COUNCIL QUESTIONS & ANSWERS

Council Questions – Standing Committee June 17, 2024

1. Supplemental Information Report – Official Community Plan Amendment – Maximum Building Heights in Mixed Use Downtown Core

a. Explain the contingency difference in the population estimates from OCP to current?

The difference in population projections as shown in the May 6 and June 17, 2024 Administrative Reports results from updating the population in the 2023 OCP, which used 2020 data, to the most recent Yukon Bureau of Stats (YBS) projection (May 2024). This change reflects an increase of 1,914 people (from 29,525 to 31,439). The newer YBS projection uses data from March 2023, which is when the OCP was adopted, and therefore is the most accurate total population projection for the OCP growth strategy.

The OCP housing opportunities planned to accommodate 7,360 units or 17,664 people and provided for a potential population of 47,189 people using 2020 data. With the updated YBS report in May 2024, the total people the OCP growth strategy should accommodate has been increased to 49,103 people.

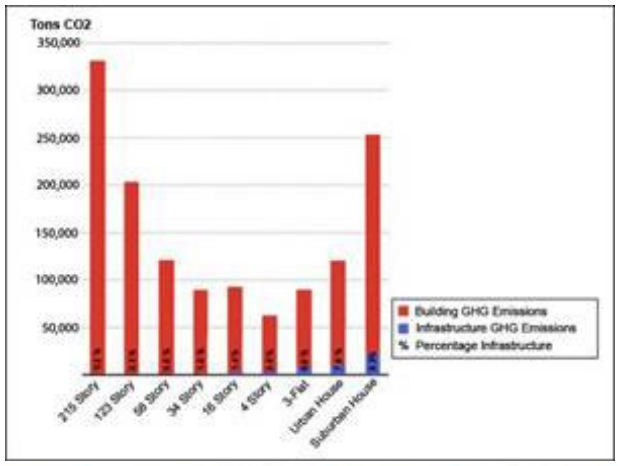
b. Provide a list of references explaining optimal building heights?

Below is a list of some of the sources used to determine optimal building height:

- Building tall isn't necessarily better for the environment, according to new research (Walsh, 2021)
- Decoupling density from tallness in analysing the life cycle greenhouse gas emissions of cities (Pomponi et al., 2021)
- Higher Density Development for Lower Cost Housing? Understanding the Multifamily Housing Market and the Role of Density in Multifamily Home Prices (Dong, 2020)
- The Environmental Impact of Tall vs Small: A Comparative Study (Drew et al., 2015)

c. Are there tangible cost differences between tall buildings mentioned in the Administrative Report and suburban single-family houses?

A study (Drew et al., 2015) found that four storey buildings have the lowest energy demand. Administration has summarized the study's comparisons of each dwelling type in the following chart:



Metro Vancouver Regional Planning also conducted a study that compares the costs of providing infrastructure and services to different residential densities. It found that the cost for onsite infrastructure and servicing for a house vs apartment are approximately five to nine times more expensive per capita ($13,000 vs. $2,000). Development cost charges and property taxes were also lower for apartment developments.
In order to prepare Whitehorse specific information, a work request would have to be authorized as a study of buildings in Whitehorse would be required and could take approximately 6-8 months and require a budget amendment for consulting services. However it is felt that Whitehorse's situation would be similar, as the costs for onsite infrastructure and servicing are higher per capita for a house when compared to an apartment.

d. What are the climate change impacts between sprawl and taller buildings?

Though the academic literature is somewhat conflicted on the subject, it appears to be broadly held that despite the construction and operation of taller buildings emitting more greenhouse gasses per capita than shorter buildings, the negative environmental impacts of residential urban sprawl outweighs the benefits of shorter buildings' energy efficiency. In other words, taller buildings are typically a better option than shorter buildings if shorter buildings lead to urban sprawl. It should be noted that infill, such as Copper Ridge Development and Takhini North Extension, should not be considered sprawl in the same manner as a new neighbourhood such as Whistle Bend or the South Growth area. Infill is utilizing established municipal services including water, sanitation, road, solid waste collection and transit networks instead of the considerable changes to the landscape to extend these services that a new neighbourhood would require.

However, dense mid- to low-rise neighbourhoods can limit both building and transportation greenhouse gas emissions. Increasing density without changing building heights was not found to increase per capita greenhouse gas emissions.

Cities with strong suburban active and public transportation networks can mitigate the high burden of transportation emissions which lower-density neighbourhoods tend to experience. In Helsinki, which has strong active and public transportation networks, inner-city dwellers generally emit roughly the same CO2 as suburban dwellers. In Toronto, with weaker suburban active and public transportation networks, surrounding regions on average emitted 21% more CO2 than inner-city dwellers.

e. What options exist at 30m regarding design guidelines?

The Official Community Plan currently allows building heights of 25 m (approximately 7-8 storeys) in the Mixed Use – Downtown Core designation, however, to promote the concentration of commercial and higher-density residential uses within the Downtown, buildings up to 30 m (approximately 8-10 storeys) may be considered within this designation. The alternative proposed bylaw requires the provision of community benefits, such as affordable housing, and design elements to minimize shadow and wind impacts when proposing developments greater than 25 m and up to 40 m.

The same requirements could be required for proposed developments between 25 and 30 m. Community benefits and shadow and wind impacts are typically proportionate to the height of a building and would be subject to future policy and guidelines developed for each. For example, the Zoning Bylaw is currently being rewritten and could consider inclusionary zoning regulations to build up to 30 m. These inclusionary zoning regulations could include things such as density bonusing if a certain threshold of affordable or accessible units are provided.