

Clause No. 22 in Report No. 9 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on May 15, 2014.

22

**POTENTIAL ONTARIO BUILDING CODE AMENDMENTS FOR MID-RISE WOOD
FRAME BUILDINGS UP TO SIX STOREYS**

Committee of the Whole recommends:

- 1. Receipt of the communication from Michael McSweeney, President and CEO, Cement Association of Canada, dated April 26, 2014.**
- 2. Adoption of the following recommendations contained in the report dated April 16, 2014 from the Executive Director, Corporate and Strategic Planning:**

1. RECOMMENDATIONS

It is recommended that:

- 1. Council endorse this report as York Region's submission to the Ministry of Municipal Affairs and Housing (MMAH) supporting potential amendments to the Ontario Building Code (OBC) to increase the maximum height for wood frame buildings in Ontario from four to six storeys.**
- 2. The Regional Clerk forward this report to MMAH, local municipalities and the Building Industry and Land Development Association.**

2. PURPOSE

This report seeks Council support of proposed changes to the OBC to increase the maximum height for wood frame buildings from four to six storeys.

3. BACKGROUND

The OBC sets standards for construction of buildings in Ontario

The *Building Code Act*, 1992 (the Act) is Provincial legislation that governs construction, renovation and demolition of buildings. The OBC is the regulation that establishes minimum requirements for construction of buildings with reference to public health, fire protection and structural sufficiency. MMAH is responsible for administering the Act and the OBC while local municipalities are responsible for enforcing the Act and the OBC through the building permit and inspection process.

MMAH is proposing amendments to the OBC to permit the construction of up to six storey wood frame buildings.

In March 2014, MMAH announced potential amendments to the OBC to increase the maximum height permitted for wood frame buildings from four up to six storeys. To facilitate public input on the potential amendments, MMAH also released a policy document outlining the background and rationale for the proposed changes (see *Attachment 1*). The Province has requested that comments on the potential amendments be submitted to MMAH by May 4, 2014.

4. ANALYSIS AND OPTIONS

A number of technical amendments to the OBC are proposed to wood frame buildings up to six storeys

When considering changes to the OBC, MMAH has to balance the need for innovation, flexibility and housing affordability with ensuring proposed construction practices result in buildings that meet high public and fire safety standards. It is proposed that the following 2012 OBC requirements continue to apply to all five and six storey buildings regardless of construction material:

- Automatic sprinklering to National Fire Protection Association (NFPA) 13 standard
- One hour fire separations in floor and wall assemblies between apartment suites
- Minimum two sets of exits stairs
- Fire hose cabinets on each floors
- Fire detectors in exit stairways and corridors
- Smoke alarms in all apartment suites

If permitted, mid-rise wood frame buildings would also be required to meet new technical requirements in the areas of occupancy (uses), fire safety and structural design, outlined as follows:

Occupancy

- Permitting residential and business uses with no restrictions on location within the building (i.e. apartments, offices and barber shops)
- Limited assembly and mercantile uses to first and second storeys (i.e. small restaurants, libraries and museums)
- Restricting large assembly uses (i.e. theatres)

Public and Fire Service Personnel Safety

- Limiting the height and area of buildings to restrict fire load and facilitate external rescue and fire fighting operations
- Ensuring buildings are accessible to a street that provides fire service access
- Non-combustible stairwells with a fire rating of least 1.5 hours
- Enhanced automatic sprinklering, beyond NFPA 13 standard (including sprinklering of balconies and decks)
- Increased fire protection in concealed spaces
- Non-combustible or combustion resistant exterior cladding
- Combustion resistant roof cladding.

Structural Design

- Requiring consideration of building movement, structural load and exterior maintenance at the design stage

Mid-rise wood frame construction is permitted in other jurisdictions nationally and internationally

Mid-rise wood frame construction has been permitted in the British Columbia Building Code (BCBC) since 2009. Originally limited to residential uses, the BCBC now allows a range of mixed-uses in mid-rise wood frame buildings, similar to what is now being proposed in Ontario. Quebec, like Ontario, is considering developing building code requirements to permit wood frame construction up to six storeys.

Internationally, mid-rise wood construction is a well-established practice in Scandinavia, United Kingdom and most European Union countries. In the United States, northwestern states such as Oregon and Washington have permitted this type of construction for several decades. The practical experience of these jurisdictions in implementing mid-rise wood frame construction has helped inform proposed amendments to the OBC.

The Building and Land Development Industry (BILD) have been actively advocating for changes to the OBC to allow the construction of wood frame buildings up to six storeys

In May, 2013, BILD advocated for changes to permit the construction of mid-rise wood frame buildings. To support these changes BILD commissioned a report “Unlocking the Potential for Mid-rise Buildings” that identifies the planning rationale, role and benefits of mid-rise buildings in creating urban communities (see *Attachment 2*). Importantly, the report recommends that BILD communicate its strong support for changes to the OBC increasing the maximum building height for wood frame buildings to six storeys.

Mid-rise buildings will help achieve housing affordability, intensification and complete communities polices in the *York Region Official Plan, 2010*

York Regional Official Plan, 2010 contains objectives and policies that support:

- Managing growth by promoting intensification within our existing urban areas with a focus on Regional Centres and Corridors
- Creating compact, complete mixed-use neighbourhoods where residents can meet most basic needs on a daily basis
- Achieving a full mix and range of housing types, tenures and affordability so residents can live and work in York Region
- Supporting programs and initiatives that facilitate and support improved sustainability in our communities

Supporting changes to the OBC to permit construction of mid-rise wood frame buildings will help in implementing these Regional Official Plan policies.

Potential construction cost saving could support Regional objectives of providing a full mix and range of housing options for our residents

Wood frame buildings are less expensive to build than similar buildings constructed out of concrete or steel. Studies estimate potential cost savings of between 10 and 20 percent, depending on design factors such as parking requirements, exterior claddings and fireproofing. Lower building costs can contribute to improved housing affordability and will help address the need for larger-sized units suitable for families, typically not provided for in high-density residential developments.

The Human Services Planning Board (HSBP) of York Region was created by Council to bring together leaders in human services to find new ways of improving the health and well-being of our residents. The HSBP has initiated the Make Rental Happen campaign to create rental housing options in York Region. Lower construction costs associated with wood frame construction will contribute to improving conditions to build private market rental housing.

As a built-form, mid-rise buildings are an important element to managing growth and creating complete communities in existing urban areas and new communities areas

As a built-form, mid-rise buildings are an important tool to increasing density and variety of uses along Regional corridors and mixed-use nodes in new community areas. Mid-rise buildings deliver density at a scale that creates a more comfortable public realm. Mid-rise buildings also provide design flexibility that may better address infill situations, where compatibility with existing neighbourhoods is essential. Mid-rise buildings are also an important element in providing transition between high density development and existing lower density neighbourhoods.

Increasing the use of wood as a construction material in mid-rise buildings provides a number of environmental benefits and promotes sustainability

There are a number of sustainability and environmental benefits associated with wood as a construction material. These include:

- Reducing consumption of non-renewable resources
- Reducing the carbon footprint of buildings
- Reduced greenhouse gas emissions (less energy required in the extraction and processing of wood products compared to other materials)

York Region supports proposed changes to the OBC to increase the maximum height for wood frame buildings from four to six storeys as a tool to implement key objectives of the YROP-2010.

Link to key Council-approved plans

Permitting wood frame buildings up to six storeys supports “Improve Social and Health Supports” and “Focus Growth along Regional Centres and Corridors” priority areas within the *2011 to 2015 Strategic Plan*. The proposed OBC amendments also support “Liveable Cities and Complete Communities”, “Appropriate Housing for All Ages and Stages” and “Living Sustainably” priority areas within *Vision 2051*.

5. FINANCIAL IMPLICATIONS

The review of proposed amendments to the OBC to permit mid-rise wood frame construction up to six storeys have been undertaken within the existing staff complement and budget allocation for the Long Range Planning Branch.

6. LOCAL MUNICIPAL IMPACT

Local municipalities are responsible for enforcing the OBC. Building officials will be required to implement any changes to the OBC through existing building permit processes.

Local municipalities may benefit from changes to the OBC that support design innovation and flexibility. Mid-rise wood frame buildings may assist local municipalities in achieving complete communities, intensification and housing affordability objectives identified in their official plans.

7. CONCLUSION

In March 2014, the Province proposed changes to the OBC to increase the maximum height permitted for mid-rise wood frame construction from four to six storeys. To permit this increase, technical requirements are proposed that ensure these buildings meet high public and fire safety requirements. Public input on the proposed amendments are being received by MMAH until May 4, 2014.

Mid-rise buildings offer design flexibility that can contribute to achieving a variety of community building objectives such as of providing a range of housing types, tenures and affordability, creating compact complete communities through intensification and managing growth sustainably. Proposed changes to the OBC that improve innovation and flexibility in building design will contribute to implementing these ROP policy objectives. For these reasons, York Region supports proposed changes to the OBC to increase the maximum height for wood frame buildings from four to six storeys.

For more information on this report, please contact Valerie Shuttleworth, Director of Long Range Planning at Ext. 71525.

The Senior Management Group has reviewed this report.

Attachments (2)

Potential Building Code Amendments for Mid-Rise Wood Frame Buildings up to Six Storeys

Regulatory Registry Posting

March 20, 2014

Introduction

The Ministry of Municipal Affairs and Housing (MMAH) is currently proposing to amend the Building Code regulation (O. Reg. 332/12) to change the maximum height permitted for wood frame building from four storeys up to six. This policy document outlines the proposed changes and provides background and rationale. The Ministry is interested in seeking further advice from the public on these potential amendments.

About the Ontario Building Code

The *Building Code Act, 1992* (the Act) is the legislative framework governing the construction, renovation, change of use and demolition of buildings in Ontario. The Building Code, authorized by the Act, sets out detailed administrative and technical requirements, as well as establishing minimum health and safety standards for the construction of the buildings in Ontario, among other objectives.

The Ministry of Municipal Affairs and Housing is generally responsible for administering the Act and the Building Code, while municipalities are responsible for enforcing the Act and the Building Code (in some areas, other “principal authorities” enforce certain Building Code requirements, such as for small septic systems).

Ontario’s Objective-Based Building Code

The 2006 edition of the Building Code introduced an “objective-based” approach to setting requirements, including defining the objectives or rationale underlying technical provisions of the Building Code. Objective-based code requirements allow for alternative solutions provided that the alternative solution can achieve the same level of performance as required by the applicable acceptable solution for the relevant Code objectives. The objective-based format is intended to facilitate innovation in building materials, systems and designs by establishing the intended objectives or outcomes of the Building Code.

Code Development in Ontario and the model National Building Code

In Canada, provinces (and, in some cases, municipalities) regulate building construction through building codes and other regulations and laws.

The Government of Canada, through the National Research Council and in co-operation with Canada’s provinces and territories, develops the model National Building Code (mNBC). The mNBC is not law, but some provinces and territories adopt the mNBC as their Building Code. Others, including Ontario, while having distinct provincial legislation, harmonize to the extent possible with the mNBC to ensure consistency and competitiveness across the country.

Ontario relies significantly on the code development work and research of the NRC which supports the mNBC. However, while Ontario typically adopts the “core” structural requirements necessary to maintain harmonization among provinces, Ontario also varies from the mNBC in order to address government priorities, proposals from the public and stakeholders, and changing technology and industry standards.

Currently, the NRC is researching and consulting on potential requirements to be included in the 2015 edition of the mNBC. Among the proposals being considered are a number that would facilitate construction of mid-rise wood frame buildings up to six storeys.

In addition to the development of the 2015 mNBC, the NRC is also pursuing research into the fire safety of combustible buildings through the “Wood and Wood-Hybrid Midrise Buildings”. This study is examining the performance of a variety of structural types that might be used in mid-rise wood buildings in experimental conditions approximating a real fire. Results from this study are anticipated to be made public in April 2014, and will also help inform the development of the proposed Building Code requirements discussed in this document.

Other Jurisdictions Permitting Mid-Rise Wood Construction

British Columbia was the first Canadian province to amend its Building Code to permit mid-rise wood construction up to six storeys. It did so in 2009 in the context of a broader government strategy to advance its wood industry. Initially, only residential uses were permitted but, British Columbia has since amended its regulations to allow a range of mixed-uses in mid-rise wood buildings, similar to what is being proposed for Ontario. At this time, roughly 70 mid-rise wood buildings are built and occupied or under construction in British Columbia.

Quebec, like Ontario, currently limits wood construction to four storeys or less. In July 2013, Quebec published a guideline entitled “Residential five or six storey Wood-Frame Construction Directives and Explanatory Guide”. The Quebec guideline sets out criteria and conditions that must be met by a builder as an alternative solution to construct a five or six storey wood frame building. The guideline is intended to ensure safe construction of six storey wood frame buildings, and specifically restricts six storey wood frame buildings to residential uses only. Quebec is currently developing potential Building Code regulatory requirements that would permit up to six storey wood frame buildings.

Mid-rise wood construction is permitted in the building codes of most European Union countries, and is a well-established technique in Scandinavia and the United Kingdom. In some northwest U.S. jurisdictions, such as Oregon and Washington, mid-rise wood frame construction has been permitted for several decades.

A. Current Status of Wood Frame Construction in Ontario

Overview of Current Building Code requirements for fire safety in wood frame buildings up to four storeys

The Ontario Building Code currently limits the number of storeys, area and height of wood frame buildings. These height and size restrictions for particular occupancy classes were based on limiting the fuel load of the entire building and its contents.

In addition, the Building Code includes several fire safety provisions to ensure the safety of building occupants and emergency responders.

Many of the safety systems required in four storey wood frame buildings are also required for other buildings, and it is proposed they would be required for five and six storey wood frame buildings as well.

Four storey wood frame buildings are subject the following safety requirements:

- **Building area limits which require wood frame buildings to be much smaller than “non-combustible” sprinklered buildings.** Typically, 20% of non-combustible building area for residential occupancies, and 33% for business and personal services occupancies;
- **One hour fire separations throughout the building** (the fire separations apply to floor assemblies, walls around suites, and exit stairs);
- **Automatic heat-activated sprinklers meeting the National Fire Protection Association (NFPA) 13R standard** which are specifically designed for low-rise residential buildings and NFPA 13 for office buildings;
- **Fire hose cabinets and standpipes, on each floor** to NFPA 14 standard to provide the fire service with a water supply for fire-fighting operations;
- **Smoke detectors connected to a central fire alarm system, and in each corridor and exit stair**, sets off alarms in the entire building;
- **Smoke alarms in each apartment suites;**
- **Two means of exiting the building** through two sets of exit stairs protected by fire separations and sprinklers.

B. Proposed Amendments for Mid-Rise Wood Frame Construction

In order to move forward with any Building Code requirements permitting up to six storey wood frame construction, the Ontario government seeks to balance two primary objectives; first, to help increase opportunities for designers and builders to create innovative, flexible and affordable new buildings; and second, to maintain Ontario’s high fire safety standards for both the public and fire service personnel. The proposed “made-in-Ontario” approach proposed below would meet both of these objectives.

Potential Benefits of Mid-rise Wood Frame Buildings

Extensive public consultations on the proposed mid-rise wood amendments to Ontario's Building Code already took place in 2011. The amendments being proposed in this document are substantially the same as those considered at that time. In addition, MMAH conducted further focussed stakeholder consultations on the proposed requirements contained in this document in October 2013. The British Columbia experience with mid-rise wood also provides a basis in practical delivery of mid-rise wood construction.

The proposed mid-rise wood amendments address a wide scope of government's objectives and priorities. These include the following:

- **Design flexibility and innovation.** In accordance with the philosophy of an "objective-based" Building Code, the proposed provisions enabling six storey wood frame buildings would contribute to more design flexibility and choice while protecting public safety.
- **Public and fire service personnel safety.** When constructed with modern fire safety technologies such as sprinklers, alarm systems and fire blocking, mid-rise wood can provide safety levels equivalent to those of buildings composed of non-combustible materials.
- **Urban intensification and main-street redevelopment.** Mid-rise buildings support the intensification and main-street redevelopment objectives of the Province's Growth Plan for the Greater Golden Horseshoe and the Provincial Policy Statement.

Ontario's proposed changes enabling up to six storey wood frame buildings would permit mixed use buildings that could include commercial or retail uses on lower floors to facilitate construction of these buildings along urban arterial roads and in urban in-fill situations. This supports transit and pedestrian friendly development, thus contributing to meeting planning and intensification goals.

- **Environmentally friendly buildings and construction.** Wood-frame buildings contribute to the energy conservation and greenhouse gas reduction objectives of the Building Code. Wood requires less energy in production, it is a "carbon sink" (when combined with good forestry practices) and it is amenable to the re-use and recycling of wood building components.
- **Housing affordability.** Based on experience in British Columbia and elsewhere, up to six storey wood frame construction can, in some cases, be approximately 10% less expensive than steel or concrete construction. Contributing factors include faster construction (especially when pre-fabricated panels are used), lighter foundations, and less expensive materials.

- **Value added wood-based products help support the forestry industry.**
Engineered and value-added wood products that can be used in mid-rise wood frame buildings help support the forestry industry. Supporting forestry and value-added forestry-related industries is one of the goals in the Province's Growth Plan for Northern Ontario.

Proposed Building Code Amendments to Enable up to Six Storey Wood Frame Buildings

It is proposed that the following 2012 Building Code requirements would continue to apply to all five and six storey buildings, whether constructed of combustible or non-combustible materials:

- automatic sprinklering to NFPA13 standard;
- one hour fire separations in floor and wall assemblies between apartment suites;
- minimum two independent sets of exit stairs;
- fire hose cabinets on each floor;
- fire detectors in exit stairways, corridors; and
- smoke alarms in all apartment suites.

To maintain Ontario as a leader in fire safety, in addition to meeting the existing requirements, the proposed amendments to the Building Code would require mid-rise wood frame buildings to also comply with the following new requirements:

- Mid-rise wood frame construction would be permitted for **residential buildings and office buildings**;
- To facilitate mixed uses, certain other building uses would be permitted on the first and second floors of mid-rise wood frame residential or office buildings, including restaurants, stores and medical offices;
- **Limits on building height** to top floor (18m from first floor, 20m from fire access route);
- **Limits on building area** to 25% of that of residential non-combustible buildings and 42% of office non-combustible buildings;
- Minimum **building perimeter** access requirements;
- **Improved fire service access** to the building.
- **Non-combustible stairwells** with a fire rating of at least 1.5 hours;
- **Enhanced automatic sprinklering**, beyond the NFPA 13 standard for large buildings. Enhancements include sprinklering of balconies, decks and certain types of concealed spaces;
- **Increased fire protection in concealed spaces**;
- **Non-combustible or combustion resistant exterior cladding**;
- **Combustion-resistant roof cladding**.

Rationale for Proposed Amendments

The following provides more specific information and rationale for these proposed requirements:

1. Increasing the maximum number of storeys for wood frame buildings from four to six

The basic purpose of these proposed amendments is to increase the maximum allowable height of wood frame buildings from four to six storeys. Other proposed amendments constitute “compensating measures” that would refine this amendment to better provide for public safety. Six storeys is the maximum height that can be permitted without becoming a “high building” under the Building Code for residential occupancies. Beyond that height, further storeys would be out of reach for fire safety equipment such as ladders and trucks.

2. Permitted Occupancies

The Building Code contains requirements based on the occupancies or uses a building may be used for. These uses are categorized according to specific “Groups” of occupancies. Depending on the needs or hazards of a particular occupancy, additional compensating measures may be required.

It is proposed that the following occupancies or uses be permitted in mid-rise wood frame buildings:

- **Residential (“Group C”) buildings** up to six storeys, including apartments or condominiums, hotels, dormitories, etc.
- **Business (“Group D”) buildings** up to six storeys, including banks, medical offices, general office space, barber shops, etc.

Group C and D occupancies would be permitted in any combination; for instance, five storeys of residential and one storey of commercial or vice versa, or entirely of one use or the other.

3. Other “Mixed-Use” Occupancies

Mid-rise wood construction is expected to be primarily suited to existing built-up areas of cities, especially on major avenues. Since the proposed changes would permit a variety of complementary uses to be located in mid-rise buildings, the changes would both maximize the value of the building and provide more local amenities such as restaurants, groceries, or retail stores.

It is proposed that some limitations would be placed on the types of uses permitted, and where they could be located within the building, as follows:

- On the first or second floors: art galleries; libraries, larger restaurants, etc. (Group A, Div.2 – Assembly) and small restaurants, stores and groceries (Group E - Mercantile).

These assembly uses are relatively small and would not include larger uses, such as theatres. Parking garages would be allowed up to the second storey, provided they are ancillary to the primary residential and/or commercial use of the building. Where a Group A, Division 2 or Group E occupancy is proposed to be constructed on the first or second floor, a two-hour fire separation would be required between it and a residential or business occupancy above.

4. Restricting the height of mid-rise wood frame buildings

Several height restrictions are proposed:

- 18 m to the top floor including mezzanine, measured from the first storey.
- 20 m from the fire service access route to the top floor, including mezzanine.

These height limits would help to ensure that the building benefits from external rescue and fire-fighting operations, which in turn depend on both the maximum height of fire ladders, and the maximum height that can be reached by external water hoses.

The 18m limit would be intended to limit the height of each storey. If this was not required, a building could be constructed with very high storey heights, potentially leading to the upper storey or storeys being above the reach of fire service equipment.

The 20m limit on the height of the top floor relative to the fire service access route would help to ensure that the top floor and roof are within the reach of most fire ladders and hoses from any part of the fire service access route.

5. Restricting the building area of mid-rise wood frame buildings

The proposed amendments would require mid-rise wood buildings to be significantly smaller in maximum building area relative to non-combustible buildings of the same occupancy classification. This proposed limitation is based on existing Building Code provisions that restrict the size of combustible buildings to a much smaller size than non-combustible buildings of the same occupancy classification.

The limit in building area would reflect the fact that the total potential fire load of a combustible building (composed not just of building contents but also its structure) is significantly higher than for a non-combustible building. Therefore, to keep the fire load limited, restrictions on building area are appropriate.

It is proposed that:

- Mid-rise wood buildings containing residential uses be limited to a building area of 1,500 m² at six storeys, or approximately 25% of the building area permitted for a non-combustible building.
- Mid-rise wood buildings containing no residential uses would be permitted to have a building area of 3,000 m² at six storeys, or about 42% of the building area permitted for a non-combustible building.

Currently four storey wood frame (combustible) buildings are limited to 20% of the size of a non-combustible residential building. In the case of office buildings, they are limited to 33% of the size of a non-combustible building.

The relative building area proposed for mid-rise wood buildings has been increased slightly compared to the mNBC proposals because of the additional compensating measures.

6. Minimum requirements for building perimeter facing one street

The proposed “made in Ontario” model would require that not less than 10% of the perimeter of a five or six storey wood frame building be within 15m of a street that provides fire service access.

The Building Code currently does not specify a minimum figure for the percentage of a building perimeter that must be within access of a street that provides fire service access. The proposed requirement for mid-rise wood would provide emergency responders greater capacity to access the building exterior and interior to undertake fire suppression activities, assist in the timely evacuation of building occupants, and help firefighters attack the fire from multiple angles if necessary.

Other instruments, such as municipal zoning and site plan control, may also have a significant effect on building siting and emergency access.

7. Non-combustible stairwells with a fire resistance rating of 1.5 hours

The proposed “made in Ontario” model would prescribe that stairwells in mid-rise wood buildings be constructed of non-combustible materials only [i.e. concrete, masonry (concrete block), or steel frame and drywall] with a fire resistance rating of at least one and one-half (1.5) hours.

Since stairwells are used for staging of public evacuation and fire fighter response they are subject to increased fire safety concerns. The Building Code currently requires that most structural elements such as floors, walls and stairwells have one-hour fire endurance. In addition, the Building Code currently requires that all buildings, whether combustible or non-combustible, have fire separations between the stairwell structure and the surrounding floors. This limits the potential for fire to spread to stairwells from floor assemblies.

This “made in Ontario” proposal for non-combustible stairwells would exceed current requirements in British Columbia, proposed requirements in Quebec, and requirements elsewhere in the United States and Europe. Generally, these jurisdictions require only a one-hour fire resistance rating and do not prescribe the use of specific structural materials, allowing the internal frame to be concrete, masonry, steel or wood as the designer may determine.

8. Requiring sprinklering for all balconies and decks

The proposed “made in Ontario” model would require sprinklers on any balconies or decks in mid-rise wood buildings. Exterior sprinklers are readily available on the market, and do not impose greater risks of water damage through pipe freezing, as the design of the sprinkler system keeps water well clear of cold weather until needed.

Fires on balconies are a reasonably common occurrence due to people smoking on their balconies. Unattended or poorly maintained barbecues are also a common source of balcony fires. When a fire starts on a balcony, it can gain access to the building interior by burning through the bottom surfaces of the balcony above, or into the wall assembly.

This proposed requirement would exceed NFPA 13 provisions, which require sprinklering only of balconies and decks over four feet deep. They would also be an increase in fire protection over current Building Code requirements for combustible buildings of four storeys or less, which do not require exterior sprinklers.

9. Increased fire protection in concealed spaces

The proposed “made in Ontario” model would require these areas to meet NFPA 13 sprinkler standard. It would also require additional fire blocking to be provided. NFPA 13 requires combustible concealed spaces, such as roof assemblies and attics to be provided with sprinkler protection. This limits the probability of fire spreading both within and from a concealed space to other parts of the building.

10. Require non-combustible exterior cladding

A key feature of the proposed “made in Ontario” model for mid-rise wood would be a requirement that all exterior wall cladding be composed of non-combustible materials or fire tested exterior assemblies. This requirement would apply to all wood frame buildings of five and six storeys. Brick is the most common of these materials, but other materials and systems that meet the referenced standard do exist, and would also be permitted to be used.

The requirement for non-combustible cladding on exterior walls on all storeys would recognize that one possible way that a fire can spread is on, or through, the exterior of the building. Currently, four storey wood frame buildings permitted under the Building Code do not require combustion resistant or non-combustible exterior cladding.

11. Require combustion-resistant roof cladding

It is proposed that all five and six storey wood frame buildings be required to have “Class A” roof covering providing maximum fire resistance. The intent is to help prevent flying embers from any nearby fires causing the roof of the mid-rise building to catch fire. This requirement would apply regardless of the height of the roof assembly.

12. Fire protection during construction

Wood buildings can pose particular fire risks during construction. This risk is not restricted to mid-rise wood structures, but can also exist with smaller wood structures.

Building Code requirements address the design and manner of construction of buildings, including the sufficiency of the building components for their intended use. This does not include safety requirements of workers during construction. While the Building Code requires a number of fire safety measures and systems that would be in place when a building is occupied (such as operational sprinkler systems), those measures and systems are not generally in place during construction. While construction is underway, a fire can occur before these systems are fully installed or operational.

To mitigate concerns about the risk of fires in mid-rise wood construction projects, the Ministries of Municipal Affairs and Housing, Community Safety and Correctional Services, and Labour will work together with stakeholders to explore opportunities to support fire safety during the construction of combustible buildings, such as developing supporting materials or guidelines.

13. Other technical matters related to mid-rise wood

A variety of other technical matters are also addressed in the “made in Ontario” proposals that are more technical in nature, and that would help to ensure best design practices, including:

- Structural design requirements to include anticipated building movement. This would be intended to ensure that designers take into account likely impacts of settling, shrinkage and other types of building movement.
- Anchor clips to allow for exterior maintenance. This would address best practice in terms of identifying the attachment points for window washers, etc.
- Increased structural loadings in design. This provision would require mid-rise wood frame buildings to withstand a structural load that is 20% higher than equivalent non-combustible buildings. The intent of this provision would be to help ensure that such structures are as safe or safer than other buildings permitted under the Building Code. Tests of wood frame buildings that simulate earthquake loads have demonstrated the capacity of wood frame structures to resist lateral loads.



UNLOCKING THE POTENTIAL FOR MID-RISE BUILDINGS

SIX STOREY WOOD STRUCTURES

Prepared for the Building Industry and Land Development Association

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February 2013

EXECUTIVE SUMMARY

- This report presents a strong planning rationale for changing the existing Ontario Building Code to permit wood frame buildings to be constructed to a maximum of six storeys in order to unlock the immense potential of a new mid-rise market throughout the Greater Toronto and Hamilton Area, the Greater Golden Horseshoe and in many other cities throughout the province.
- The incredible opportunity to realize this vision and to create safe, cost effective and liveable building forms is not being met. One of the reasons for this is that the existing Ontario Building Code requirement limits wood frame buildings to a maximum of four storeys. Changing this to a maximum of six storeys would increase the variety of living choices, realizes cost savings for construction of the home which is ultimately a benefit for the new home buyer, and represents a major step in achieving planned intensification goals of the Provincial Places to Grow Growth Plan and all GTHA regional and municipal Official Plans.
- Changing the Ontario Building Code along these lines would be similar to the changes that have already been implemented in 2009 to the British Columbia Building Code. Changes there had an immediate positive impact on the local economy. Expected impacts in Ontario would include job creation, increased availability of affordable housing, increased taxation and a minimization of the carbon footprint of building construction.
- The idea of building mid-rise residential and mixed-use buildings on urban corridors throughout the GTHA is a fundamental component of creating sustainable cities and regions. Lands along these urban corridors are generally underutilized. They represent a significant opportunity for re-development to accommodate future residential growth, are generally well-served by a variety of transit routes and make good use of the existing infrastructure.
- By recognizing the potential of mid-rise development, we have a choice to direct change in a positive way into urban corridors that are capable of accommodating various degrees of growth. The sites (which are often underutilized, vacant or include obsolescent properties) should receive special planning attention in terms of development incentives and precinct plans to guide future change. This planning strategy is a key way to protect the long term stability of low density residential neighbourhoods as it channels an opportunity to create a diversity of new housing, support the health of retail shops and boosts transit ridership. It is a win-win planning idea that needs to be seized throughout the region.

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“THE IDEA OF BUILDING MID-RISE RESIDENTIAL AND MIXED-USE BUILDINGS ON URBAN CORRIDORS THROUGHOUT THE GTHA IS A FUNDAMENTAL COMPONENT OF CREATING SUSTAINABLE CITIES AND REGIONS”

INTRODUCTION

This report presents a strong planning rationale for changing the existing Ontario Building Code to permit wood frame buildings to be constructed to a maximum of six storeys in order to unlock the immense potential of a new mid-rise market throughout the Greater Toronto and Hamilton Area (GTHA), the Greater Golden Horseshoe (GGH) and in many other cities throughout the province. This report was initiated by the Building Industry and Land Development Association (BILD).

The irony is that the incredible opportunity to realize this vision and to create safe, cost effective and livable building forms is not being met. One of the reasons for this is the existing Ontario Building Code requirement to limit wood frame buildings to a maximum of four storeys. Changing this limitation from four to a maximum of six storeys would increase the variety of living choices, realizes cost savings for construction of the home which is ultimately a benefit for the new home buyer, and represents a major step in achieving planned intensification goals of the Provincial Places to Grow Growth Plan and all GTHA regional and municipal Official Plans.

THE PLANNING VISION

The idea of building mid-rise residential and mixed-use buildings on urban corridors throughout the GTHA is a fundamental component of creating sustainable cities and regions. Lands along these urban corridors are generally

underutilized and characterized by buildings of one to four storeys. They represent a significant opportunity for re-development to accommodate future residential growth, are generally well served by a variety of transit routes and make good use of the existing infrastructure.

This planning vision is not new. Building housing on main streets represents a long established tradition in the cities and towns of Ontario but the housing market has generally catered to either hi-rise or low rise construction. This has started to change with mid-rise development appearing in locations that can justify high construction and land costs. It is important to grow this market so that multiple benefits can be achieved.

Mid-rise buildings located along the urban corridors of our cities are a vital component of the vision of the Provincial Places to Grow Growth Plan and are found in virtually all regional and municipal Official Plans. All the right language is there but unless the economics of building mixed-use development on urban arterials throughout this region make sense, this policy vision will simply remain just a nice idea. Everything possible must be done to create a positive economic climate so that the private sector can respond in a creative and cost effective manner.

Provincial Policy Context

The 2006 Provincial Places to Grow Growth Plan sets out a clear vision for the GGH which includes a wide variety of choices for living. The vision is grounded by six core principles that all focus on building complete communities to take advantage of existing infrastructure to support growth in a compact and efficient form. Compact urban form includes mid-rise apartments and apartments above retail uses that are typical of urban corridors.

The Plan also contains extensive policy statements that promote intensification in built up areas, reduce dependence on the automobile by building mixed-use transit-supportive, pedestrian-friendly development in intensification corridors in addition to a range and mix of housing, taking into account affordable housing needs. (1) The Plan requires that all regional and local Official Plans contain policies that conform to the Places to Grow Growth Plan. The Minister of Infrastructure must review the growth plan at least every 10 years.



after it comes into force and will review the forecasts at least every 5 years and may propose amendments.

In November, 2012, the Minister Proposed Amendment 2 to the Growth Plan to update the growth forecasts for population and employment and extend the time horizon of the forecasts and policies from 2031 to 2041. (2) These revised forecasts are based on a recent Ministry review of demographics, economic trends, land availability, infrastructure investment, water and waste water servicing capacity. The review projects a GGH population of 13.5 million and a GTHA population of 10.1 million by 2041. Consultation and feedback on Amendment 2 was concluded on February 8, 2013.

Regional and Municipal Policy Context

A high level review of all GTHA Regional Official Plans and local Official Plans for major municipalities within the GTHA reveals a consistent set of policy statements designed to encourage various levels of mid-rise intensification on urban corridors. Examination of the Urban Structure Maps for the larger municipalities of Hamilton, Mississauga, Brampton, Toronto, Vaughan and Markham indicates extensive linear corridors are targeted for mixed-use development. Urban Structure Maps for Hamilton, Mississauga and Toronto are illustrated in figures 1, 2 and 3.

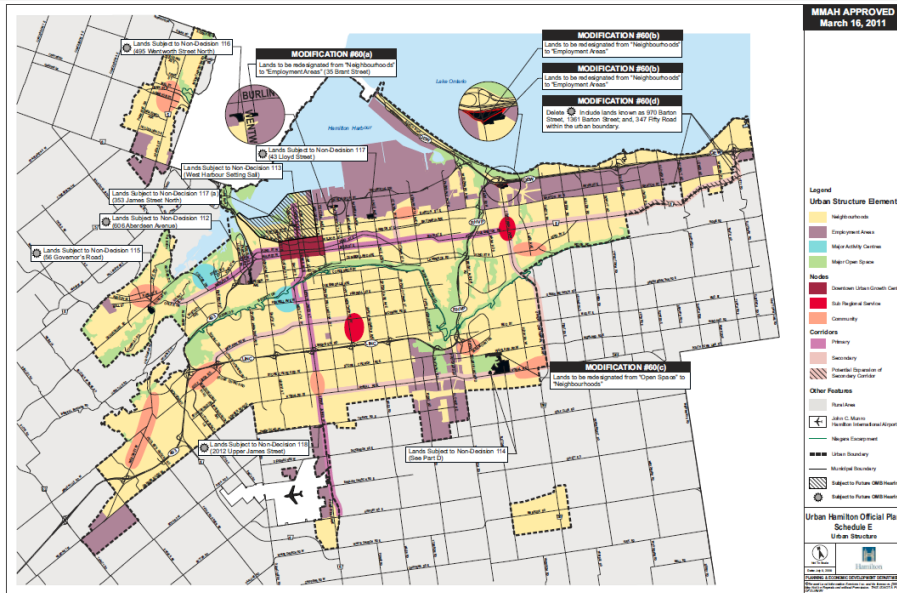


Figure 1. Official Plan Urban Structure Map - Hamilton

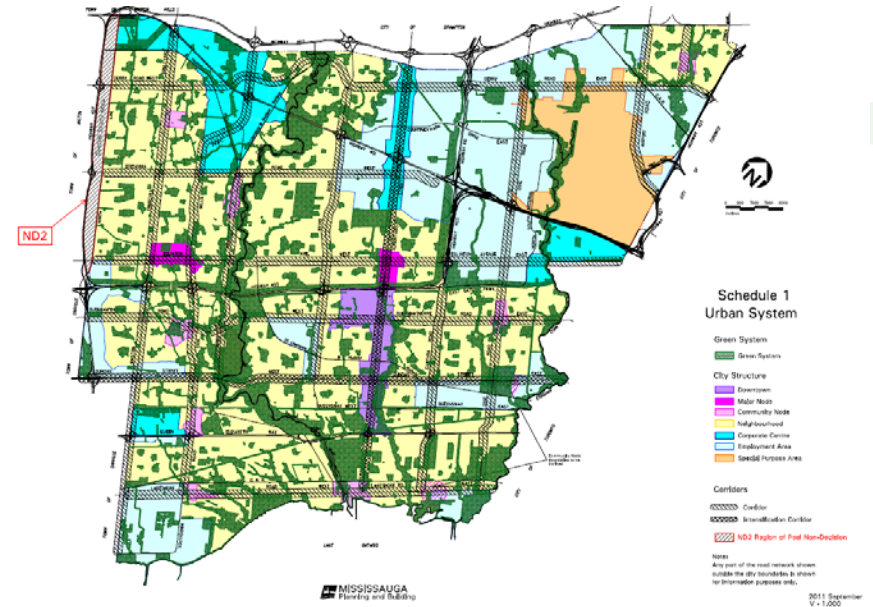


Figure 2. Official Plan Urban Structure Map - Mississauga

In the City of Toronto they are referred to as “Avenues” and comprise about 160 kilometres in total length. In Hamilton they are called “Primary and Secondary Corridors.” In Mississauga they are referred to as “Corridors and Intensification Corridors.” In Brampton they are labeled “Business Corridors.” In Markham they are referred to as “Intensification Areas”. Finally, in Vaughan they are called “Regional and Primary Intensification Corridors.” There are literally hundreds of kilometres of urban corridors throughout the GTHA that are now targeted for intensification.

All Official Plans contemplate achieving a wide variety of housing goals on lands within these linear corridors that run through our region and every municipality. Depending on the context, the scale of development contemplated varies from three to ten + storeys but the vast majority would fall into the four to six storey range. What is essential to understand is that one size does not fit all. However, if the province and its’ municipalities are serious about realizing the development potential of these corridors, steps need to be taken by all parties to make it easier and more affordable to build mid-rise construction.

DEVELOPMENT POTENTIAL

It is sometimes hard to grasp the magnitude of housing that could be created if these barriers were removed. To help illustrate this potential, it is useful to reflect on the findings of a City of Toronto background study for the 2002 Official Plan called “Flashforward: Projecting Population and Employment to 2031 in a Mature Urban Area, June 2002”(3). This type of study is often referred to as the realistic development potential or a soft sites analysis.

The approach is very simple. An estimate of the residential capacity of all lands designated as “Avenues” that were zoned for mixed commercial-residential uses was developed using criteria to select prime re-development lands. The criteria meant that sites had to have a frontage of 22metres (75 feet), a site area of 100 square metres or more, the land was vacant or had two or less storeys, had no townhouse, walkup or medium rise apartment building and had no active development application filed. In total, there were 15,775 parcels of land fronting on the 160 kilometres of “Avenues”. Only about 1/10th of all sites or 1,443 parcels met these criteria.

The realistic residential development capacity was determined by assuming a maximum of six storeys (5 residential floors and 1 storey of ground floor retail use). Assumptions for the building footprint of 75% of the lot area and an average unit size of 92 square metres (1,000 square feet) were used to calculate the total. The end result generated a realistic development potential of 123,911 units of new housing.

The current 5 year review of Toronto’s Official Plan is most relevant to this discussion. Since 2006 when the Official Plan came into legal effect, 246 projects representing almost 30,000 residential units have been proposed for development on the “Avenues”. The majority of this is classified as mid-rise ranging from four to eleven storeys. This constitutes 28% of the 106,848 units proposed City-wide. (4)

This is a flexible model that could be easily applied to all intensification corridors throughout the GTHA in order to get an appreciation of the magnitude of the mid-rise market. It is not within the scope of this report to undertake such a study but given the hundreds of kilometres of corridor lands

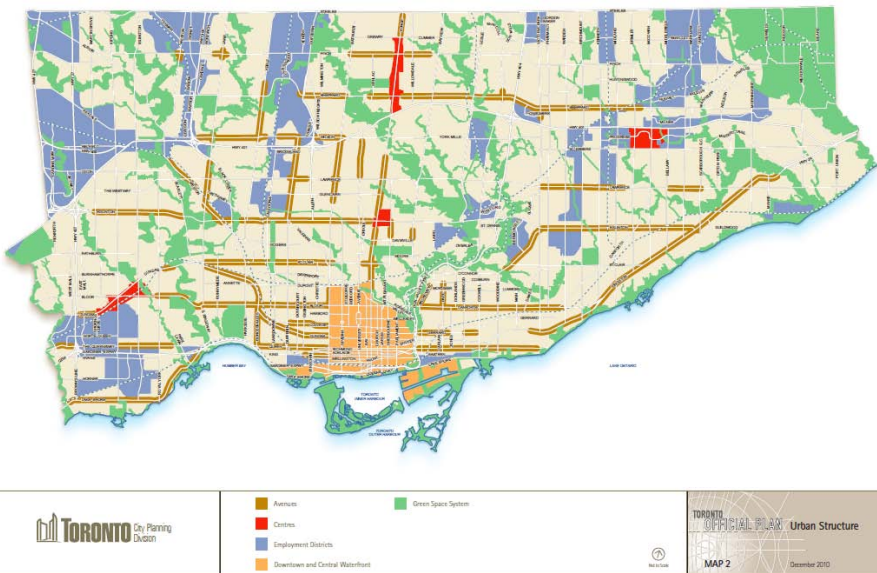


Figure 3. Official Plan Urban Structure Map - Toronto

designated for residential and mixed-use intensification throughout the GTHA, it would seem reasonable that the regional potential for a new mid-rise housing market could approach several hundred thousand units. This would go a long way in meeting the policy goals of provincial, regional and local Official Plans and would make a huge improvement to the achievement of complete streets throughout the region.

BARRIERS TO MID-RISE DEVELOPMENT

“THERE ARE FUNDAMENTAL BARRIERS THAT REMAIN IN PLACE THAT WILL CONTINUE TO FRUSTRATE THE PLANNING GOALS OF CORRIDOR INTENSIFICATION”

Ontario Building Code

Notwithstanding the best of intentions, there are fundamental barriers that remain in place that will continue to frustrate the planning goals of corridor intensification.

The existing Ontario Building Code (OBC), which limits stick or wood construction to a maximum of four storeys, is a major barrier. Allowing wood frame construction up to a maximum of six storeys has been

subject to longstanding concerns by fire chiefs and fire fighters over increased safety risks. These concerns are well documented in the August 2012 study titled “Evaluating Stakeholder Concerns with Wood Frame Buildings and Fire Risk” undertaken by Surrey, B.C Fire Chief Len Garis and Dr. Joseph Clare, strategic planning analyst for the Surrey Fire Service. (5) This study was undertaken to answer issues associated with Private Members’ Bill 52, Ontario Forestry Industry Revitalization Act (Height of Wood Frame Buildings), 2012.

The study concludes that changes to the Ontario Building Code would be possible to increase the maximum building height for wood frame buildings to

six storeys. This recommendation is subject to the adoption of fire safety strategies that in order to ensure that six storey wood frame buildings would perform as least as well as buildings currently permitted under the existing OBC.

Changing the OBC along these lines would be similar to the changes that have already been implemented in 2009 to the British Columbia Building Code (BCBC). It was noted that the B.C. Fire Chiefs’ Association expressed similar reservations as the Ontario Fire Chiefs’ Association but that these initial concerns were withdrawn once a due process was followed in B.C. The study further noted that the changes to the BCBC had an immediate positive impact on the local economy. Expected impacts in Ontario would include job creation, increased availability of affordable housing, increased taxation and a minimization of the carbon footprint of building construction.

From a planning perspective, adopting changes to the OBC to permit wood frame construction for four to six storey buildings would represent substantial construction cost savings over poured concrete structures which would translate into a more affordable unit to the home buyer. More importantly, allowing wood frame buildings up to a maximum of six storeys would likely kick-start the mid-rise housing market at a time when the market is dominated by either hi-rise or low rise building. This is especially true in the suburbs that do not share the locational advantages of inner city development sites.

Development Charges

All municipalities within the GTHA have a schedule of development charges but the amounts vary considerably. The general philosophy underpinning development charges is that growth should pay for growth. This approach makes sense in situations where infrastructure does not exist or needs to be substantially upgraded to accommodate intensification. For example, within the “Urban Area” of the Region of Halton, the development charge for apartment units ranges from \$24,409 to \$29,586. In contrast, the development charge for apartment units located within the Greenfield area of Halton Region ranges from \$28,957 to \$34,134.(6)

However, in mature urban areas the infrastructure is already in place and in many cases is underutilized. In the City of Toronto, the 2012 development charge for a bachelor or one bedroom unit is \$7,164 and \$ 10,841 for a two bedroom or larger unit. (7) In recognition of the benefits of development intensification experienced to date, the City of Waterloo is currently proposing a reduction of approximately 20% in development charges for apartment units from \$6,612 to \$5,343 for bachelor and one bedroom units and from \$8,598 to \$6,947 for two and three bedroom units. (8)

Within the City of Toronto, additional inconsistencies exist as the same development charge applies to new units anywhere in the City regardless of its location. As a result, a developer has to pay the same development charge for a unit built in Yorkville and a unit built in a priority neighbourhood such as Jane and Finch. This makes no sense and only serves to put less attractive areas at a further disadvantage as these areas are exactly where new private sector investment is critically needed.

If the potential of mid-rise development is to be realized, it would make total sense to reduce or totally exempt key urban corridors from paying development charges. This would act as an incentive to attract developers to invest in new construction. A detailed study of such options should be undertaken by the Building and Land Development Industry.

Tax Policy Reform

Adoption of favourable tax policy reform would also have a positive effect on kick-starting mid-rise construction. Municipalities could offer property tax exemptions for a given period of time in order to attract new development along urban corridors.

Additionally, the Federal government could bring back large scale, private sector rental housing construction by permitting developers to write off capital costs from income taxes known as the Capital Cost Allowance. This type of tax policy was responsible for the creation of massive amounts of private sector

rental housing construction in the 1960's and 1970's that still dominates many neighbourhoods throughout the GTHA. Indirect incentives for rental housing supported this building boom. Private capital flowed to rental housing because it was a good investment relative to others. When the condominium market developed, the Federal government withdrew its supportive tax environment and private rental housing slowed to a halt.

The combination of allowing wood frame construction up to six storeys in addition to a positive tax environment would enable the private sector to build a new supply of badly needed rental units along urban corridors that could meet the diverse housing needs of the existing and future population.

“ADOPTION OF FAVORABLE TAX POLICY REFORM
WOULD ALSO HAVE A POSITIVE EFFECT ON KICK-
STARTING MID-RISE CONSTRUCTION”

Parkland Dedication Policies

The Ontario Planning Act says “that a municipality may utilize an alternate parkland dedication rate of one hectare per 300 units”. Many area municipalities tend to utilize this provision in order to create new parkland to service growth associated more with a greenfield environment. However, in the City of Toronto, a lower parkland dedication rate of 0.4 hectares per 300 dwelling units is in force. This reflects the reality of a mature built city.

On urban corridors, what is often most important to encourage mixed-use re-urbanization is the provision of high quality pedestrian amenities, wider sidewalks and streetscape improvements. To help stimulate a positive investment climate for mid-rise construction it would seem to make more sense for municipalities to develop strategies that would improve the quality of the public realm within urban corridors and consider adopting a much lower alternate parkland dedication policy than is provided for in the Planning Act. BILD should consider initiating a further study of this matter.

PLANNING RATIONALE FOR MID-RISE

Corridors of Opportunity

Within the GTHA there are hundreds of kilometres of arterial roads that have been designated in regional and municipal Official Plans for intensification. Corridors that are characterized by one storey buildings, car dominated uses, vacant and underutilized lands with large areas of surface parking are prime opportunities and priorities for intensification. Each corridor is different in terms of lots sizes, configuration, street width, existing uses, neighbourhooing uses, transit service and streetscape potential. Change will occur incrementally over time and respond to the context of each corridor. This process will involve local residents, businesses, business improvement areas (BIA's) and other stakeholders.

In mature urban areas, the framework for new development will be established through area planning studies that will determine new zoning rules spelling out uses, heights, densities, setbacks and other matters. In suburban areas, there is an opportunity to establish a totally new zoning framework for mid-rise development that can implement the policies of the Official Plan. In all cases, mid-rise is a transformational opportunity to achieve high quality development that significantly increases the range of housing choices for people of all ages.

Relationship to the Street and the Neighbourhood

There are important advantages of providing an appropriate scale, type, range and mix of housing in Ontario that can be achieved through mid-rise development. Most main streets form the heart of many neighbourhoods and are often bordered by stable low density communities that predominantly consist of two to three storey single family houses. These communities are sensitive to change and generally are not supportive of buildings that exceed a comfortable height and scale so the relationship to new mid-rise development is of great interest.

While most people do not welcome change it is essential to understand that our cities and region will continue to change regardless. We have a choice to

direct change in a positive way into urban corridors that are capable of accommodating various degrees of growth. This planning strategy is a key way to protect the long term stability of low density residential neighbourhoods as it channels an opportunity to create a diversity of new housing, support the health of retail shops and boosts transit ridership. It is a win-win planning idea that needs to be seized throughout the region.

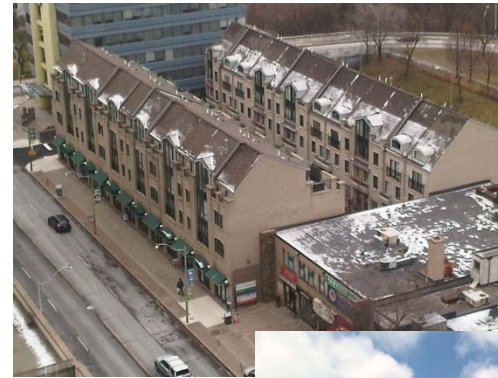


Figure 4. Buildings within a 4 to 6 storey height range at Yonge & Aylmer (Left Photo)

Figure 5.
Yonge and CPR Tracks
(Right Photo)



Buildings within the four to six storey height range seem to represent the sweet spot of main street development that offers a moderate degree of intensification that most people are comfortable with, as seen in Figures 4 through 8. This scale of building often represents an attractive housing alternative for long established neighbourhood residents who are downsizing from larger homes, seeking a carefree condo lifestyle and who want to stay in the same neighbourhood.



Figure 6. Yonge and Broadway



Figure 7. 109 Ossington

Ironically, it is the local residents who often oppose new mid-rise buildings in the four to six storey range (as is currently the case in the Beach and Lower Ossington.) Notwithstanding this reality, the majority of buyers for new mid-rise building actually come from the immediate neighbourhood. This is the case with both the Beach and Lower Ossington buildings and is the norm for most new mid-rise buildings.

Mid-rise buildings of four to six storeys seem to represent a scale that is compatible with most established neighbourhoods especially when the upper two floors are setback so the visual impact on the street is less noticeable. Six storey buildings can be built within a height limit of 20 metres, which is comparable to the 20 metre width of most urban streets in the older parts of Toronto. As a general rule, the height of buildings on urban corridors should be roughly equal to the street right-of-way width.



Figure 8. College & Dovercourt

Construction Cost Savings

“ON A 1,000 SQUARE FOOT UNIT, A COST SAVINGS OF \$20-25,000 COULD THEREFORE BE ACHIEVED. THIS IS A SUBSTANTIAL OPPORTUNITY THAT SHOULD NOT BE IGNORED.”

The ability to utilize wood frame instead of poured frame construction for buildings up to six storeys on the urban corridors throughout the GTHA would produce definite cost savings for both the builder and the end user. It is hard to generalize in such a large region but a preliminary investigation of construction costs with well respected

builders operating in our region indicates that cost savings for utilizing wood frame could be in the order of \$30-40 per square foot or approximately 15-20% of construction costs. The price can vary according to the parking arrangements, exterior wall treatment, fireproofing and possibly earthquake structural requirements which would probably translate into a \$20-25 per square foot savings or approximately 10-15% less than concrete construction. On a 1,000 square foot unit, a cost savings of \$20-25,000 could therefore be achieved. This is a substantial opportunity that should not be ignored. (9)

These figures represent the actual experiences of long established developers in Toronto and clearly are only a sample. However, they do illustrate that wood frame construction would enable developers to produce projects at a more cost effective rate and would likely enable a larger number of smaller developers to enter the mid-rise market. This is especially important for smaller projects in the 905 area where the development charges are much higher than those in the City of Toronto.

Given the construction cost savings realized with wood frame, these substantial savings would be passed through the system resulting in a more affordable condo or rental unit brought to the market. The creation of more affordable ownership and or rental housing by the private sector is an obvious benefit to governments who do not have to provide financial subsidies. It is a

definite benefit for people in need of housing and is a benefit to the construction and development industry.

Housing Diversity and Unit Type

Within this scale, it is possible to build a variety of unit types including larger units with decks or terraces. The lack of larger units that can accommodate families in hi-rise condos is a key issue to be addressed. Mid-rise development on main streets can help to meet this demand by offering a variety of configurations and unit sizes including through units with frontage on both the main street and the rear facing adjacent neighbourhoods. Attractive development opportunities for main streets buildings are often found on corner lots that have sufficient depth and rear lane access which enables maximum design flexibility. Terraced upper floors also create new possibilities.

Quality design must be a cornerstone of every urban corridor as these streets are the faces of our cities and region. The tremendous diversity of parcel sizes and shapes allows architects to experiment with different building types and forms to achieve housing choices for all age groups. Changing the Ontario Building Code to allow wood frame construction up to six storeys would represent a new type of building that could spark design innovation. The Province and cities could promote this opportunity through design competitions to celebrate the best examples of development.

Mid-rise development also offers tremendous potential to accommodate seniors in a variety of housing types. These can be public and or private accommodation including retirement and nursing homes that offer a range of care. Contrary to popular belief, most seniors enjoy being surrounded by normal daily life with people of all ages. Main streets and urban corridors are excellent locations for such housing with shopping, transit and a range of community support facilities often found on the street. These include medical facilities that can often be reached by walking or by a short transit ride. Most people want to retain all the important contacts they have established throughout their life which include a face to face relationship with local merchants, many of whom make local deliveries.

Transit

The growth and redevelopment of urban corridors needs to be supported by high quality transit service. In the City of Toronto, almost all of the main streets have bus service with more densely populated corridors served by streetcars or subways. As development intensifies over time it is essential to ensure frequent and reliable transit service, along with the adoption of priority measures, is provided to meet the needs of increased population.

High quality and dependable surface transit is of critical importance to the success of mid-rise development. It provides residents with travel choices and reduces the dependency on the car as the only means of transportation. As new Light Rapid Transit (LRT) lines are built along Eglinton, Sheppard, Finch, Scarborough, Highway 7, Hurontario and throughout the GTHA over the coming decade, they will help to spur mid-rise growth. On November 29, 2012, Metrolinx announced a commitment to additional subway and surface transit lines throughout the region over the coming 15 years. Development of these lines will change the image and function of corridors from only arteries of movement to arteries of development opportunity.

Complete Streets

The planning goal of building complete streets can also be substantially advanced by the development of mid-rise construction. The key ingredient in realizing a complete street and the provincial and municipal planning goals is more density. This message can be hard for many people to understand as they usually have a negative image of density. Yet without the addition of more people, most urban streets will not be capable of transformation and rejuvenation.

Mid-rise development can also be a means to improving the streetscape and quality of the pedestrian environment, where trees can be planted and where the road allowance can be utilized for community benefits to create new or improved public space. Urban corridors should become meeting places for local residents and the wider community with focal points and attractive, bustling sidewalk life. Increased population gradually enhances local businesses and creates a demand for new business opportunities. These changes can

benefit both established and new residents as funding opportunities present themselves and development proceeds over time.

Complete streets thrive on mixed-use with vibrant retail uses at grade and residential uses above. The increased residential population represents new customers for the local merchants, adds pedestrian life to the street and adds richness to the neighbourhood. Advancing mid-rise construction represents one of the best planning strategies available to transform the complete streets vision into reality but it needs more than nice policy statements to achieve it.

**“COMPLETE
STREETS THRIVE
ON MIXED-USE
WITH VIBRANT
RETAIL USES AT
GRADE AND
RESIDENTIAL USES
ABOVE”**

The Look and Feel of Buildings and the Street

The look and feel of the street is also integral to attracting mid-rise development. Where the streets are the most successful, they tend to have wide sidewalks, pedestrian amenities and are a pleasant environment to shop, stroll or enjoy the experience of a sidewalk café. Other streets are inhospitable to pedestrians with wide and busy high speed traffic, narrow sidewalks and surface parking that isolate buildings from the sidewalk. Cities can play a major role in developing urban design guidelines and performance based zoning to stimulate positive change in order to re-image the look and feel of these streets.

The analogy of urban acupuncture can also be a very powerful tool to change the appeal of a street for new mid-rise development. Perhaps the best example of this was in the City of Toronto when the City Council decided to convert the public parking lot behind the flat iron Gooderham and Worts office building at Front Street and Wellington Street East into a public park (Berczy Park) in the 1970's. This demonstration of political will stimulated private sector investment in buildings on both streets and created a whole new vibrant district. Every city is capable of creating new parks or public squares on city-owned lands in a similar fashion.

“QUALITY OF LIFE IS THE LINCHPIN TO A VIRTUOUS CYCLE OF GROWTH AND RENEWAL”

Quality of Life

Quality of life is a relative term and the single most important matter to address for our region. It is the key to enjoyment and leads to improved economic competitiveness and rising prosperity. Quality of life is the linchpin to a virtuous cycle of growth and renewal.

The Provincial Places to Grow Growth Plan is a great vision for the future. But a great vision alone can't create a great region. It is essential to bring the vision to life through a clear implementation strategy. Mid-rise development on our urban corridors is a transformative component of this vision.

It offers endless possibilities to improve the quality of life for existing and future residents through a diversity of housing choice. It offers region wide opportunities to improve the level of transit. It offers opportunities to reinforce the health of retail shopping districts. Mid-rise development creates the potential of a new market that is capable of housing hundreds of thousands of people in the coming decades. Above all, it makes a huge contribution to raising the quality of life throughout our region by improving the daily living, working and transportation life cycle choices of existing residents.

The Long Term Picture of City Building

The Proposed Amendment 2 by the Minister of Infrastructure to update and revise population and employment projections for the GGH to 2041 emphasizes the importance of taking the long view and looking at the big picture. While 2041 may seem like a long time from now, it is just under 30 years.

Looking back 30 years to 1983 may help to reflect on the degree of change that will take place. Since that time, the GTHA has grown substantially with much of that growth taking place in a car dependent pattern that is problematic and will only get worse unless a major investment in transit is made to support a regional population in excess of 10 million.

This means that the GTHA will add 3.5 million people to our region. This is equivalent to Greater Montreal or the equivalent of adding the cities of Vancouver, Calgary, Edmonton and Ottawa. It represents a unique window of opportunity to build great streets of the future that provide a sustainable model that will stand the test of time. Mid-rise development is a major component of this opportunity.

We now have the Provincial Growth Plan in place in addition to the Metrolinx Big Move Transit Plan. Together, these documents have the potential to shape the region in a sustainable way if the political will exists to stay the course and find new funding sources to support growth. Mid-rise wood frame construction up to six storeys on urban corridors would represent a fundamental breakthrough in advancing the transformation of our main streets. This simple change to the Ontario Building Code would bring a substantial range of benefits to both the public and private sector and could be achieved through a relatively quick process. It is a cost effective strategy that should be initiated without hesitation.

CONCLUSIONS

In order to create a sustainable city region over time it is essential to fully embrace a paradigm shift to bring the Places to Grow policies to life in a shorter time frame. This paradigm shift is all about moving minds.

This process has been underway since 2006 with the adoption of the Places to Grow Growth Plan. Every year approximately 100,000 people move into the region. When out migration is factored in there is still an annual demand for approximately 35 to 40,000 new housing units per year in the region. This is a huge challenge that can only be met if everyone involved in the building and land industry are moving in the same direction. This includes engaging all three levels of government, the private sector, land owners, developers and communities.

The Province has taken important steps to encourage future development in built up areas instead of allowing continuous sprawl outward. Advancing the case for mid-rise could be achieved by understanding the realistic development potential of all designated urban corridors. Natural systems and transportation networks need to be integrated into the thinking and a soft sites analysis undertaken to identify key parcels of land that are ripe for redevelopment. These sites could include obsolescent properties, vacant lands, underutilized sites and sites with one storey buildings that are easy to redevelop. The sites should receive special planning attention in terms of development incentives and precinct plans to guide future change. They have the potential to provide housing for the full range of incomes, can advance the development of complete streets and can help to expedite transit improvements.

Investments in community improvements by public agencies through capital budgets must be made to support high quality urban living. The public sector also has an obligation to create a positive environment to encourage private sector investment through a combination of creative zoning, innovative tax policy and supportive infrastructure. Unleashing the untapped potential of urban corridors is an extraordinary opportunity to build the next generation of buildings and create the great urban streets of the future!

RECOMMENDATIONS

1. That this report be forwarded to the Board of the Building and Land Development Industry (BILD) for its consideration and other relevant stakeholders.
2. That BILD undertake the appropriate background studies associated with exempting development charges, lower alternative parkland dedication policies and favourable tax policies at the local and Federal levels to help stimulate a positive investment environment for mid-rise housing located on urban corridors
3. That BILD communicate to the Minister of Municipal Affairs and Housing its strong support to change the Ontario Building Code to increase the maximum building height for wood frame buildings in Ontario to six storeys.

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- (5) *Garis, Len and Clare, Dr. Joseph, "Evaluating Stakeholder Concerns with Wood Frame Buildings and Fire Risk", University of the Fraser Valley, August 2012*
- (6) *Town of Oakville Development Charge Brochure, "Development Charges for the Town of Oakville, The Region of Halton and the Halton District School Boards", September 5, 2012*
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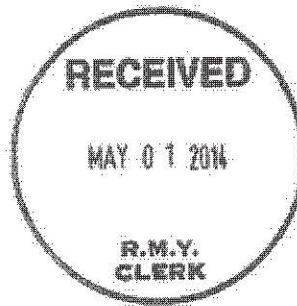


Cement Association
of Canada

Association
Canadienne
du Ciment

Ottawa, April 26, 2014

Mr. Mayor Bill Fisch
cc: Denis Kelly, Clerk
Regional Municipality of York
PO Box 147
Newmarket, ON L3Y 6Z1



CLERK'S OFFICE
FILE No. - P46

Dear Mayor Fisch,

On behalf of the Cement Association of Canada (CAC), I would like to draw your attention to an urgent issue that could negatively impact the integrity of the Ontario Building Code and jeopardize the safety of the people in your municipality.

On March 20, 2014, the Ontario government announced proposed changes to the Ontario Building Code to permit the construction of six-storey wood frame buildings. The province is holding a public consultation on the proposed changes until May 4, 2014.

The provincial government's announcement reflects the interests of the wood products industry and its recent lobbying efforts. Those who promote taller wood frame construction believe that a four storey limit on residential and commercial wood buildings is no longer necessary, and have been actively pressing provincial governments to politically amend building codes to permit six-storey wood frame structures outside the tried and true longstanding building code review process. Federally, the wood products industry is also pushing for changes to allow for the construction of six-storey wood buildings in the 2015 edition of the National Building Code of Canada.

As an elected representative of your municipality, I know that you want to protect and strengthen your municipality, as well as ensure that your housing market meets or exceeds the codes and standards that the residents of your community deserve. Unfortunately, the proposal put forth by the Ontario government, as currently drafted, could place Ontarians' lives at risk.

Currently, there are no provisions in place to protect those who are engaged in the construction of these buildings or the fire fighters who respond to emergencies or potentially fatal fires in these buildings. It is considered outside the mandate of the building code to include safety clauses for people who work on the site and those who respond to emergencies at the site. We believe that the lives of fire fighters should be protected in the Ontario Building Code. An interesting point to note is that Ontario has 19,000 voluntary fire fighters and only 11,000 professional fire fighters.

Further, if the regulation is approved, taller wood frame buildings may be constructed in areas of your municipality that may not have adequate firefighting coverage, including those currently being protected by voluntary firefighters. Many local fire departments across the province do not have the equipment to fight a massive blaze in a six storey building. To adequately fight such a fire, fire fighters need 100-foot ladder trucks that cost as much as one million dollars each and require specially trained crews. This is very costly, particularly at a time when municipal tax dollars are being stretched to the limit and when we see some Ontario municipalities, including the city of Toronto, cutting their budgets for fire services.

Owners of residential and commercial buildings constructed with wood may also face higher insurance premiums. I know that your government wants to ensure that housing remains affordable in your municipality. The proposed changes to the Ontario Building Code will undoubtedly increase



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building and insurance costs – and, most importantly, compromise the safety of the people in your community.

Those who are often the most vulnerable – the very young, seniors and physically disabled citizens – are those who would be at greatest risk in the unfortunate scenario where a fire breaks out. The massive fires that have recently destroyed multi-storey wood buildings in Kingston, Ontario, Richmond, British Columbia, Edmonton, Alberta, and Houston, Texas, demonstrate how dangerous these buildings can be, and how many lives will be put at risk as a result.

We do appreciate that the Ontario government has included some fire safety provisions in the draft proposal, such as the inclusion of non-combustible stairwells. However, the omission of important fire safety features – such as non-combustible elevator shafts and firewalls – demonstrate that this proposal does not go far enough to protect the people and communities of Ontario.

Recently we saw how a concrete masonry firewall prevented a raging fire in L'Isle-Verte, Quebec from destroying an entire retirement complex. This tragedy should serve as a reminder that we need more fire safety features implemented in our building codes to fully protect the safety of Ontario communities. The minimum standard of a building code is just not enough to protect the residents of your community.

The proposal that has been put forward by the Ontario government, which boosts an industry at the expense of citizens' safety, is a cause of great concern. We are currently urging each and every politician in Ontario to call on the provincial government to defer any proposed mid-rise wood frame changes to the Ontario Building Code until after the 2015 National Building Code of Canada is debated and the fire safety issues are adequately addressed. This will allow time for proper assessment and coordination with the National Building Code of Canada, which is the standard code development process traditionally used in Ontario. It is crucial that any building code changes go through proper channels and ensure that all fire safety implications are addressed. We need a full public policy debate about what risks Ontarians are willing to take when it comes to the construction standards set for the buildings that we live and work in.

Please write to your MPP and to the Honourable Bill Mauro, Minister of Municipal Affairs to raise your concern that the Province of Ontario shouldn't be moving so quickly and out of step with the National Building Code Process. Feel free to contact me directly if you have any questions about the CAC's position on mid-rise wood frame construction and fire safety. We know you understand that the health and safety of Ontario communities must come first.

Finally, I hope you will share this letter with your city councillors so they can also take action.

Yours sincerely,

Michael B McSweeney
President and CEO