; Green, Tracy SG:EX Construction Fire

Importance:

High

### Preliminary comments....

- The 2006 BC Building Code allowed wood-frame residential buildings of up to four storeys.
- In May 2008, the Premier announced that changes would be made to the Building Code to allow wood-frame residential buildings up to six storeys.
- A Minister's order for change to the Building Code was signed and deposited in January 2009 and became effective April 6, 2009.
- The 2009 amendment to the BC Building Code allowing construction of six-storey wood-frame residential buildings was in support of the Wood First policy.
- There have been previous incidents of "course of construction" fires. The OFC issued this bulletin in response.



OFC Apr 17-09 -Fire Safety Pl...

- The upcoming 2012 Fire Code will have some additional provisions to protect buildings during construction. Some bullets on this will be sent shortly.
- BC Housing is a funding partner for this particular building, Remy; it was to be the first 6 storey wood frame building to be completed under the new code provisions
- There are many more buildings that are on the drawing board or under construction
- The fire protection system, sprinklers, was not yet activated when the fire occurred; there will be an investigation of the cause of fire by OFC

### ISSUE:

The impact on public/stakeholder confidence in wood buildings of recent major fires on wood building construction sites.

### **BACKGROUND:**

Building and Safety Policy Branch (BSPB), Office of Housing and Constructions Standards, are developing recommendations for the Minister on changes to the BC Building Code (BCBC) to allow six-storey wood frame residential construction in January 2009. A major issue of stakeholder concern evident at technical advisory group meetings and in correspondence with the branch has been the perceived extreme fire risk presented by wood buildings.

### DISCUSSION:

While statistics on course of construction fires in British Columbia are not readily available, many stakeholders and the public appear to perceive that wood buildings present an extreme danger to the public. Dramatic media coverage of several recent major construction fires in B.C. likely contributes to this perception. Even some industry professionals appear to transfer their anxiety to completed wood buildings that have all the required fire stopping and safety systems in place. Alberta has also experienced a number of dramatic fires at wood building construction sites in recent years. The Alberta government initiated a task force to examine the issues and come up with recommendations. The conclusions of this task force are contained in the Alberta High Intensity Residential Fires Working Group Report released October 31 of last year. Recommendations from this report were discussed at a Six Storey Wood Technical Advisory (TAG) Meeting on October 2, 2008.

Alberta has better statistics, and if their experience is comparable to BC's, then a substantial majority of course of construction (CoC) fires where the cause has been determined are intentional. A further 20 percent are caused by careless construction activities – usually hot works. Ten per cent are caused by careless smoking on the job site.

The Fire Safety TAG arrived at the following general conclusions:

- There are measures that can improve site security and make sites less tempting (i.e. just-in-time delivery of combustible construction materials, storing lumber as far away as possible from the structure, etc) but a determined arsonist will almost invariably find a way to succeed.
- Measures to incrementally compartmentalize and protect buildings under construction with incremental fire systems (i.e. active standpipes to within a floor of the top) may marginally improve worker safety, but are unlikely to prevent the total loss of the building.
- A significant number of fires result from construction workers being unaware or uncooperative with safe construction practices. A combination of better worker education and some safety-oriented oversight could reduce the risk of unintentional fires.

The BSPB is taking steps to improve CoC fire safety – not because there are code-related issues, but because this issue has significant potential to undermine public confidence in the proposed mid-rise wood code changes, and there is an opportunity to build on the stakeholder involvement on this issue to develop a credible strategy to reduce the risks of intentional and unintentional CoC fires. The BSPB has invited a range of stakeholders to contribute ideas for the development of a CoC Fire Safety Strategy, and to meet in January to discuss a draft roll up of ideas and finalize a strategy by the end of January, 2009. Strategy elements would like include:

- A best-practices guide for developers/contractors
- A training program for builders and construction workers
- Collaboration with site inspectors (i.e. WCB inspector) to draw unsafe practices to the attention of workers, site supervisors and contractors.

### ISSUES/RISKS IDENTIFIED - RESPONSE STRATEGY:

- Stakeholder and public concerns inspired by recent CoC fires have the potential to undermine public confidence in wood buildings and support for the proposed six storey wood building code changes.
  - BSPB working with stakeholders to develop a CoC Fire Safety Strategy.

ISSUE: Mid-Rise Wood-Frame Residential Construction—Risk Management

QUESTION: How did the government identify and manage the risks associated with raising the

allowable height of wood-frame residential buildings to six storeys?

**KEY POINTS:** 

- Changes to Code are based on sound building science and expert opinion
- Key areas of technical risk for new Code provisions on mid-rise construction were identified in initial research and confirmed in discussions with in-house Code experts:
  - Fire safety
  - · Seismic and structural safety
  - · Wood shrinkage and building envelope
- Areas of technical risk were thoroughly investigated and addressed during Code change development process through:
  - Peer-reviewed risk analysis by experts in these areas
  - Expert recommendations on Code changes that manage risks
  - · Leading-edge seismic research
  - Extensive consultation with industry and academic experts in technical advisory groups
  - Review of lessons learned in comparable jurisdictions such as Washington and Oregon (see *Process note for more detail*)
- As with most other larger buildings, architects and engineers are required during design and construction
- Code has existing performance requirements for fire safety, seismic/structural safety and building envelope—mid-rise buildings will need to meet those requirements in new ways
- Majority of stakeholders show cautious support for Code changes
- See Appendix for details on specific measures to manage key technical risk areas

### Measures to manage key areas of technical risk include:

Funding to develop technical guidance for fire safety, seismic/structural and building
envelope design techniques that meet Code performance requirements for higher mid-rise
buildings (Association of Professional Engineers and Geoscientists of BC, Architectural
Institute of BC and HPO)

### **Fire Safety**

- Higher sprinklering standards (NFPA 13) established, which require sprinklering of concealed spaces such as attics and crawl spaces and balconies deeper than four feet
- Total building area maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings
- Building height limited to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended
- Fire resistance performance standards established for exterior cladding to prevent external fire spread

### **Seismic and Structural Safety**

 Partnership with external experts on computer modelling techniques to examine and compare seismic behaviour of low-rise and mid-rise wood-frame structures New Code requirement for shear wall regularity
 established—completion of engineering guidelines and seismic testing may result in reassessment of this precautionary measure

### Wood Shrinkage and Building Envelope

 Building designers must account for wood shrinkage due to changes in moisture content, and must coordinate wood shrinkage calculations among designers of all building components such as elevator shafts, exterior cladding, etc.

Polation



## INFORMATION BULLETIN

For Immediate Release release number April 17, 2009

Ministry of Public Safety and Solicitor General Office of the Fire Commissioner

#### Fire Safety Planning for Construction and Demolition Sites

The purpose of this Information Bulletin is to provide the construction and demolition industry with an easy to follow checklist to assist them in meeting the fire safety requirements of British Columbia's Building and Fire Codes. The goal is to prevent fires in and around construction/demolition sites and reduce the fire risk to life and property.

This bulletin only covers provincial building and fire code requirements. Specifically:

- British Columbia Building Code 2006, Division B, Section 8.1 makes reference to the British Columbia Fire Code (BCFC) 2006, Division B, Section 5.6 which applies to buildings, parts of buildings, and associated areas undergoing construction or demolition operations, including renovations.
- BCFC, Division B, Section 5.6.1.2 (1) states: "Prior to the commencement of construction/demolition operations, a fire safety plan shall be prepared for the site."

The owner or owner's authorized agent is responsible for carrying out the provisions of the BCFC, which includes establishing a work site fire safety plan to ensure that:

- Fire hazards will be controlled.
- Emergency responders will be notified of a fire emergency.
- Emergency responders will not be delayed in carrying out their duties.
- Firefighting operations will be managed effectively, without unnecessary delays.
- Designated supervisory staff will be appointed and organized to respond to fire emergencies.
- Instructions including schematic diagrams describing the type, location and operation of building fire emergency systems will be established.
- Building facilities, systems, equipment and devices will be properly inspected and maintained.

The fire safety plan not only reflects the unique characteristics of building, operation and construction techniques (including the construction/demolition trades), but also considers the available firefighting infrastructure. For this reason, the fire safety plan must be prepared by the owner or owner's authorized agent in cooperation with the <u>local fire department</u> and other applicable regulatory authorities.

#### Fire Safety Planning for Construction and Demolition Sites

Prior to commencing any work at a site, it's important for the owner or authorized agent of the owner to:

- ensure they are also in compliance with the laws, regulations and requirements of the BCBC, the BCFC, local government and other regulatory authorities; and
- contact the local fire department and other regulatory authorities such as the <u>British</u> Columbia Safety Authority and WorkSafeBC.

Fire safety planning and risk management assessments of the site done prior to, during and after building construction/demolition is completed, are essential to prepare for and manage fire hazards. Planning and assessment will identify and lead to methods and processes that will minimize or contain potential fire hazards. All site safety activities should be coordinated through the planning and assessment process.

BCFC provisions are included in the fire safety plan and are applied depending on the project's scope and conditions of the site, e.g. the size and type of the building and its proximity to adjacent buildings.

At a minimum, a fire safety plan should include the following information:

1. Emergency procedures and information needed to plan for an emergency:			
	Who is the designate and backup person responsible to sound the fire alarm (horn)? Who is the designate and backup person responsible to notify the fire department (9-1-1)? Is instruction given to site personnel on the procedure to follow when an alarm is sounded?		
	Are exit routes clearly visible within the site and on all floors?		
	Is the muster point (or meeting place) known by all site personnel?		
	Is there a list of on-site personnel, and is it updated and current? (Can everybody on-site be accounted for?)		
	Are there assigned personnel to meet the fire department upon arrival and give		
	information, such as the location of the fire or injury?		
	Are there persons assigned as site fire wardens (ensuring various trades are represented)?		
	Are there personnel directed and trained to confine or control the fire?		
	ining of site personnel on evacuation procedures:  Is site orientation provided?  Are regular site fire safety meetings a part of regular safety meetings?		
	Are simulated fire drills conducted when applicable and warranted?		
3. Assigned site personnel must be responsible to install and maintain fire safety duties such as:			
	Controlling combustibles on the site and around the buildings.		
	General site housekeeping.		
	Removing excess pallets, garbage/waste material and other combustibles on a regular		
	basis.		
	Maintaining separation of combustibles from open flame devices.		

# Fire Safety Planning for Construction and Demolition Sites

0 0	Maintaining clear unobstructed access route(s) for fire department apparatus and to fire hydrants.  Designating and maintaining at least one exit from every floor.  Separating access routes from materials stored on-site, combustibles, etc.  Parking of vehicles or delivery trucks should not obstruct fire department access to the site, and adjacent buildings (off-site parking and storage may be considered).			
4. Fire	efighting Services – Hydrant, Siamese Connection, Sprinkler, Access Route:			
	Are they installed, tested and activated at the start of construction?  Are firefighter access route(s) to the building provided?  Are firefighting services (standpipes, hydrants) maintained and accessible?  Do drawings provided to the fire department show the location of firefighting systems as they become operational?  Is the site address sign visible and legible to emergency crews form the street? (if they must be provided according to bylaw)			
5. Fire Extinguishers:				
	Is there sufficient quantity and type on-site? Such as:  - 2-A:10-B:C on movable equipment?  - 4-A:40-B:C in all other locations?  Is the servicing up—to-date (within the last year)?  Are they provided at or near fuel operated equipment?  Are they mounted with proper signage at exit locations within the required travel distance?  Are they adjacent to any hot works operations (e.g. cutting torch, welding, torching, etc)?			
6. Hot	Works Operations:			
	Is the area clear of flammable and combustible materials? Is a fire watch assigned during a hot works operation and for 60 minutes after its completion?			
	Is there a final inspection of the hot works area 4 hours after completion?  Are the hot works in the proximity of combustible or flammable materials?  Have provisions been made for protection of such materials by non-combustible materials, thermal barrier or other means?			
	Is the work being performed by trained or certified personnel?  Is a fire extinguisher present at all times? Such as:  - 2-A:10-B:C on movable equipment?  - 4-A:40-B:C in all other locations?			
	Is proper ventilation provided as required? Are the hot tar pots on-site complete with fire extinguishers, trained personnel, and located away from combustible materials?			

7. Flan	mmable and Combustible Storage:		
	Are flammable and combustible liquids properly stored, handled and used in and around the building?		
	Are non-petroleum based compressed gases properly stored, handled and used in and around the building?		
	Is the storage area separated from combustible material by 3 metres? Is the storage area locked and vented?		
	Is the storage area protected and vented?  Is the storage area protected from vehicular/ industrial motorized traffic?  Do containers and/or storage areas have proper signage/placards in place?  Is there a current or updated list of dangerous goods on-site such as material safety data sheets (MSDS), as per the Workplace Hazardous Materials Information System		
	<ul> <li>(WHMIS)?</li> <li>Are portable extinguishers provided in close proximity to storage and work areas such as:</li> <li>2-A:10-B:C on movable equipment?</li> <li>4-A:40-B:C in all other locations?</li> </ul>		
	Is the storage area away from egress and access routes to the site?		
8. Electrical Installations and Petroleum Gases:			
	Do the electrical installations, storage and use of petroleum gases comply with the requirements of the Safety Standards Act and pursuant regulation? (contact the <u>British Columbia Safety Authority 1-866-566-7233</u> )		
9. Security:			
	What type of on-site security is provided: e.g. locked gate, monitored alarm and/or CCTV, 24 hour or nightly walk around?		
	Do security personnel have knowledge of and understand their role in the site's fire safety plan?		
	Can the fire department effectively communicate with the security personnel during an emergency?		
	Do security personnel have access (keys) to locked areas?		
10. Co	ntact Personnel:		
	Is there a list of names and telephone numbers of persons to be contacted during and after normal operating hours or in the event of an emergency?		
	Are the contact personnel able to respond in a timely fashion? What is their estimated response time?		
11. Building Diagrams:			
	Are diagrams available on-site? These diagrams should indicate:  - Plans of each floor area;  - Muster point(s);  - Location of nearest hydrant(s);  - Location of fire protection equipment;  - Exit paths; and,  - Service rooms.		

The fire safety plan must be reviewed and updated as construction/demolition progresses and then periodically afterwards to provide the greatest value. The plan that is developed for a building construction site should evolve into the plan that will be used to maintain and protect the building and its occupants after completion. It's very important that all supervisory staff remain familiar with the plan throughout the process so they are familiar with how it pertains to their responsibilities.

It may be beneficial to owners to obtain the services of a consultant who specializes in fire safety planning. This consultant would oversee the fire safety plan's development and implementation. This is especially useful to owners who have neither the time nor the expertise to develop their own plan as well as when a fire department isn't available to them.

Contact: Stephen Watt

Codes and Standards Coordinator

1-888-988-9488

#### Carr, Steve MEM:EX

From:

Vasey, Jeff SG:EX

Sent:

Wednesday, May 4, 2011 10:20 AM

To:

Carr, Steve MEM:EX

Subject:

media issue - fire at the Remy

#### Steve

- You may have seen in the news that there was a major fire in Richmond last night at the Remy
- The Remy was the first project designed as mid-rise wood frame when BC developed the change allowing mid-rise wood frame in 2009, and it was the closest to completion.
- For many, it was a demonstration project and the site of many tours for interested observers in other Canadian and international jurisdictions.
- Because of this, the fire has created a great deal of uncertainty about bigger "combustible" buildings in
  Ontario and other provinces contemplating a code change similar to BC's as well as jurisdictions in the US
  and Asia.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.
- Issues Note well under way

#### Respectfully

Jeff Vasey Assistant Deputy Minister Office of Housing and Construction Standards Ministry of Energy and Mines

T: 250.387-2001



#### Carr, Steve MEM:EX

From:

Vasey, Jeff SG:EX

Sent:

Thursday, May 5, 2011 3:45 PM

To:

Carr, Steve MEM:EX

Subject:

Thoughts on moving forward on construction fire issue

Importance:

High

Steve

The ED and staff in the Building and Safety Standards Branch have brainstormed a possible plan of action for the 'course of construction' fire issue. It involves collaboration and funding from three ministries. The following can be quickly formatted into a decision note for the minister if you support the concept and we can follow up with options of how to finance.

Thanks

Jeff

S13, S17

#### Background:

 The Remy was the first project designed as mid-rise wood frame when BC developed the code change allowing mid-rise wood frame in 2009, and it was the closest to completion.

Page 79
 HOU-2011-00006

- For many, it was a demonstration project and the site of many tours for interested observers in other Canadian and international jurisdictions.
- Because of this, the fire has created a great deal of uncertainty about bigger "combustible" buildings in
  Ontario and other provinces contemplating a code change similar to BC's as well as jurisdictions in the US
  and Asia.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

Jeff Vasey Assistant Deputy Minister Office of Housing and Construction Standards Ministry of Energy and Mines

T: 250.387-2001



From: Rotgans, Trudy SG:EX

Sent: Thursday, May 5, 2011 2:27 PM

To: Vasey, Jeff SG:EX Cc: Lam, Roger SG:EX

Subject: Thoughts on moving forward on construction fire issue

Importance: High

Hi Jeff,

### Rotgans, Trudy SG:EX

From:

Rotgans, Trudy SG:EX

Sent:

Thursday, May 5, 2011 2:27 PM

To: Cc: Vasey, Jeff SG:EX Lam, Roger SG:EX

Subject:

Thoughts on moving forward on construction fire issue

Importance:

High

Hi Jeff,

S13, S17

#### Background:

- The Remy was the first project designed as mid-rise wood frame when BC developed the mode change allowing mid-rise wood frame in 2009, and it was the closest to completion.
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- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

Let me know what you think.

Thanks,

Trudy

#### **ADVICE TO MINISTER**

# CONFIDENTIAL ISSUES NOTE

Ministry of Jobs, Tourism and Innovation

Date: May 4, 2011

Minister Responsible: Pat Bell

Remy Fire: first 6-storey wood-frame construction in B.C. – Wood first promotion

#### Advice and Recommended Response:

- This fire is an unfortunate delay to a unique development that will provide a number of affordable rental and home ownership options for families, seniors and people with disabilities in the Richmond area.
- The Richmond Fire Department and the Office of the Fire Commissioner are investigating the cause of the fire, and any questions related to this should be directed to them.
- Our understanding is that the REMY building had not yet reached the stage where the fire prevention elements had been activated, as the building was still under construction and there were no occupants.

#### Wood First and China Trade:

- We will continue to promote wood construction in North America and China. As we do this, we will continue to emphasize proper design and construction. This is important to ensure that wood buildings are safe and durable.
- . Wood is the only building material that is renewable, sustainable, and climate friendly.

#### **Building Code:**

- Throughout North America over the past decades we have developed excellent building systems that minimize the risk of fire and the B.C. Building Code includes all of those system standards.
- The changes to the B.C. Building Code allowing six storey residential wood frame construction include the requirement that sprinklers be extended to balconies.
- The 2012 edition of the BCBC will have additional provisions to protect buildings under construction.

#### **KEY FACTS:**

- A fire destroyed two buildings under construction in Richmond. The Remy projects were the
  first six storey wood frame buildings being built under new B.C. building-code provisions that
  allowed for mid-rise wood frame construction (six-storey wood buildings).
- The fire broke out around 10:30 p.m. PT at the site located at 9388 Cambie. The building was still under construction and not occupied.
- Richmond Fire Department expressed concerns in 2009 that their ladders were not high
  enough to reach the top of the building. However, at the time, the fire chief had said it was
  not a concern as the building was not yet occupied.

- The 2006 BC Building Code allowed wood-frame residential buildings of up to four storeys.
- In May 2008, the province announced changes that would allow wood-frame residential buildings up to six storeys. The change became effective April 6, 2009. The amendment was in support of the Wood First policy.
- The 2012 edition to the code will contain the following additional fire safety provisions:
  - Higher sprinkler standards (NFPA 13) established, which require sprinkler for concealed spaces such as attics and crawl spaces and balconies deeper than four feet.
  - Total building area maintained at 7200 square meters so maximum floor area remains the same as for four storey wood buildings.
  - Building height limited to 18 meters to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended.
  - Fire resistance performance standards established for exterior cladding to prevent external fire spread

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File Location:

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Minister's Office Progra	am Area ADM/Depu	ty Comm. Dir
l i	r / Ken Baker	Marisa Adair

#### **ADVICE TO MINISTER**

# CONFIDENTIAL ISSUES NOTE

Ministry of Energy and Mines and Minister Responsible for Housing Date: May 4, 2011

Minister Responsible: Hon. Rich Coleman

# Fire at Remy development Seniors Housing and first 6 storey wood-frame construction

#### KEY FACTS REGARDING THE ISSUE:

UPDATE\_May4\_9:40 a.m.: It appears the fire started in the 2nd phase that was under construction. The first phase/structure was almost complete, however the sprinklers may not have been hooked up or charged yet. Embers fell on a neighbouring home but were extinguished.

- A fire destroyed two buildings under construction in Richmond. The Remy projects were the
  first six storey wood frame buildings being built under new B.C. building-code provisions that
  allowed for mid-rise wood frame construction (six-storey wood buildings).
- The fire broke out around 10:30 p.m. PT at the site located at 9388 Cambie near the intersection of Stolberg Road. The building was still under construction and not occupied.
- Richmond Fire Department expressed concerns in 2009, that their ladders were not high
  enough to reach the top of the building. However, at the time, the fire chief had said it was
  not a concern as the building was not yet occupied.

#### **Current BC Building Code**

- The BC Building Code used to allow wood-frame residential buildings of up to four storeys.
- In May 2008, the province announced changes to allow wood-frame residential buildings up to six-storeys. The change was effective in April 2009 and supports the Wood First policy.
- The current code contains additional fire safety provisions for five and six storey residential wood-frame buildings:
  - Higher sprinkler standards (NFPA 13) established, which require sprinkler for concealed spaces such as attics and crawl spaces and balconies deeper than four feet.
  - Total building area maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings.
  - Building height limited to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended.
  - Fire resistance performance standards established for exterior cladding to prevent external fire spread.

### **BC Housing Investment**

- The 188-unit housing development is being built by Oris Development Corporation, and was scheduled for completion in December, and was to include:
  - 33 apartments for seniors and people with disabilities & 48 affordable apartments for lowto moderate-income families and singles - all managed by S.U.C.C.E.S.S.
  - 37 affordable-homeownership units for sale to qualified buyers
  - o 70 private-market apartments
  - 50-60 space children's daycare
- The province provided a \$34 million construction loan to Oris to date, \$18.5 million has been advanced. In addition, \$4.5 million in provincial and federal funding was provided for the 33 seniors apartments. Province also invested \$500 thousand for the daycare.
- Oris is planning to hold a media briefing near the site at 11:30 a.m. (May 4).

#### Impact on Wood-Frame Construction in other jurisdictions:

- BC has been in discussions with Ontario and other provinces regarding mid-rise six-storey and a demonstration project was recently announced in Beijing.
- The fire has created some uncertainty about higher wood-frame buildings in other jurisdictions contemplating a code change similar to BC's.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

#### ADVICE AND RECOMMENDED RESPONSE:

- This fire is a terrible delay to a unique development that will provide a number of affordable rental and home ownership options for families, seniors and people with disabilities in the Richmond area.
- The cause of the fire is still under investigation by the Richmond Fire Department and the Office of the Fire Commissioner. Any questions related to the fire should be directed to them.
- The Province was providing construction financing of \$34m to facilitate the project and purchasing 33 apartments under the joint Federal/Provincial Seniors' Rental Housing initiative, to be operated by SUCCESS.
- SUCCESS was also purchasing 48 units for rental and was going to be property manager for all 81 rental apartments.

#### **Building Code**

- The changes to the B.C. Building Code allowing six storey wood frame construction include the requirement that sprinklers be extended to balconies and within concealed spaces like attics.
- We understand the fire protection system was not yet activated as the building was still under construction and there were no occupants.
- A building under construction does not have many of its fire safety features in place, such as sprinkler systems and fire separations like doors, which are required for occupancy.
- The province has a wood-first policy with an overall goal that wood be considered as the first choice for construction and interior design.
- B.C. has a high level of competency and knowledge in research, engineering design and construction of wood buildings and we have an established process in place designed to protect life safety, during construction and after occupancy.
- We will continue to support mid-rise wood frame construction.

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