ADMINISTRATIVE REPORT

TO:	City Planning Committee
FROM:	Administration
DATE:	June 17, 2024
RE:	Supplemental Information Report - Official Community Plan Amendment - Maximum Building Heights in Mixed Use Downtown Core

ISSUE

Administration has been asked to provide additional information to Council regarding the Official Community Plan (OCP) amendment to increase the maximum building height in the Mixed Use Downtown Core designation to 40 m.

REFERENCE

- Whitehorse 2040 Official Community Plan
- Housing Development Incentives Policy
- Yukon Bureau of Statistics Population Projections 2024-2045
- Yukon Bureau of Statistics Population Projections 2018
- 2021 Accommodating Future Residential Demand in Whitehorse Background Report
- 2018 Downtown Plan
- 2024 Copper Ridge Development Area Land Use Master Plan
- Bylaw 2024-16 – Zoning Bylaw Housing-Related Amendments
- Bylaw 2024-19 – Vacant and Unoccupied Buildings Bylaw
- Proposed Bylaw 2024-25
- Council Motion 2024-03-09 Building Height Maximum
- Location Map – Downtown Land Use Designations (Attachment 1)
- Proposed Bylaw 2024-26 (Attachment 2)
- Alternative Proposed Bylaw 2024-26 (Attachment 3)

HISTORY

At the February 12, 2024 Regular Council meeting, Council passed Motion 2024-03-09 to direct Administration to bring an Official Community Plan (OCP) amendment forward under the bylaw process to replace Section 15.8.7 of the OCP with the following wording: “The maximum building height allowed in the Mixed Use – Downtown Core designation will be 40 metres.”

On May 6, 2024, Administration introduced the proposed OCP amendment to the Planning Committee with a recommendation that the proposed amendment not proceed through the bylaw process. Administration noted the following reasons that the proposed amendment should not proceed:

- Taller buildings will have wind and shadow impacts;
- Development opportunities provided for in the OCP are able to accommodate the higher than anticipated population growth rates indicated by Yukon Bureau of Statistics (YBS);

- Community feedback on maximum building heights was sought and collected through the development of the Whitehorse 2040 OCP and appears unchanged; and
- Increased building heights may not directly result in additional residential units.

Notwithstanding the above, Administration recommended that if the proposed amendment were to proceed through the bylaw process, then development guidelines should be developed to address wind and shadow impacts. At the Standing Committee meeting on May 6, 2024, Council requested, per section 26 of the *Council Procedures Bylaw,* that Administration conduct additional research and provide the following:

1. Conduct research on and summarize the interplay of climate change, equitable access, and housing affordability in relation to taller buildings;
2. Address the higher population growth rate that is now anticipated through a review of the existing Residential Growth Strategy and possible new strategies; and
3. Design guidelines for inclusion in the proposed OCP amendment bylaw that address shadows, wind, and the inclusion of affordable housing.

The updated schedule for the OCP amendment is as follows, if the proposal were to pass First Reading:

First Reading:	June 17, 2024
Newspaper Ads:	June 21 and June 28, 2024
Public Hearing:	August 12, 2024
Report to Committee:	September 3, 2024
Second Reading:	September 9, 2024
Ministerial Review:	October 31, 2024 (assuming a full 45-day review period)
Third Reading:	November 12, 2024

Administration notes that multiple letters of support and opposition have been received in relation to the building height motion. If the proposed OCP amendment were to pass First Reading, those who sent letters will be advised that the public hearing process has now opened and that if they wish to comment on the bylaw, they will need to resubmit their letter.

ALTERNATIVES

1. Proceed with the alternative proposed OCP amendment under the bylaw process; or
2. Do not proceed with any of the proposed amendments.

ANALYSIS

1. Additional Research

Climate Change

Contrary to the belief that taller buildings are the most efficient solution for housing a growing population, research suggests that increasing urban density, without allowing for a corresponding increase in building heights, can better mitigate greenhouse gas emissions while maximizing population capacity. While high-rise buildings offer certain advantages in

terms of space utilization and minimizing sprawl, their overall environmental impact is significant.

Studies suggest that low-rise high-density cities (approximately six to ten storeys) are more environmentally friendly than their high-rise high-density counterparts. Buildings between six and ten storeys (18-30 m) in height offer the most environmentally friendly balance, emitting approximately 365 tons of carbon dioxide less per person over a building's lifetime than high-density high-rise alternatives.

Tall buildings require excessive materials and sophisticated structural systems to withstand high wind forces present at higher altitudes. Tall buildings are exposed to more wind and sunlight, which can increase heating and cooling loads. They also have a large carbon footprint due to the extensive use of steel and cement, which requires substantial energy and generate large amounts of carbon dioxide. Furthermore, tall buildings often have higher energy consumption and greenhouse gas emissions from running extensive electrical, mechanical, lighting, and security systems.

Tall buildings also lead to more intense urbanization and place significant demand on infrastructure, such as transportation networks, sewers, and the electrical grid, which can cause overcrowding and traffic congestion. Additionally, tall buildings and their concentration of heat-retaining materials can have negative effects on the microclimate, such as causing a heat island effect and wind funneling, which can increase urban temperatures by up to 5-6 degrees Celsius and lead to pedestrian discomfort and hindered natural ventilation.

The negative impacts of taller buildings can be minimized by considering mitigation factors and implementing sustainable practices. However, even by implementing these mitigation factors, the negative environmental impacts of taller buildings are still inherently higher in comparison to smaller structures.

Equitable Access

The relationship between taller buildings and equitable access is multifaceted and context dependent. While taller buildings have the potential to improve equitable access by accommodating more residents, enhancing public service efficiency, and promoting economic opportunities; the actual outcomes depend on thoughtful urban planning, inclusive policies, and community-focused design.

Taller buildings can help increase the supply of housing in urban areas where land is limited by providing more units per lot, potentially making housing more affordable and accessible to a broader range of people. Additionally, high-rise buildings minimize sprawl and help protect suburban greenspaces, which can lead to more greenspaces, and recreational areas that are accessible to all residents. High-density living can also make the provision of public services like transportation, healthcare, and education in an area more viable and effective. Finally, taller buildings built in accessible locations can offset higher housing costs with lower transportation costs.

Many tall buildings incorporate mixed use designs, including residential, commercial, and recreational spaces. This can create more vibrant, walkable neighborhoods with amenities

and services within close proximity of other uses on- and off-site. Taller buildings can also create more job opportunities by accommodating more businesses and offices and potentially reducing economic disparities. Additionally, taller buildings can help developers justify land costs in competitive urban markets and achieve a return on investment.

If not properly managed, however, high-rise developments can lead to reduced access to affordable housing. To achieve equitable access, it is essential to implement policies that guarantee affordable housing and accessible services.

Housing Affordability

Although it is commonly held that relaxing limits on building heights will improve the affordability of housing through increased housing supply, the inherently higher building costs of taller buildings may not allow for the construction of the more affordable units desired. Research shows that the optimal residential unit affordability occurs in buildings that are four floors or fewer with the cheapest rents occurring at the second and third floor.

Taller buildings are more complex structures that often cost more to build. The increased building costs are recouped through more expensive units. Higher floor units typically have more expansive views which are reflected in the unit prices. Moreover, taller buildings have longer pre-sale marketing and construction timelines, and this increased risk to the developer requires the extraction of a larger profit margin on units to ensure the financial feasibility in a more variable market. Existing affordable housing stock tends to be targeted for redevelopment in order to reduce costs associated with land assembly.

The supply of affordable units in taller buildings can be encouraged through several methods including voluntary and mandatory inclusionary zoning regulations, ensuring new development occurs on vacant land, and ensuring that taller buildings are built in more accessible locations.

Voluntary inclusionary zoning regulations, such as density bonusing, could allow an increased building height on the condition that a developer meets a specified affordability threshold for their units. Mandatory inclusionary zoning regulations can also be used to mandate that all new construction include a minimum proportion of affordable units. Although mandatory inclusionary regulations have shown to be effective in increasing affordable unit construction, the prices of other units in these buildings may increase to ensure the same overall profit margin, offsetting the overall affordability of the housing market.

Municipalities can protect existing affordable housing units by incentivizing new developments on vacant land instead. Finally, cities can ensure that taller buildings are built in more accessible locations to offset higher housing costs with lower transportation costs.

2. Population Growth & Development Strategies

YBS revised their preferred population growth projection in May 2024. The estimated population of Whitehorse is now expected to grow to 46,110 people by 2040.

The OCP Growth Strategy used Whitehorse's estimated average household size and YBS' 2018 preferred population growth projections to identify that 6,150 additional dwelling units would be required by 2040 to accommodate Whitehorse's population growth. To address this, the OCP provides development opportunities for 7,360 additional dwelling units, through densification within the current Urban Containment Boundary (UCB), which at 2.4 people per household, would be 17,664 people. In March 2023, when the OCP was adopted, the City's population was 31,439[1]. The OCP therefore accommodates growth to 49,103 people, which is still above recently updated YBS projections.

It is nevertheless noted that the OCP Growth Strategy includes the Holly Street development opportunity, which is not advancing. However, it does not include all of the recently adopted housing-related zoning amendments to allow for a wider range of opportunities for residential development (Bylaw 2024-16), nor does it include expanding the UCB. Developing the South Growth Area could alone potentially provide approximately 7,140 units or 16,000 people above current OCP growth opportunities, which would be well above the updated YBS projections.

Regardless of current development opportunities, there are three main strategies the City could employ in order to further increase residential development:

a) Developing City-owned land for residential use;

Developing and/or disposing City-owned land for residential use is the most direct way the City can contribute to increasing residential units. The City recently approved the Copper Ridge Development Area Master Plan and is currently considering a zoning amendment application to include a residential use on the old Municipal Services Building site (proposed Bylaw 2024-25). Although the Holly Street development is no longer advancing, other underutilized City-owned land, such as the old Municipal Services Building site, could be considered in the future for residential development. Administration is currently in the process of reviewing City- and Government of Yukon-owned land for potential residential opportunities to advance in line with this strategy.

b) Use the City's regulatory tools;

Since opportunities to develop City-owned land are limited, the use of the City's regulatory tools is the most impactful method the City can use to increase residential development. The main regulatory tools the City has is the OCP and the Zoning Bylaw. Administration is currently rewriting the Zoning Bylaw and considering ways to allow for increased residential density through that process in order to align with the increased development opportunities provided in the OCP. Increasing building heights over 30 m is currently not being considered as part of this process.

Administration has already implemented several housing-related Zoning Bylaw amendments but is considering other ways to allow increased residential development through the overall rewrite process. The new Zoning Bylaw Rewrite project is targeted for completion in early 2025, allowing sufficient time for changes to take affect by 2040.

---

[1] https://yukon.ca/sites/yukon.ca/files/ybs/fin-population-report-q2-2023.pdf

c) Support land owners in developing their land.

While the City's regulatory tools are used to spur systematic changes, the City can also incentivize (or de-incentivize) other land owners to develop their land for residential use. For example, the City recently adopted changes to its Housing Development Incentives Policy and adopted the Vacant and Unoccupied Building Bylaw to incentivize the development of underutilized lots.

Administration is currently in the process of considering additional changes to the Housing Development Incentives Policy to further incentivize residential development in line with the City's Housing Accelerator Fund Action Plan. Administration is also actively collaborating with the Government of Yukon, Kwanlin Dün First Nation, Ta'an Kwäch'än Council, and other key landowners to advance the development of their land.

Finally, Administration is considering other ways it can further support housing and land development through recommendations of the City's Housing and Land Development Advisory Committee.

3. Proposed Design Guidelines

Administration completed a jurisdictional review of best practices of multiple municipalities of varying sizes and locations in Canada and the United States relating to shadow, wind, and affordable housing considerations for taller buildings. These considerations were either included as part of a municipality's regulatory documents (e.g. Official Community Plan, Zoning Bylaw, etc.) or as guidelines or terms of references. In general, the overall requirement to undertake shadow and/or wind assessments and to permit density bonusing were found in Official Community Plans, or comparable planning documents, while detailed study requirements and minimum affordable housing requirements were included in Zoning Bylaws or non-regulatory documents.

Considering this, an alternative bylaw (Attachment 3) is proposed to enable requirements for shadow and wind studies, and density bonusing (community benefit) when considering buildings between 25 and 40 m. This would enable Council to consider the potential impacts of shadows and wind from taller buildings, or the provision of affordable housing, when considering zoning amendment applications, or similarly for Administration when considering Development Permits, for developments between 25 and 40 m.

The purpose of a shadow analysis is to assess the impact of shadows cast by a proposed development on its surroundings, while a wind analysis would assess the impact of a proposed development on the wind speed at pedestrian levels. In addition, density bonusing would consist of a voluntary system of exchange between the City and land developers to grant a density bonus through increased building heights for developments that provide affordable housing. For example, a land developer could choose to either develop under the permitted maximum height with no additional contribution required or build over the permitted maximum height, up to 40 m, in exchange for the provision of affordable housing.

Further detailed guidelines and policies on these studies and benefits are considered to be better suited as separate documents or as an inclusion in the Zoning Bylaw rather than as

an inclusion in the OCP, similarly to other municipalities, as further research and analysis is required to determine acceptable levels of impact and benefits, and appropriate mitigation measures. This would also allow the detailed requirements to be developed in consultation with the public.

4. Conclusion

Overall, findings from the research on the interplay between climate change, equitable access, and housing affordability with taller buildings suggest that between four to ten storeys (up to 30 m) is the optimal height to achieve the benefits of increased density as it relates to these topics. The OCP currently aligns with this target.

Furthermore, the OCP currently provides for sufficient development opportunities to accommodate the most recent growth projections from YBS. Administration is also actively advancing additional development opportunities and strategies to further increase residential development over and above current OCP opportunities, which would not require increasing heights.

Finally, the current OCP increased allowable building heights in the Mixed Use Downtown Core to 25 m, with consideration for 30 m. This initial increase in allowable building height was largely informed by public input. Administration does not consider enough time has passed to evaluate whether the initial increase in the allowable building height will have an impact in the number of residential units developed in the Downtown area. There is also no reason to believe that public opinion on the matter has changed since the OCP was developed, as no additional engagement on the matter has occurred since.

For these reasons, Administration does not consider it necessary to further increase the allowable building height in the Mixed Use Downtown Core designation. However, if Council decides to proceed with the OCP amendment, Administration recommends that the OCP is amended as proposed in the alternative bylaw.

ADMINISTRATIVE RECOMMENDATION

THAT Council direct that Bylaw 2024-26, a bylaw to amend the Official Community Plan to increase the maximum building height in the Mixed Use Downtown Core designation to 40 m, not proceed under the bylaw process.

N

Attachment 1

Map 6

Land Use Designations Downtown and Marwell

Whitehorse
THE WILDERNESS CITY

100 0 100 200 300 400m

TITANIUM WAY
TUNGSTEN ROAD
GYPSUM ROAD
GOLD ROAD
PLATINUM ROAD
GALENA ROAD
INDUSTRIAL ROAD
COPPER ROAD
QUARTZ ROAD
INDUSTRIAL ROAD
QUARTZ ROAD
CHILKOOT WAY
WATERFRONT PLACE
KISHWOOT ISLAND
SECOND AVENUE
THIRD AVENUE
SHIPYARDS PARK
BAXTER STREET
RAY STREET
KEISH STREET
OGILVIE STREET
COOK STREET
WHEELER STREET
BLACK STREET
ALEXANDER STREET
STRICKLAND STREET
SIXTH AVENUE
SEVENTH AVENUE
EIGHTH AVENUE
FIFTH AVENUE
FOURTH AVENUE
THIRD AVENUE
SECOND AVENUE
FRONT STREET
YUKON RIVER
BLACK STREET STAIRS
JARVIS STREET
WOOD STREET
STEELE STREET
MAIN STREET
ELLIOTT STREET
PIONEER CEMETERY
LAMBERT STREET
HANSON STREET
HAWKINS STREET
ROGERS STREET
LOWE STREET
HOGE STREET
JECKELL STREET
TAYLOR STREET
ERIK NIELSON WHITEHORSE INTERNATIONAL AIRPORT
ROTARY PEACE PARK
ROBERT CAMPBELL BRIDGE
SS KLONDIKE

- Commercial Service
- First Nations Development Land
- Greenspace
- Industrial/Commercial
- Mixed-use - Downtown Core
- Mixed-use - Live/Work
- Mixed-use - Riverfront
- Public Service
- Residential - Old Town

CITY OF WHITEHORSE

BYLAW 2024-26

A bylaw to amend the Whitehorse 2040 Official Community Plan

WHEREAS section 289 of the *Municipal Act* provides that a municipality shall by bylaw adopt an official community plan in accordance with Part 7, Division 1 of the Act; and

WHEREAS section 285 of the *Municipal Act* provides for amendment of an official community plan; and

WHEREAS it is deemed desirable that the Whitehorse 2040 Official Community Plan be amended to increase the maximum building height within the Mixed Use Downtown Core land use designation to 40 m.

NOW THEREFORE the council of the municipality of the City of Whitehorse, in open meeting assembled, hereby ENACTS AS FOLLOWS:

1. Policy 15.8.7 is hereby amended by replacing the current text with the following:

   i. "The maximum building height allowed in the Mixed Use – Downtown Core designation will be 40 metres."

2. This bylaw shall come into force and effect upon the final passing thereof.

FIRST READING:
PUBLIC NOTICE:
PUBLIC HEARING:
SECOND READING:
EXECUTIVE COUNCIL MEMBER APPROVAL:
THIRD READING and **ADOPTION**:

_____
Laura Cabott, Mayor

_____
Corporate Services

CITY OF WHITEHORSE

BYLAW 2024-26

A bylaw to amend the Whitehorse 2040 Official Community Plan

WHEREAS section 289 of the *Municipal Act* provides that a municipality shall by bylaw adopt an official community plan in accordance with Part 7, Division 1 of the Act; and

WHEREAS section 285 of the *Municipal Act* provides for amendment of an official community plan; and

WHEREAS it is deemed desirable that the Whitehorse 2040 Official Community Plan be amended to increase the maximum building height within the Mixed Use Downtown Core land use designation to 40 m.

NOW THEREFORE the council of the municipality of the City of Whitehorse, in open meeting assembled, hereby ENACTS AS FOLLOWS:

1. Policy 15.8.7 is hereby amended by replacing the current text with the following:

   "The maximum building height allowed in the Mixed Use Downtown Core designation will be 25 metres (approximately 7-8 storeys); however, to promote the concentration of commercial and higher-density residential uses within the Downtown, buildings up to 40 metres (approximately 11-12 storeys) may be considered within this designation. The specific location and regulations for taller building heights within the designation will be identified in the Zoning Bylaw.

   Where buildings greater than 25 m are permitted, they must include design elements to minimize shadow and wind impacts from the proposed development. Built-form studies prepared by a qualified professional may be required when considering any potential shadow and microclimatic (e.g. wind) impacts on the surrounding area of buildings greater than 25 m.

   Provision of community benefits, such as affordable housing, may also be required as part of the development of buildings greater than 25 m."

2. Appendix A - Ideas for Action is hereby amended by adding a 'strategy or program type' Idea for Action #40 to read as follows and renumbering the remaining Ideas for Action accordingly:

   "The City may develop a policy for community benefits and guidelines to establish study requirements, acceptable levels of impact and benefits, and appropriate mitigation measures."

3. This bylaw shall come into force and effect upon the final passing thereof.

FIRST READING:
PUBLIC NOTICE:
PUBLIC HEARING:
SECOND READING:
EXECUTIVE COUNCIL MEMBER APPROVAL:
THIRD READING and **ADOPTION**:

_____
Laura Cabott, Mayor

_____
Corporate Services