

TOWERS

These guidelines provide general direction, at the concept or schematic stage, on built form considerations related to the design of towers and tower tops.

These guidelines identify design considerations in addition to *Zoning Bylaw* regulations related to floor plate area, tower separation and setbacks.

Note that considerations of tower size and location must be taken holistically. While it may be possible to reduce or trade off minimum requirements, a site that cannot meet the minimum design expectations may not be suitable for tower development.

For additional considerations related to the location, orientation and configuration of a tower (or towers) on a site, please see *BF1 Built Form – General*.

These guidelines do not provide detailed guidance related to materiality, facade articulation, transparency, etc.

The careful siting, orientation and configuration of towers can contribute to a comfortable, human scaled public realm, minimize microclimatic impacts, prioritize the health and wellbeing of building occupants, while making a positive contribution to the city's skyline.

Towers

- The floor plates of residential towers should be no greater than 850m² to maximize views and sun exposure within adjacent buildings, streetscapes and civic spaces (Figure 1). Smaller tower floor plates (e.g. 750m²) are recommended in certain situations, e.g:
 - On sites adjacent to development of a smaller scale, to ensure the proposed tower addresses the existing street context.
 - On sites of a size and/or configuration that dictate a smaller tower footprint.
 - Where buildings of lower height are proposed.
- For office towers, the maximum floor plate area should be limited to 2500m² (Figure 2).
 - A maximum facade length of 60 meters should be considered for these larger buildings to contribute to a more human scaled streetscape.
- A minimum separation distance of 25m should be provided between two towers on the same site. It may be appropriate to increase this separation in certain situations; e.g.:
 - To reduce wind and shadow impacts on surrounding streets, civic spaces and outdoor amenity areas.
 - To accommodate necessary building separations at the ground level; e.g. townhouse podiums on either side of a mid-block connection.
- Towers should be setback a minimum of 12.5m from side yard property lines and/or the centrelines of adjacent streets and lanes, allowing for tower development and appropriate separation for towers on adjacent sites.
- A podium/tower configuration is a desirable way to create a human-scaled street wall and potentially mitigate the impact of wind downdrafts on adjacent streets and civic spaces.

- When a tower/podium configuration is used, towers should be stepped back a minimum of 4.5m from the face of a podium. This setback clearly delineates the tower from the podium, and creates opportunities for outdoor common and/or private amenity areas above the podium.
- Towers can extend directly to grade (for any portion of the length of a facade) (Figure 3); however, additional design strategies may be required to address wind impacts and create a more articulated, human scaled public realm interface.
- Additional tower setbacks and/or setbacks should be considered to respond to the surrounding context and/or preserve important views to heritage buildings or other significant landmarks.
- For office towers, consideration should be given to creating a civic space integrated with the primary building entry, and in particular:
 - Increasing the legibility of building entrances (Figure 4).
 - Accommodating the high volume of pedestrian activity generated by these buildings.
 - Incorporating design elements to mitigate wind impacts.
 - Incorporating amenities for the use of building tenants and others (Figure 5).
 - See *PR1 Civic Spaces* for more information.
- Where sites have multiple towers, consideration should be given to varying the heights of adjacent towers to add visual interest to the city's skyline and maximize views.
- Consider the environmental and visual impact of the tower form.
 - Towers should be located, configured and oriented in a manner to maximize sky view and sun access; e.g. towers with rectangular floor plates should be oriented north-south to minimize shadows.
 - The location, orientation, massing and shape of towers on a site (or podium) must be supported by the required *Wind Impact Assessment* and *Sun Shadow Impact Study*.
 - Additional sculpting of the tower form may be needed to address wind and sun/shadow concerns, and/or reduce its mass and visual impact (Figure 6).

Tower Tops

- Rooftop mechanical and/or telecommunication equipment should be screened to not be visible from adjacent streets and civic spaces. Strategies to achieve this may include:
 - Wrapping mechanical units with usable floor space, and / or integrating them with the tower top design (Figure 6).
 - Using screens, parapets and similar architectural elements. These elements should extend or otherwise complement the design language of the tower (Figure 7).
- A distinctive tower top is not required; however, the design of a tower top should be considered holistically with that of the overall tower form in order to create a unified architectural composition, visually terminate the tower with a simple, elegant gesture, and contribute positively to the city's skyline.
 - Tower top design can be used in conjunction with tower setbacks, setbacks and articulation to improve city views and sunlight penetration, while reducing the massing, and in turn the visual impact, of the tower.
 - Rooftop patios and amenity spaces should be considered as part of the tower top design and the overall tower composition (Figure 8).
- Lighting and signage is often a key element of tower top design and therefore requires additional design attention.

Summary of key tower design considerations

Setbacks allow for rooftop amenity areas (A).

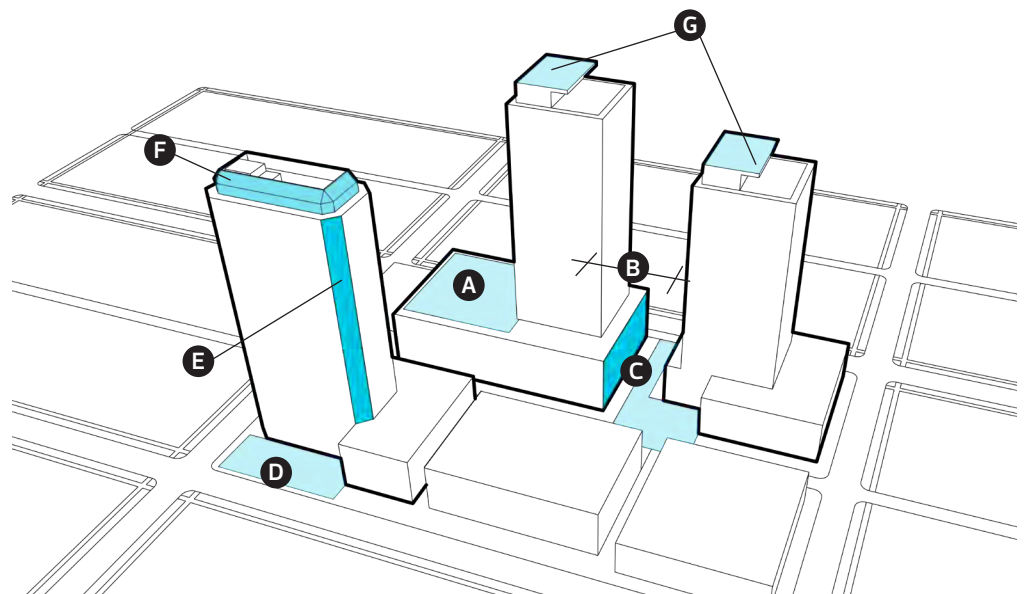
Sufficient tower separation (B) to accommodate at-grade uses (C).

Civic space opportunity where tower extends to grade (D).

Tower orientation and sculpting to minimize microclimatic impacts (E).

Rooftop mechanical screened (F).

Varying tower heights to contribute positively to the city's skyline (G).



TOWERS

- 1,2** Visual impact of residential vs. non-residential tower floorplates: Encore Tower (1) and Edmonton Tower (2).
- 3** Removal of a tower podium to create a ground-level amenity, HSBC Place.
- 4** Well defined entry, Enbridge Tower.
- 5** Ground level amenity space, Fifth Avenue Place, Calgary.
- 6** The design of EPCOR Tower is sculpted to reduce its visual impact, while incorporating mechanical into its tower top.
- 7** Stantec Tower and JW Marriot both employ parapets to screen rooftop mechanical equipment.
- 8** The Maclaren integrates rooftop amenity space into the overall tower design.

